REINVENTING...

IT Planet®

STREAMING Without Buffering

Windows 7 with Office 2010

Davinder Singh Minhas

Reema Soni

This book belongs to:

Name .....

Class ..... Section ..... Roll No. .....

School .....

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5

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PREFACE

In the educated world, knowing about computer and its intricacies is no more a luxury, but a necessity. Therefore, we have created **IT Planet (Streaming without Buffering)** Computer Series for classes **1** to **8**, keeping this necessity in mind. The name of this series symbolizes the flow of understanding the computer concepts continuously without any pause.

You may have heard somebody talking about the open source, social engineering, cloud computing, app development, Raspberry Pi — a lot of jargon in that talk might have seemed Latin and Greek to you, but not in this series. In this series, the concepts of computer will be as clear as you are watching streaming media without any buffering.

This series is based on the latest software packages and operating system programs such as **Microsoft Office 2010** and **Windows 7**. Apart from these two, we have covered almost all the open source software programs such as **Scratch**, **LOGO**, **Pencil2D**, **GIMP**, **Inkscape**, and **Python**.

To produce a visually appealing and easy to understand book, we have artfully combined the latest technology, pictures, drawings and text in this series. Most of the pictures in this series show a **step-by-step pedagogy**, which simplifies the more complex computer concepts. The terms and examples described in this series are those which everyone will come across while using computers in school as well as at home.

To make the chapters exciting, **projects** have been given that encourage the students to try out for themselves, to instill in them the confidence before they embark on making their own project using that software. Each project in the chapter presents a practical problem and complete solution in an easy-to-understand approach. Each of the tasks required to complete a project is identified throughout the development of the project.

In a Nutshell section summarizes the whole chapter and **Self-Evaluation** section examines the students' understanding of computer concepts. Different types of **exercises** and **activities** have been included at the end of every chapter to inculcate the students with an urge to seek answers.

The series also throws light on the **cybercrimes** and **cyber security issues**, thereby encouraging students to be good **digital citizens**. It includes all the software programs required to be at par with the current global education system.

The contents in this series are hand-picked by a panel of experts, including **Ms. Nisha Batra**, Jr. Headmistress and HOD Computer Department, **St. Mary's School**, Delhi and **Dr. Richa Verma**, Sr. Headmistress, **KIIT World School**, Delhi. This selection of contents will answer the need of students and shape their minds to stand apart from the crowd.

We welcome constructive suggestions and any feedback to make this series more comprehensive, relevant, updated and useful both for the teachers and the learners. You may mail us at editor@pmpublishers.in

AUTHOR

CONTENTS

1 »Computer – History & Generations

Topics Covered

•Concept of Counting •Early Calculating Devices •The First Electro-Mechanical Computer •The First Electronic Computer •Personal Computer •Generation •Generations of Computer

Hello friends! I am back here again to tell you more about computers. The computer which you see today was not like this before. It took many years to make the computer as it is today. Let us look at the history and generations of the computers.

Concept of Counting

The **computer** is an electronic machine that has touched every aspect of our life, making our work faster, easier, and well-organized. We rely on computers for most of our daily work. Computer has its own **history**. It has been a combination of **efforts** and **ideas** of many people from all over the world.

The concept of counting started with the existence of human beings. In the **ancient times**, people used to count with the help of stones, pebbles, bones, sticks, fingers, toes, etc., and store the information by making marks on walls, pillars, rocks, etc.


Fingers


Toes


Stones


Sticks


Bones

In the course of time, it became difficult to do bigger and complex calculations with such objects. So, people started thinking of some kind of device which could make their tasks easier. Thus, the first calculating device **'ABACUS'** was invented.

Early Calculating Devices

ABACUS

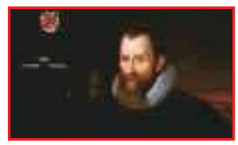
Abacus was the first calculating device, invented about 5000 years ago by the **Chinese**. Simple calculations like addition and subtraction were performed, using the abacus. It is still in use in different parts of the world.


Abacus

NAPIER'S BONES

In 1617, a Scottish mathematician **John Napier** invented a calculating device called **Napier's Bones**. This device is a set of rectangular rods marked with numbers on them.

It was meant for simple calculations like addition, subtraction, multiplication of numbers. Later on, it was improved to perform division and to find the square root.


John Napier


Napier's Bones

PASCALINE

In 1642, a French mathematician named **Blaise Pascal** invented the **first mechanical computing machine** known as **Pascaline**.

It consisted of a box with movable gears that could add, subtract, multiply, and divide the numbers very easily.


Pascaline


Blaise Pascal


Gottfried Wilhelm von Leibniz

LEIBNIZ'S STEP RECKONER

In 1692, the more advanced calculating machine named **Step Reckoner** was developed by a German mathematician **Gottfried Wilhelm von Leibniz**. It could perform all four basic mathematical operations, i.e., addition, subtraction, multiplication, and division.


Leibniz's Step Reckoner

BABBAGE'S ANALYTICAL ENGINE

In 1822, a mathematics professor of Cambridge University, England, **Charles Babbage** developed a machine known as **Difference Engine**. It could perform mathematical operations automatically. However in 1833, Babbage had a better idea, and he stopped working on Difference Engine and started designing another machine called **Analytical Engine**.

It had five key features, i.e., **input device**, **storage unit**, **processor**, **control unit** and an **output device**. All these five features are found in today's modern computers. Therefore, Charles Babbage is also known as the **Father of Computer**.


Analytical Engine


Charles Babbage

Update Your Knowledge


Even today, the concept of **Abacus** is put into pre-nursery classes to give an idea of counting in a play-way method.

Update Your Knowledge

The principle of **Pascaline** is still used today in water meter, odometer and speedometer.

TABULATING MACHINE

In 1890, **Herman Hollerith**, an army engineer invented a tabulating machine**.** This **Tabulating Machine** was used in **census** (to count the population) of the USA. It gave a 'quick' count of the US population.

The use of the Tabulating Machine was so successful that Hollerith formed a company that later became famous as the **International Business Machine** or **IBM**.

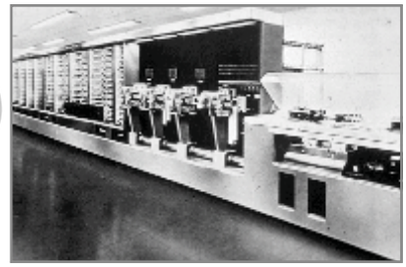
Tabulating Machine

The First Electro-Mechanical Computer

MARK I

In **1944**, **Prof. Howard Aikens** built the first Electro-Mechanical Computer named **Mark I**.

It was 51 feet long, weighed 5 tons, and used a typewriter for input and punched cards for output. This device was the first computer in a real sense.



Mark I

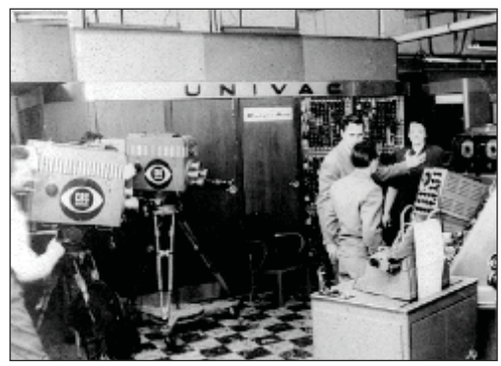
The First Electronic Computer

ENIAC AND UNIVAC

John Mauchly and **John Presper Eckert** together built the first successful electronic digital computer known as **ENIAC** (**E**lectronic **N**umerical **I**ntegrator **A**nd **C**omputer). It was operational in 1946. ENIAC was 10 feet wide and 100 feet long; it occupied 1800 square feet of area and could perform 5000 additions per second.

In 1951, **John Mauchly** and **John Presper Eckert** developed another successful computer known as **UNIVAC** (**Univ**ersal **A**utomatic **C**omputer). It could handle both numeric and textual information. It was the first commercial computer delivered to a business client **US Census Bureau** in 1951.

ENIAC



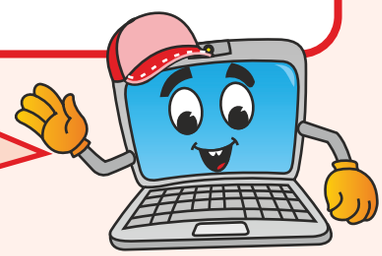
UNIVAC

Personal Computer

Computer has come a long way since then. In 1981, **IBM** introduced its first **Personal Computer (PC)** and in 1984, they introduced the advanced version of the **personal computer** called **PC-AT** (Advanced Technology). These computers were smaller in size, faster in speed, more accurate, and more reliable.

Personal Computer

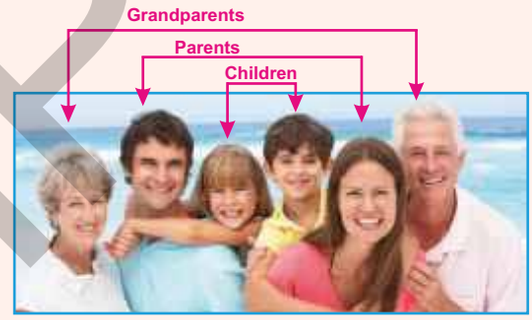
There are several types of personal computers available nowadays. For example, desktop computer, laptop computer, and tablet computer.



After learning about the history of computer, now you are going to learn about the generations of computer.

Generation

Dear children, we all have different generations of people in our family, like grandparents, parents, and children.



Computer also has its different generations like:

UNIVAC

Personal Computer (PC)

Desktop Computer

All-in-one Computer

Notebook

Tablet PC

Smartphone

Raspberry Pi

You can see in the above pictures that with each new generation, the computer has become smaller, faster, and more advanced than the previous generation.

Update Your Knowledge

The **Raspberry Pi** is a tiny credit card size computer that can be plugged into a computer monitor and it works with a standard keyboard and mouse. It enables you to explore computing, and to learn how to program in languages like Scratch and Python.

Generations of Computer

Generation means the production or creation of something. In terms of computer, it implies remarkable improvement in any product. So, we can say that the **generation of computers** means remarkable development and growth in computer technology.

The growth of computer took place in **five** distinct phases called **Computer Generations**. The different computer generations are categorized according to their technology of basic computing elements.

Now, let us learn about these different generations of computer.

FIRST GENERATION COMPUTERS (1946-1958)

The **First Generation of Computers** started in 1946. The makers of these computers used thousands of **vacuum tubes**, which were often huge, taking up the space of the entire room.

Vacuum Tube

Features of First Generation Computers:

- They used **Vacuum tube** technology.
- They used **Machine language**.
- The size was very big.
- They were very expensive.
- They produced a lot of heat.
- The operating speed was very slow.
- They were not much reliable.

UNIVAC

ENIAC and **UNIVAC** are the examples of first generation computers.

SECOND GENERATION COMPUTERS (1959-1964)

In the late 1950s, the **Second Generation Computers** were introduced. Second Generation computers used **transistors** in place of **vacuum tubes**.

Features of Second Generation Computers:

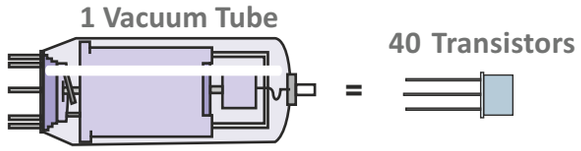
- They used **Transistors**.
- They used **Assembly Language**.
- The cost got reduced.
- The size became smaller.
- The operating speed became faster.
- They produced a lot of heat.

Transistors

IBM 140, **MARK III**, and **LEO** are the examples of second generation of computers.

The **transistors** were far superior than **vacuum tubes** that allowed computers to become smaller, faster, and more reliable than the first generation computers.

Size difference between a vacuum tube and a transistor



THIRD GENERATION COMPUTERS (1965-1970)

In the mid of 1960s, the development of **Integrated Circuit** was a major breakthrough resulting in the introduction of the **Third Generation Computers**.

The **transistors** were replaced by the **Integrated Circuits (IC)**, also known as **Semiconductor Chips**, which made the computer more powerful, and increased its speed and efficiency.

Features of Third Generation Computers:

- They used **Integrated Circuits (ICs)**.
- They used **high-level language** like Fortran and Cobol.
- The size became smaller.
- They generated less heat and were more reliable.
- They performed billions of instructions in a few seconds.
- Users interacted with keyboards and monitors which interfaced with an operating system.

Integrated Circuit

IBM-360, **ICL 1900**, **CDC**, etc. are the examples of third generation computers.

FOURTH GENERATION COMPUTERS (1971 ONWARDS)

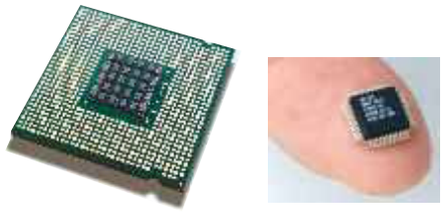
The **Fourth Generation of Computers** started in 1971, and they used **Microprocessor**, which is a single chip that does all the processing.

The size of computer became very small as thousands of **Integrated Circuits** were built onto a single **Chip**.

These computers became more powerful and they could be **linked** together to form **network**, which led to the development of **Internet**.

Features of Fourth Generation Computers:

- They use **microprocessor**.
- They use **high-level language** like C, C++, and Java.
- They are **multipurpose** computers.
- They are accurate, reliable, and very fast.



Chip

Intel 4004, **Macintosh**, **IBM 370** etc., are the examples of fourth generation computers.

In 1981, **IBM** introduced its first **Personal Computer (PC)** for the home users and in 1984, **Apple** introduced the **Macintosh**.


Personal Computer


Macintosh

FIFTH GENERATION COMPUTERS (PRESENT AND BEYOND)

The **Fifth Generation Computers** are based on **Artificial Intelligence** (AI). They are still in development.

The main goal of the fifth generation is to develop the computers that can respond to natural language, and are capable of learning and taking their own decisions, for example, **Robot**.


Robots

Features of Fifth Generation Computers:

- The fifth generation computers will use super large scale integrated chips.
- They will have **artificial intelligence**.
- They will be able to recognize images and graphs.
- They will be able to solve highly complex problem including decision-making.
- They are intended to work with **natural language**.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
I know that the 'Abacus' was the first calculating device.	☐	☐
I know that the Charles Babbage is known as the 'Father of Computer'.	☐	☐
I know that the first electro-mechnical computer is Mark I, built in 1944.	☐	☐
I know that the first electronic computer named ENIAC became operational in 1946.	☐	☐
I know that IBM introduced the first Personal Computer in 1981.	☐	☐
I know that the First Generation Computers used vacuum tubes.	☐	☐
I know that the Second Generation Computers used transistors.	☐	☐
I know that the Third Generation Computers used integrated circuit.	☐	☐
I know that the Fourth Generation Computers use microprocessor.	☐	☐
I know that the Fifth Generation Computers use artificial intelligence.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. The first calculating device was ..... .
   a. Napier's Bones ☐ b. Abacus ☐ c. Pascaline ☐
2. Which calculating device was developed by Gottfried Wilhelm von Leibniz?
   a. Pascaline ☐ b. Mark I ☐ c. Step Reckoner ☐
3. ..... is known as the 'Father of Computer.'
   a. Charles Babbage ☐ b. Herman Hollerith ☐ c. Blaise Pascal ☐
4. The PC-AT was introduced in ..... .
   a. 1894 ☐ b. 1984 ☐ c. 1994 ☐
5. The second generation computers used ..... .
   a. Transistors ☐ b. Vacuum Tube ☐ c. IC ☐
6. The ..... generation computers are based on artificial intelligence.
   a. First ☐ b. Third ☐ c. Fifth ☐

B. Write 'T' for True and 'F' for False statements.

1. Early man used to count with the help of stones, fingers, etc. ☐
2. Herman Hollerith invented 'Tabulating Machine' in 1990. ☐
3. Mark I was the first electro-mechanical computer. ☐
4. The First generation computers did not produce a lot of heat. ☐
5. The Third generation of computers used vacuum tubes. ☐
6. Integrated Circuit was used in the Fourth generation of computers. ☐

C. Fill in the blanks.

1. Abacus was invented by ..... .
2. ..... was invented by Blaise Pascal in 1642.
3. ..... invented 'Difference Engine' and ' Analytical Engine'.
4. ..... and ..... are the examples of First generation computers.
5. The Second generation computers used ..... language.
6. The transistors were replaced by ..... in the Third generation computers.
7. The ..... generation computers use microprocessor.
8. The goal of Fifth generation is to develop the computers that can respond to ..... .

D. Read the clues and name the machines.

1. The numbers were marked on a set of rectangular rods.

   .....

2. My principle is still used today in water meter and speedometer.

   .....

3. Vacuum tubes were replaced by me.

   .....

4. I am based on Artificial Intelligence and still in development phase.

   .....

E. Differentiate between the following.

1. First Generation Computer

   .....

   .....

   .....

   Second Generation Computer

   .....

   .....

   .....

2. Third Generation Computer

   .....

   .....

   .....

   Fourth Generation Computer

   .....

   .....

   .....

F. Answer the following questions.

1. Name the five key features that Charles Babbage used in Analytical Engine.

   .....

   .....

2. What do you mean by 'Generation of computers'?

   .....

   .....

3. What is a microprocessor? In which generation is this used?

   .....

   .....

4. What are the features of Fifth generation computer?

   .....

   .....

G. Application Based Question.

Your father wants to buy a device for your younger brother or sister for learning counting. Which calculating device would you suggest?

.....

Activity Section

Activity Write

A. Write the name of inventors and year of inventions.

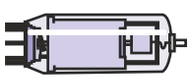
	Inventors	Year
1. Pascaline		
2. PC-AT		
3. Analytical Engine		
4. Abacus		
5. MARK-I		
6. Tabulating Machine		

B. Complete the following table.

Generation	Period	Technology	Examples
1st			
2nd			
3rd			
4th			
5th			

Activity Guess

Garima has collected the pictures of some processing devices used from the First generation computers to the Fourth generation computers. But she has forgotten to write their names. The pictures are given below. Can you name them and tell her in which generation of computers each of them were/are used?

....

....

Group Discussion

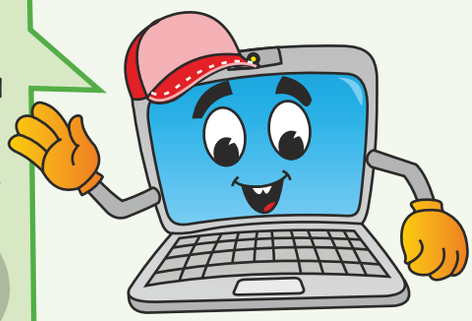
Divide the students into two groups and discuss the topic, 'History and Generations of Computer'.

2 »Programming Basics

Topics Covered

•Introduction to Programming •Algorithm •Flowchart •Program •Categories of Computer Languages •Language Processor

Dear children, you all know that to communicate with each other, you need some language. Similarly, to communicate with a computer, you need a Computer Language. Computer Language consists of a set of words, symbols, and codes that is used to write a computer program. In this chapter, we are going to study about how to write a program stepwise.



Introduction to Programming

Humans can understand a variety of spoken languages (English, Hindi, Punjabi, etc.) whereas computers cannot understand these languages. Computers understand only one language, that is, the **Machine Language**.

Let us understand it in the following manner:

If someone asks you to add 8 + 5, you will quickly give the answer 13, but if the same question is asked to the computer, it will not be able to answer this.

This is because your instruction is not understood by the computer. It can understand the instructions given in **computer language**. The set of instructions written in a language which a computer can understand is called a **program**.

Whenever you have to solve any problem or do any work, you have to follow a step-by-step procedure so that you can get the best results for it. In the same way, a computer also solves its problems in a step-by-step procedure to give you accurate results. An algorithm and a flowchart help us create a computer program in a step-by-step manner.

Basically, a computer program involves three steps:

1. **Algorithm** : Creating an algorithm
2. **Flowchart** : Making a flowchart
3. **Program** : Converting a flowchart into a program

Algorithm

All the software programs are written in special languages called **computer languages**. They follow a specific pattern of steps to achieve specific objectives. Before writing a program, we have to determine the objective and then we start developing a pattern of steps.

An **Algorithm** is a **step-by-step procedure** to solve any particular task, such as a mathematical or a logical problem.

Let us understand it by an **example**. What steps would you follow to buy a shirt?

The possible steps are as follows:

1. Take money and go to the garments shop in the market.
2. Tell the shopkeeper which color and style of shirt you want.
3. Choose and finalize the desired shirt.
4. Pay money to the shopkeeper.
5. Take the balance amount (if any) from the shopkeeper.

Finally, you get the desired result, i.e., purchase of a new shirt.

MORE EXAMPLES OF ALGORITHM

An Algorithm To Add Any Two Numbers:

Step 1 : Start
Step 2 : Take two numbers
Step 3 : Add the two numbers
Step 4 : Print the result
Step 5 : Stop

This is an Algorithm to add two numbers.

An Algorithm To Find The Greater Number Of The Two:

Step 1 : Start
Step 2 : Take two numbers - A, B
Step 3 : Compare these two numbers; if A > B, then go to step 4 or else go to step 6
Step 4 : Print A is greater
Step 5 : Stop
Step 6 : Print B is greater
Step 7 : Go to step 5

This is an Algorithm to find the greater number of the two.

Flowchart

A **flowchart** is a **diagrammatic representation** of a problem-solving process, i.e., Algorithm. It is called a flowchart as it charts the flow of a program. The direction of flow in a flowchart is always from top to bottom.

Herman Goldstine and **John von Neumann** developed a **flowchart** (originally a diagram) to plan computer programs.

In a flowchart, each operation is represented using specific **geometrical symbols**. These symbols are connected to each other by arrows to show the operations.

Following are some basic symbols that are used while making a flowchart:

START/STOP BOX

It is an **oval-shaped** symbol is used at the beginning and at the end of the flowchart. It shows the starting and ending of a flowchart.

INPUT/OUTPUT BOX

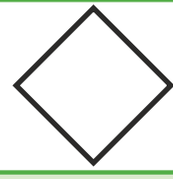
It is a **parallelogram-shaped** box that is used to indicate the input and output of a program, i.e., the instructions related to the input and getting the result.

PROCESSING BOX

It is a **rectangle-shaped** box that is used to show the processing part of the flowchart, like calculation.

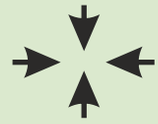
DECISION BOX

It is a **rhombus-shaped** box that is used to check the conditions, display comparisons, and take the decisions to solve the problems.



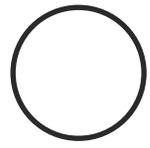
FLOW LINES

These are the **arrow lines** used to connect the different shapes and show the flow of logic in a flowchart.



CONNECTORS

It is **circle-shaped** symbol that is used to join the parts of a flowchart.



ADVANTAGES OF FLOWCHART

1. Flowchart helps in analyzing the problem in a more effective way.
2. It is a better way of communicating the logic of a system.
3. It acts as a guide during the program development phase.
4. It helps in finding out errors.

DISADVANTAGES OF FLOWCHART

1. Sometimes, the flowchart becomes complex if the program logic is long.
2. If you want to change something in the flowchart, you have to redraw it.

RULES FOR MAKING A FLOWCHART

There are some rules that should be followed while making a flowchart:

1. While drawing a proper flowchart, all necessary requirements should be listed out in a logical order.
2. The flowchart should be clear, neat, and easy to follow.
3. Only one flow line should be used in conjunction with terminal symbol.
4. The direction of flow, in a flowchart, should be from top to bottom or from left to right.
5. Avoid the intersection of flow lines if you want to make it more effective and better.
6. If the flowchart becomes complex, it is better to use connector symbols to reduce the number of flow lines.

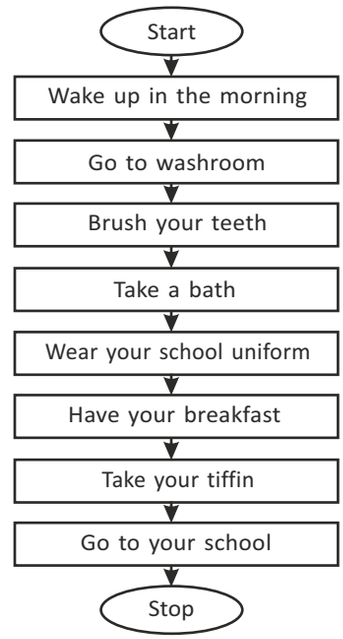
EXAMPLES

Converting an Algorithm into a Flowchart

ALGORITHM

Step 1 : Start
Step 2 : Wake up in the morning
Step 3 : Go to washroom
Step 4 : Brush your teeth
Step 5 : Take a bath
Step 6 : Wear your school uniform
Step 7 : Have your breakfast
Step 8 : Take your tiffin
Step 9 : Go to your school
Step 10 : Stop

FLOWCHART



Update Your Knowledge

- The **first programming language** designed to communicate instructions to a computer was written in the **1950s**.
- The **first code** and its **compiler** were developed in 1952 for the **Mark 1** computer.

Do You Know?

A **computer programmer**, often called a developer, creates and modifies computer programs.

Converting an Algorithm into a Flowchart for Adding Two Numbers

ALGORITHM

Step 1: Start

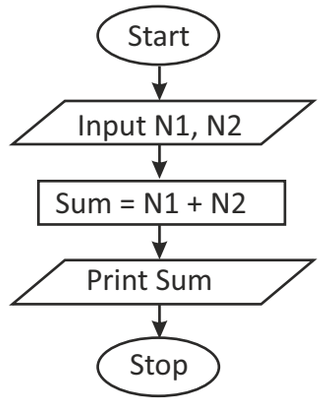
Step 2: Take two numbers

Step 3: Add the two numbers

Step 4: Print the result

Step 5: Stop

FLOWCHART



Start : The beginning of flowchart.

Input : Give 2 numbers to computer.

Processing : Give instruction to calculate.

Output : The result is displayed.

Stop : The end of flowchart.

Program

Normally, an algorithm is first represented as a flowchart, and the flowchart is then expressed in a programming language to prepare a **computer program**. Preparing a computer program is the last step in solving a problem which is written in the **computer language** to get the desired result. Let us study about it.

COMPUTER LANGUAGE

A computer understands the instructions given to it in its language, that is, **machine language**. This language uses binary digits - **0** and **1**. But it is difficult for the programmers to write their programs directly in terms of these digits. Therefore, some other computer languages have been developed in which writing programs have become easier.

A **Computer Language**, also known as programming language, is a special language understood by the computers. It consists of a set of words, symbols, and codes that is used to write a **computer program**. A **program** is a set of instructions given to a computer to get a particular task done. The process of writing a program is called **programming**. The people who can write programs are called **programmers**.

However, a computer cannot understand these languages directly. So, some special software programs have also been developed, which translate the programs written in other languages into machine language.

Categories of Computer Languages

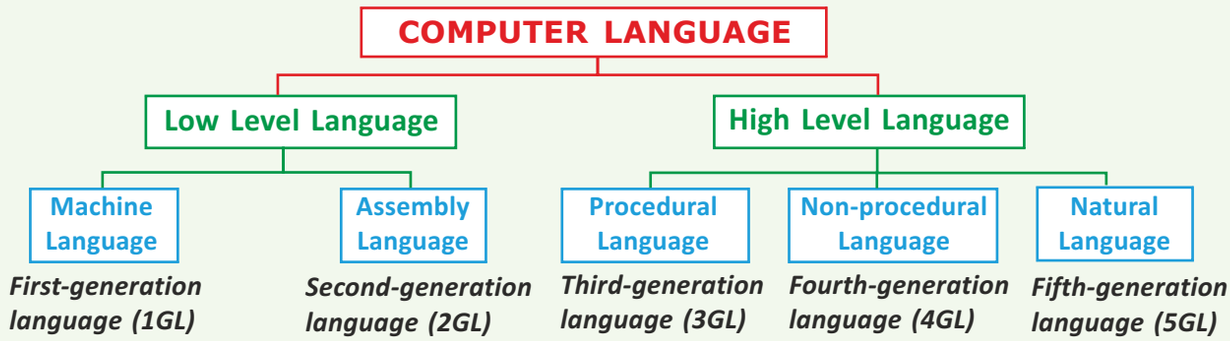
There are a number of computer languages available nowadays. Computer languages are classified into **two** major categories:

1. **Low Level Language (LLL)**
   - (i) Machine Language
   - (ii) Assembly Language

2. **High Level Language (HLL)**

(i) Procedural Language (ii) Non-procedural Language

(iii) Natural Language



LOW LEVEL LANGUAGES

Low level languages are written to run on a particular computer and cannot be easily used on other computers.

Machine Language

A **machine language**, also called **first-generation language**, is a language directly understood by a computer without any translation. It refers to **0s** and **1s** that a computer can understand as instructions. Due to this reason, it is also called **Low Level Language (LLL)**.

Limitations of Machine Language:

1. Machine language programs run only on the computer for which they have been developed, i.e., they are **machine-dependent**.
2. Machine language programs are not portable to other computers.

Assembly Language

Assembly language, also called **second-generation language**, is also a low-level programming language.

An assembly language uses letters and symbols instead of using numbers (1s and 0s). A program written in assembly language uses short sequence of letters called **Mnemonic codes** like ADD for addition, CMP for comparison, LDA for loading, and MUL for multiplying.

Assembly language program is the **source program**, which must be translated into **machine language** before the computer can understand it.

An **Assembler** is a program used to translate assembly language into machine language so that the computer can understand it.

HIGH LEVEL LANGUAGES

A **high level language** (HLL) has instructions which are almost similar to English language used by us. It is very user-friendly and resembles the language that we use. It is much easier to understand and write a program in this language. HLL is **machine-independent**. A program written in HLL can be used on almost all the computers, without any change.

Interpreter and **Compiler** are the two programs used to translate high level language into machine language so that the computer can understand it.

Three main categories of high-level languages are:

Procedural Language

A **procedural language** is also called the **third-generation language (3GL)**. In this language, the programmer writes instructions that tell the computer what to accomplish and how to do it. This language uses English-like words to make it easy for the programmer to write the program. For example, ADD for addition or PRINT to print. Many third-generation languages also use arithmetic operators, such as '*****' for multiplication and '**+**' for addition.

The **3GL** is also called the **source program**, which must be translated into machine language before the computer can understand it. A **compiler** or an **interpreter** is a program which is used to perform the translation for third-generation languages. C, BASIC, COBOL, and FORTRAN are the examples of 3GL.

Non-procedural Language

A **non-procedural language** is also called the **fourth-generation language (4GL)**. In this language, the programmer only specifies what the program should accomplish without explaining how. It uses English-like statements.

In fact, 4GLs are so easy to use, that users with very little programming background can develop programs using the fourth-generation language. It is also a **source program**, which must be translated into **machine language** with the help of compiler or interpreter. Visual Basic, JAVA, etc., are the examples of 4GL.

Natural Language

A **natural language**, sometimes called the **fifth-generation language (5GL)**, is a type of query language that allows the user to enter requests that resemble human speech. Natural languages are often associated with **expert systems** and **artificial intelligence**. These systems are popular in the medical field.

Language Processor

A **language processor** is a software that converts source program into machine language because a computer does not understand the program written in HLL or assembly language; it understands only machine language. **Compilers** and **interpreters** are the examples of language processors.

COMPILER: A compiler converts the entire HLL program into machine language at once and also displays errors for the whole program together.

INTERPRETER: Interpreter converts one line of program at a time. It displays error of one line at a time and goes to next line only after correction of that error.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
I know that algorithm is a step-by-step procedure to solve any task.	☐	☐
I know that a flowchart is a diagrammatical representation of algorithm.	☐	☐
I know that a computer program is a set of step-by-step instructions.	☐	☐
I know that there are two categories of programming languages.	☐	☐
I know that language processor is used for converting high-level language into machine language.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. The direction of flow in any flowchart should be from ..... .
   a. Top to Bottom ☐ b. Bottom to Top ☐ c. Right to Left ☐
2. The symbol used to indicate input and output of a program is ..... .
   a. Rectangle ☐ b. Parallelogram ☐ c. Circle ☐
3. ..... language is directly understood by computer.
   a. Machine ☐ b. High Level ☐ c. Assembly ☐
4. ..... language is machine-independent language.
   a. Low Level ☐ b. Assembly ☐ c. High Level ☐

B. Write 'T' for True and 'F' for False statements.

1. An algorithm is a graphical representation of a flowchart. ☐
2. The flowchart helps in finding out errors. ☐
3. Decision box is a rectangular symbol used for doing calculations. ☐
4. The people who write computer programs are called users. ☐
5. An assembly language does not need a translator. ☐

C. Fill in the blanks.

1. Flowchart was developed by ..... and ..... .
2. The rhombus-shaped symbol is known as ..... .
3. Natural language is sometimes called ..... generation language.
4. A computer only understands ..... digits directly.
5. ..... converts the assembly language program into machine language.

D. Name the following flowchart symbols.

1.  .....
2.  .....
3.  .....
4.  .....

E. Define the following.

1. Machine Language: .....

   .....

2. Assembly Language: .....

   .....

F. Differentiate between the following.

Compiler	Interpreter
.....	.....
.....	.....

G. Answer the following questions.

1. What do you mean by flowchart? Who discovered it?

   .....

   .....

2. Write any two advantages of flowchart.

   .....

   .....

3. What do you mean by computer language?

   .....

   .....

H. Application Based Question.

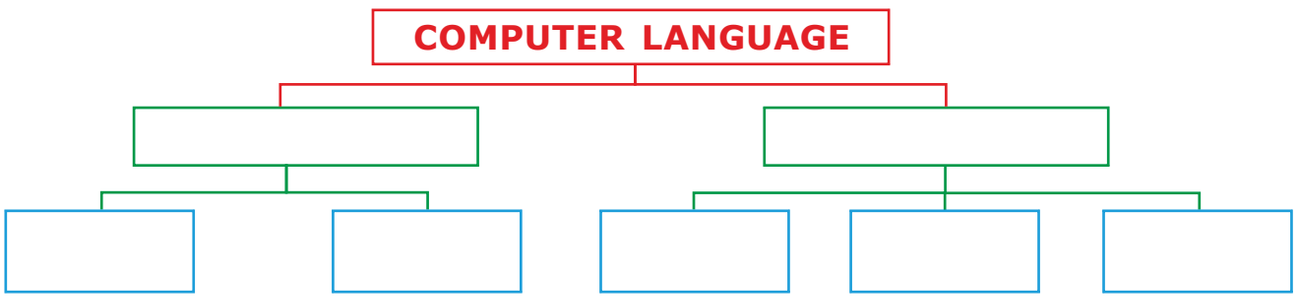
Several years ago, a programmer, who is no longer with the company, wrote a program for company using a high-level language. Now, his colleague is working on the same program and has discovered that the program is not working. By which software can he detect the errors? Help him.

.....

Activity Section

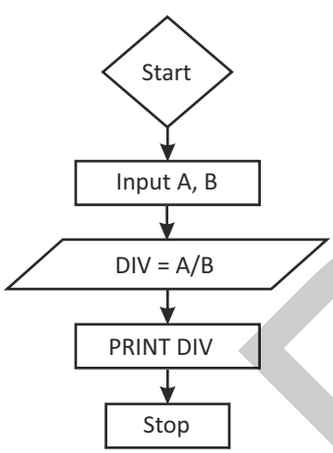
Activity Label

Label the following chart.



Activity Redraw

Redraw the following flowchart after correcting the symbols.



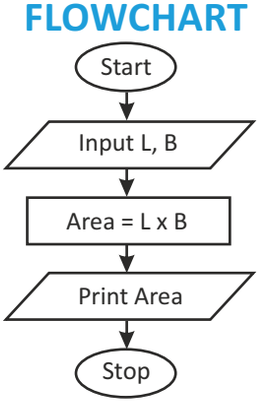
Lab Activity

Open Word, type the following algorithm to find the 'Area of Rectangle' and draw the flowchart by using shapes.

ALGORITHM

Step 1: Start
Step 2: Take two sides
Step 3: Calculate area by multiplying the two sides
Step 4: Print the area
Step 5: Stop

FLOWCHART



3 »Windows – File Management

Topics Covered

•File Management •Viewing Files and Folders •Windows Explorer •Selecting Files and Folders •Creating a New File/Folder •Deleting a File/Folder •Searching Files

Hello friends! In the previous class, you learnt about Windows 7 and its components. While working on the computer, you have to store all the work in the form of files and folders. In this chapter, I am going to make you familiar with them and tell you how to manage them.

File Management

File management helps you to organise and keep track of your files in the computer. There are thousands of files stored in the computer, and every file has a name called **filename**. File management helps to manage these files according to their name, format, size, date, etc. so that they are easy to find when you need them.

FILES

All the work that you do in a computer is stored in the form of **file**. A file contains anything such as drawing, text, and picture, created using a software. It is a collection of data and information. A file can be a **document file** when you write in it. A file can be a **picture file** when you draw and color in it. Whatever it is, the computer stores your work as a **file**.

Every file has its own **unique name**. No two files of the same name can be saved at the same location in the computer. Your computer represents files with **icons**. By looking at a file icon, you can tell what kind of file it is.

There are various types of files: **document files**, **spreadsheet files**, **image files**, **audio/video files**, and so on.

Document File

Spreadsheet File


Image File


Video File

PDF File

FOLDERS

You know that every work you do in the computer is stored in the form of **file**. There are thousands of files stored in the computer. If you want to find out a particular file out of those thousand files which are stored in the computer, it will take lot of time and energy. So, these files may be organized into **folders**.

In the computer, a **folder** is a location for organizing your files. A similar group of files saved together under a common name is called a **folder**. A folder can also have its **unique name**. There cannot be two folders of same name at a particular location.

Subfolders

Most folders contain files, but some folders contain additional folders, which we call **subfolders**. Subfolder is a folder within another folder.

A **folder** in a computer is also represented by an **icon**. By looking at these icons, you can differentiate between the folders.

An empty folder

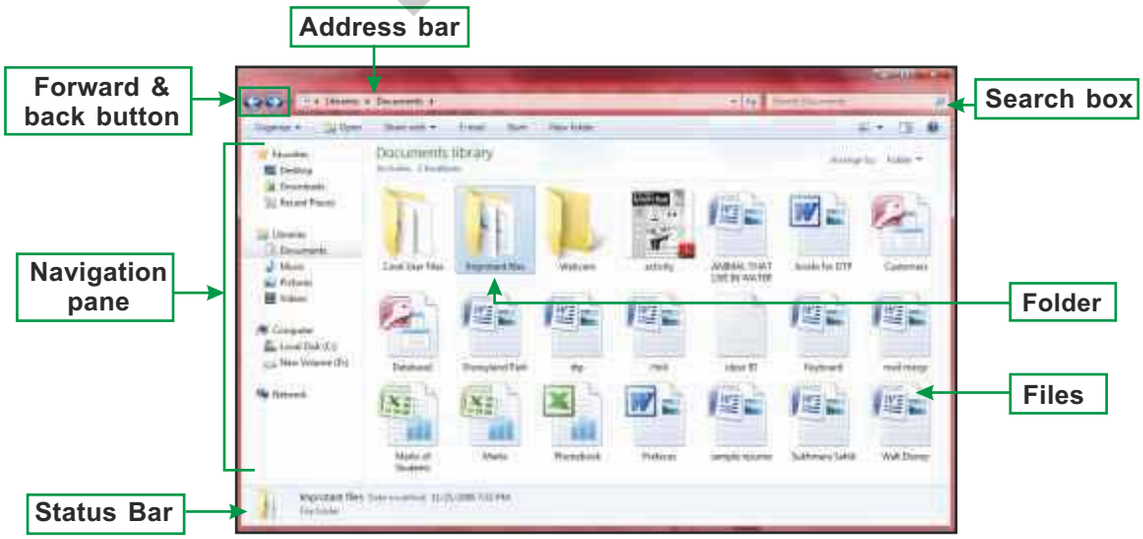
A folder containing files

A folder containing sub-folders

Parts of a Folder

You can **double-click** the folder icon to open it and see what is inside. When you open a folder, it opens in a window. A **window** is a rectangular area used to display the contents of an application or folder.

In addition to display the contents of the folder, a folder window has a variety of parts that are designed to help you to work with files and folders more easily. Let's have a look at the various parts of folder window.



Various Parts of Folder

UNDERSTANDING DISKS AND DRIVES

Your main hard disk is called a **non-removable disk** because you can't just pop it out of the computer by pressing any button. Other types of disks are called **removable media** because you can pop them in and out of the computer quite easily. Pen drives, CDs, and DVDs are examples of removable media. Your files and folders can be stored on a hard disk in your computer or on some kind of removable media.

Hard disk can be divided into several logical drives which are named with a **letter** then a **colon** (**:**).

A: The floppy drive is normally **A:** and the second floppy drive is **B:** drive. (In olden days, our first computer was a dual floppy computer.)

C: The hard drive is **C:** if you only have one hard drive.

D: Your CD or DVD drive uses the next letter after all of your hard disk drives, so it will be **D:** if you only have one hard disk drive.

USB drives and other removable drives are assigned a letter each when they are connected.

A **path** is a route the user must follow to reach a particular folder or file in the drives. A path always starts with a drive letter.

Example: **C:\Windows\calculator.exe** is the path of the file that starts Calculator.

Viewing Files and Folders

You can view the files you create, as well as those you download and copy to your computer that are stored on your hard drive.

There are **four** main folders in Windows 7, in which your files are saved by default — **Documents**, **Pictures**, **Music**, and **Videos**.

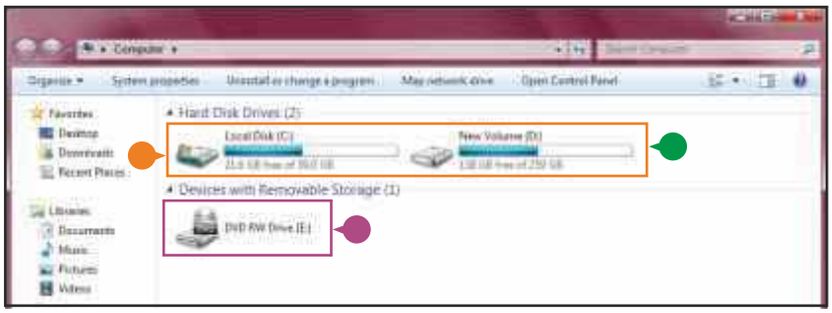
- Whenever you create and save a document file, it gets stored in **Documents** folder.
- Whenever you save any picture from digital camera or scanner or Internet, it gets stored in **Pictures** folder.
- Whenever you download any music file, it gets stored in **Music** folder.
- Whenever you download any video file, it gets stored in **Videos** folder.

If you want to open or work with those files, you first need to view them.

1. Double-click on **Computer** icon on the desktop.

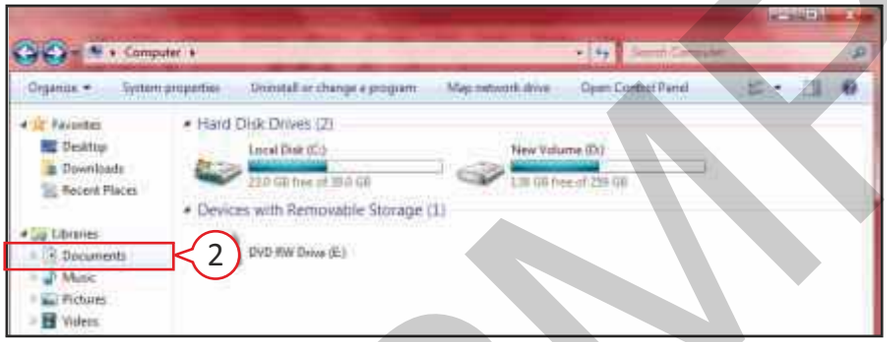
You can also open **Computer** by clicking on **Start** button and then click on **Computer** from the Start menu.

*The **Computer** window will appear.*

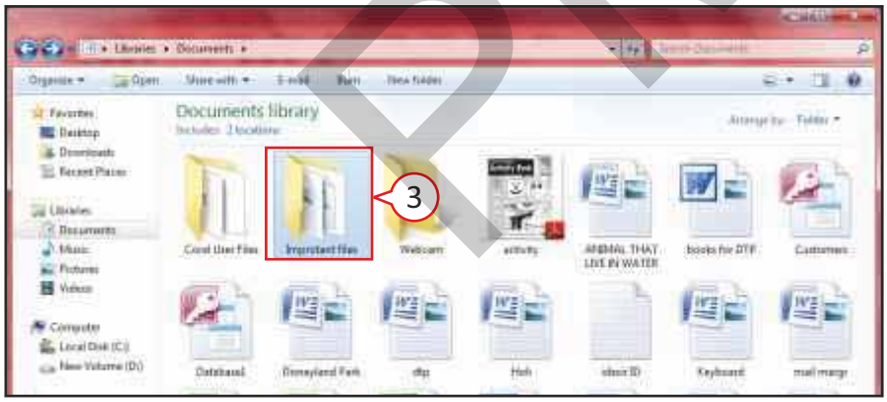


- This area displays the hard drives available on your computer.
- This area represents your CD-ROM /DVD drive and any other drives available on your computer.
- You can **double-click** on the item to display the contents of a drive or folder.

To view the contents of a CD-ROM/DVD drive, make sure you insert the CD-ROM/DVD disc into drive before continuing.

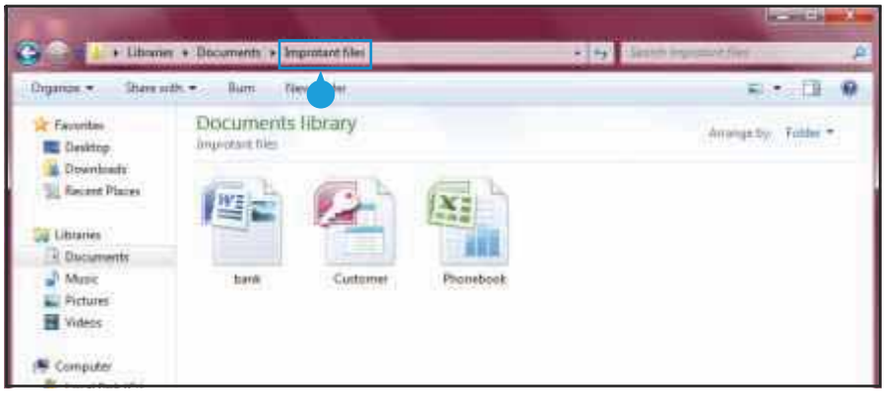


2. Click on **Documents** to explore your personal files and folders.



Windows displays the contents of the folder, including their subfolders.

3. If you want to view the stored file in a sub folder, double click on it.



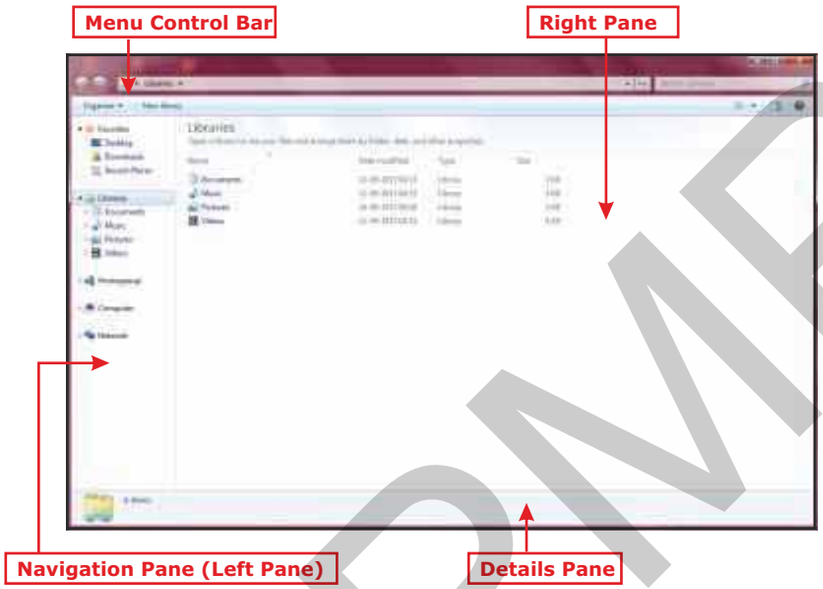
Windows displays the contents of the subfolder.

- The name of the current viewing folder, appears at the end of **file path** in the address bar.

Windows Explorer

Windows Explorer is used for viewing files and folders in any Windows Operating System. It is suitable for viewing files and folders in a hierarchical order. It is very helpful for efficiently organizing files and folders that are stored in different disk drives (hard disk) of a computer. You can move, rename, and delete files in Windows Explorer.

1. Click on **Start** button to display the Start menu.
2. Click on **All Programs** to view a list of the programs on your computer.
3. Click on **Accessories**.
4. Click on **Windows Explorer**.

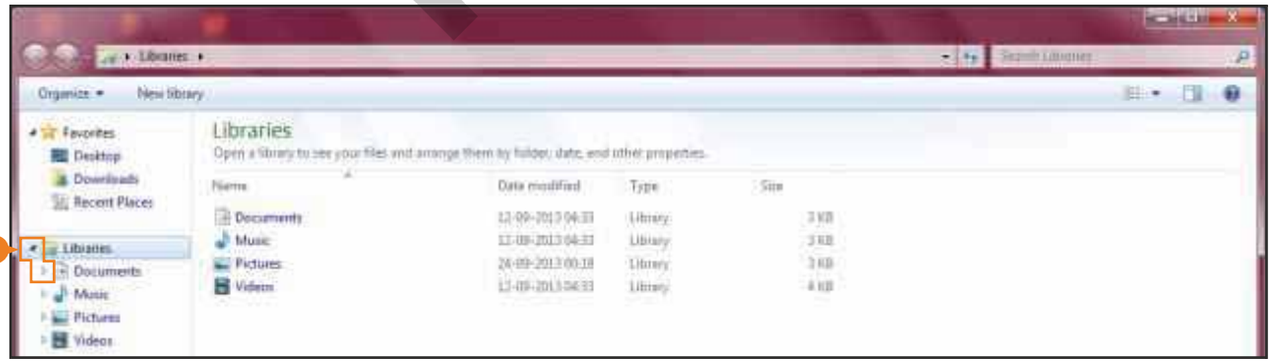


Windows Explorer screen is divided vertically into two panes:- the **left pane** and the **right pane**.

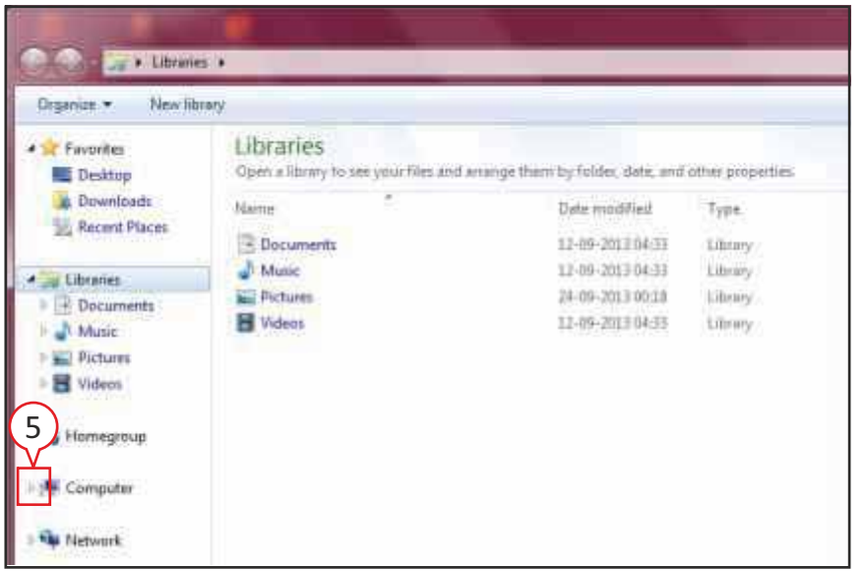
- The **left pane** displays disk drives and folders in a hierarchical order.
- The **right pane** displays the contents of the folder/drive that is selected on left side pane.

The **Menu Control bar** is used to display options used to work with files and folders.

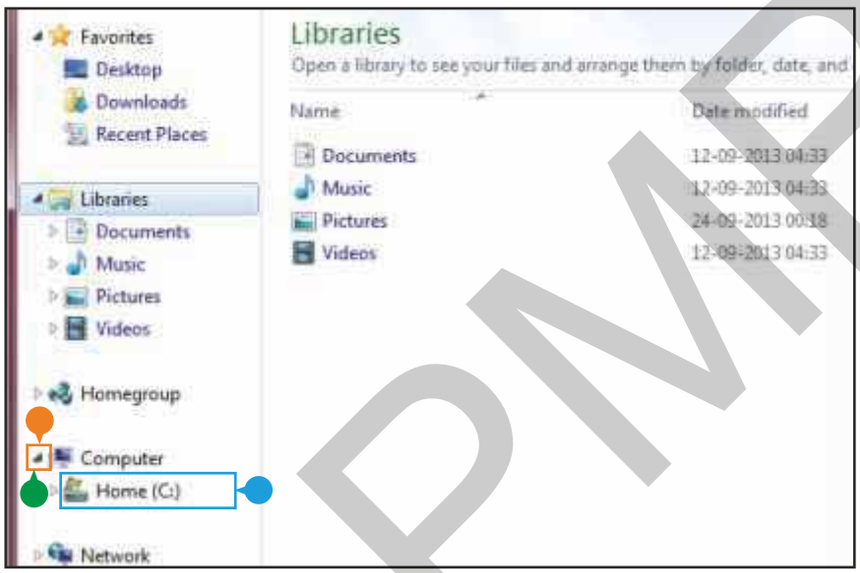
The **Details Pane** displays the details like file name, type, and size of the selected item.



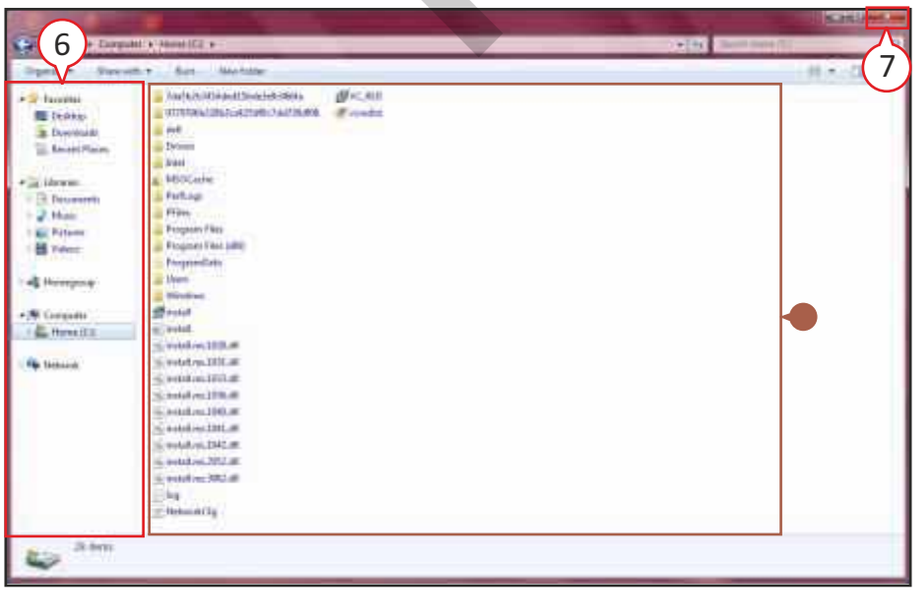
- There are **two signs**, **Collpase** [◢] and **Expand** [▷], in front of a disk drive or folder name. A [▷] indicates that the folder contains subfolders. If you click the [▷] sign, it shows the subfolders inside and at the same time the [◢] sign changes to [▷] sign. This process is called **expanding** of a folder. If you click the [◢] sign which is in front of a folder, the expanded subfolders collapse back.



5. To display the folders within a folder, click on the [▷] sign beside the folder.



- The **subfolders** appear.
- The [▷] sign beside the folder changes to [◢] sign. This indicates that all the folders within the folder are displayed.
- *You can click* [◢] *sign to once again hide the folders within the folder.*



6. To display the contents of a folder, click the name of the folder.
   - This area displays the contents of the folder.
7. When you finish using Windows Explorer, click (**x**) to close the window.

CHANGING THE VIEW OF FILES AND FOLDERS

You can view the files and folders in different ways and arrange them according to your choice. The **Change your view** option in **Menu Control bar** contains several options.

- **Large Icons or Extra Large Icons:** The images on a folder icon are displayed in Thumbnail View. It enables the users to identify quickly the contents of the folder.
- **Small Icons view:** It displays your files and folders as small icons. The file name is displayed under the icon.
- **List view:** It displays the contents as a list of files or folder names preceded by small icons. This view is very useful when your folder contains too many files and you want to view the list of files names.
- **Details view or Content view:** It gives us detailed information about files, including name, type, size and modified date.
- **Tiles view:** It displays more information about the file.

1. Open the **folder** containing files you want to view.
2. Click the **down arrow** of **Change your view** option to open the **views** list.
3. Click on the **view** you want.

- The **slider** points to the current view. You can also click and drag the slider to select a view.

Windows changes the file view.

In this example, we have changed **Large Icon view** into **List view**.

Selecting Files and Folders

While working with files and folders, you will often need to select the files so that Windows 7 exactly knows the ones with which you want to work. Selected files appear **highlighted** on your screen. You have already learned about selecting files in this section, the technique of selecting **folders** is exactly the same.

SELECTING ONE FILE

1. Open the folder containing file.
2. Click on the **file** you want to select. The file is **highlighted**.

SELECTING MULTIPLE FILES

1. Open the folder containing files.
2. Click the **file** you want to select.
3. Press and hold down the **Ctrl** key as you click each file you want to select.

SELECTING A GROUP OF FILES

1. Open the folder containing files.
2. Position the mouse pointer slightly above on the left of the first file in the group.
3. Click and drag the mouse pointer down to the right until all the required files in the group are selected.

SELECTING ALL FILES

1. Open the folder containing files.
2. Click on **Home** tab.
3. Click on **Select All**. Windows selects all files in the folder.

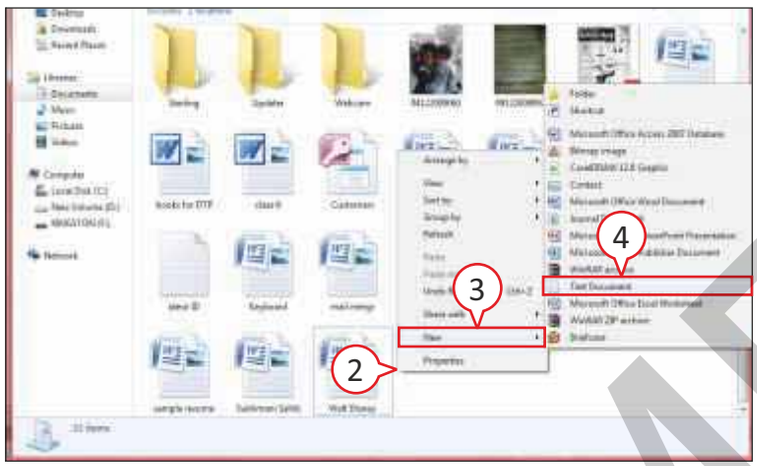
You can also press **Ctrl + A** to select all files.

DESELECTING FILE

- To deselect a single file from a multiple-file selection, hold down **Ctrl** key and click the file you want to deselect.
- To deselect all files, click an empty area within the folder.
- To reverse the selection—deselect the selected files and select the deselected files—press **Alt** key, click on **Edit** and then click on **Invert Selection**.

Creating a New File/Folder

You can instantly create, name, and store a new file in the location you want, without starting a program. You normally create a new file by opening the appropriate programs, pulling down the File menu or File tab and then choosing the **New** command. Creating a new file without starting a program allows you to focus on the organization of your files. To create a new file, follow the given steps:



1. Open the folder in which you want to create a file.
2. **Right-click** on empty section of the folder.
3. Click on **New**.
4. Click on the type of file you want to create.

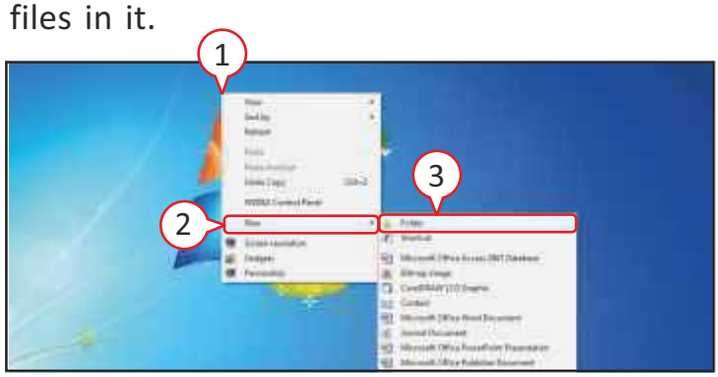
Note: *If you click Folder, Windows 7 creates a new subfolder.*

- *An icon for the new file appears in the folder.*

5. Type the name you want to use for the new file and press the **Enter** Key from the keyboard.

CREATING A FOLDER ON THE DESKTOP

You can create your personal folder by your name on the desktop, to save your files in it.



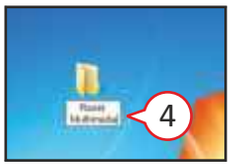
1. **Right-click** the mouse on a blank area of your desktop.

A menu appears.

2. Click on **New**.

A sub-menu will appear.

3. Click on **Folder**.

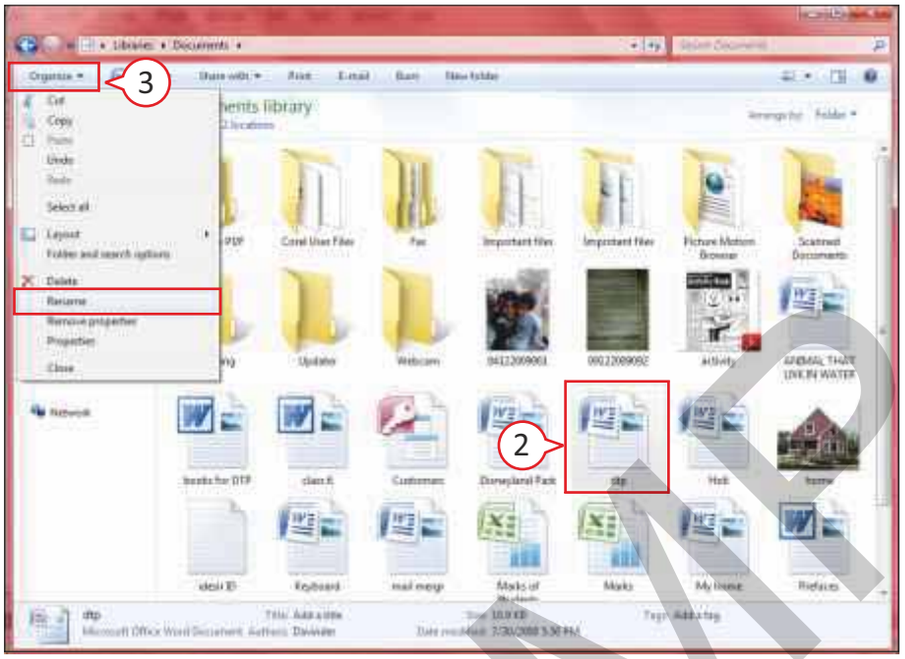


*An **icon** for the new folder appears on the desktop.*

4. Type the name you want to keep for the new folder.
5. Press **Enter** key from the keyboard.

RENAMING A FILE/FOLDER

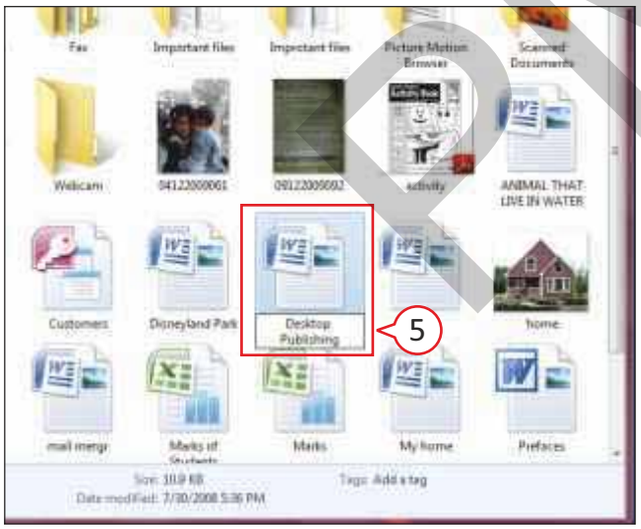
You can rename a file to describe the contents of the file in a better way. Renaming a file can help you quickly in locating the file in future. You can rename folders in the same way you rename files. ***You should rename only those files which you have created.***



1. Open the **folder** that contains the file you want to rename.
2. Click on the **file** you want to rename.
3. Click on **Organize**.
4. Click on **Rename**.

Note: *You can also press* ***F2 key*** *from keyboard after clicking file to rename it.*

A text box appears around the file name.



5. Type a new name for the file and then press the **Enter** key.

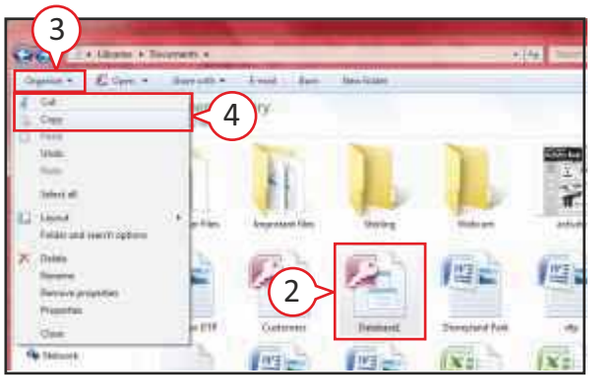
A file name cannot contain ***/ \? " < > or ! characters.***

If you change your mind while typing a new file name, you can press the **Esc** key to return to the original file name.

The new name appears under file icon.

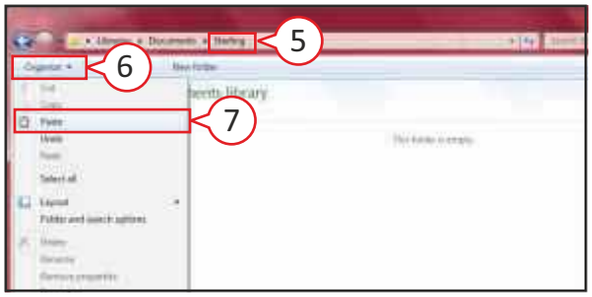
COPYING OR MOVING A FILE/FOLDER

You can **copy** or **move** a file on a pen drive, memory card, removable disk, or to a new folder on your computer. When you **copy** a file, the file will remain in its original location and also appear in the new location. When you **move** a file, the file will get removed from its original location and appear in the new location. You can use the same steps to copy or move a folder.



1. Open the folder containing the file you want to copy/move.
2. Select the **file/folder**.
3. Click on **Organize**.
4. Click on **Copy** or **Cut**.

*You can also use **Ctrl + C** for **copy** and **Ctrl + X** for **cut** as a keyboard shortcut.*



5. Navigate the folder where you want your file to be pasted.
6. Click on **Organize**.
7. Click on **Paste**.

*You can also use **Ctrl + V** for **paste** command.*

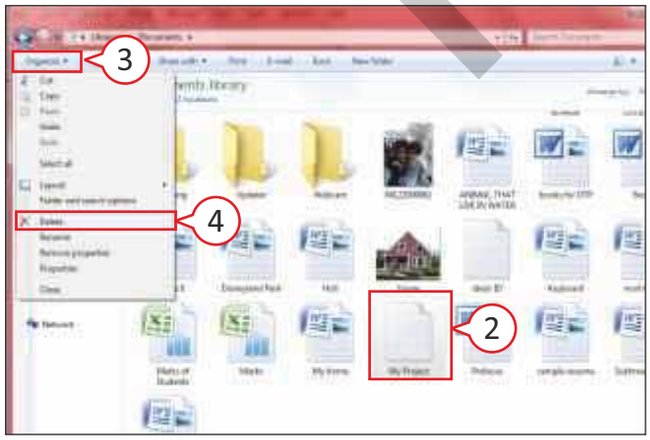
Windows copies or moves the file.

In this example, we have **copied** the file. The file will remain in its original location and also appear in the new location.

Deleting a File/Folder

You can delete the file/folder that is no longer required in the memory of the computer. Whenever you delete any file/folder, it goes into **Recycle Bin**. If you want to delete the file permanently, you have to delete it from Recycle Bin.

Make sure you delete only those documents that you have created yourself or that someone else has given to you. Do not delete any of the Windows 7 system files or any files associated with its programs.



1. Open the folder that contains the file you want to delete.
2. Click on the file you want to delete.

***Note:** If you want to remove more than one file, select all the files you want to delete.*

3. Click on **Organize**.
4. Click on **Delete**.

The **Delete File** dialog box appears.

5. Click on **Yes**.

The file disappears from the folder.

RESTORING A DELETED FILE

As told earlier, the file you delete goes into Recycle Bin, where the file stays for a few days or a few weeks, depending on how often you empty the bin or how full the folder is. You can **restore** the file which is in Recycle Bin to its original location from where you had deleted it.

1. Double-click **Recycle Bin** icon on the desktop.

The Recycle Bin window appears, displaying all the files you have deleted.

2. Click on the file you want to restore.
3. Click on **Restore this item**.

The file disappears from the Recycle Bin and reappears in its original folder.

EMPTYING THE RECYCLE BIN

Whenever you want to remove any file/folder permanently from the computer memory, you have to delete that file/folder from the Recycle Bin. After deleting the file/folder from Recycle Bin, it cannot be restored again.

These displays of the Recycle Bin indicate whether the bin contains the deleted files or whether it is empty.

() Contains deleted files () Does not contain deleted files

1. Double-click **Recycle Bin** icon on the desktop. (not shown)
2. Click on **Empty Recycle Bin** button. **Delete Multiple Items** dialog box appears.
3. Click on **Yes** to permanently delete all the files in the Recycle Bin.

Searching Files

After you have created so many of files on your computer, you might have trouble locating a specific file because these files are stored in various folders throughout the hard drive. You can save your time by using Windows 7 search option. Windows 7 searches not only the documents but also e-mail messages, contacts, Internet Explorer favorites, applications and more.

1. Open the folder and click on the **Search box**.
2. Type your search text.

As you type, Windows displays the folders and documents in the current folder with names, contents, or keywords that match your search text.

3. If you see the folder or file you want, **double-click** on it to open it.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
I know that the work done on a computer is stored in the form of a file.	☐	☐
I know that group of files stored under a common name is called a folder.	☐	☐
I know that Windows Explorer is vertically divided into two panes, i.e., left and right panes.	☐	☐
I know that 'copy' means placing the same file/folder to a new location without removing it from its original location.	☐	☐
I know that a particular file can be opened with different program.	☐	☐
I know that 'move' means removing the file/folder from its original location and placing it to a new location.	☐	☐
I fully know that the deleted files move into the Recycle Bin.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. The document you create is called ..... .
   a. Folder ☐ b. File ☐ c. Text ☐
2. A group of files stored under a common name is called a ..... .
   a. File ☐ b. Cupboard ☐ c. Folder ☐
3. Selected files appear ..... on your screen.
   a. Highlighted ☐ b. Flashing ☐ c. Colorful ☐
4. Changing the name of a file/folder is ..... .
   a. Renaming ☐ b. Copying ☐ c. Moving ☐
5. Deleted file goes into ..... .
   a. Music Folder ☐ b. Recycle Bin ☐ c. Trash ☐

B. Write 'T' for True and 'F' for False statements.

1. A file is a collection of data and information. ☐
2. A file and folder are represented with the same icon. ☐
3. Copying a file removes it from its original location. ☐
4. Windows Explorer is used to view and organize files and folders. ☐
5. A file can have any number of folders in it. ☐
6. You can open particular file with a different program. ☐

C. Fill in the blanks.

1. A computer represents files and folder with an ..... .
2. A folder inside another folder is called ..... .
3. Windows Explorer is divided into ..... and ..... panes.
4. You can press ..... keys to select all the files of a folder.
5. ..... a file can help you quickly in locating the file in future.

D. Differentiate between the following.

1. File

   .....

   .....

   .....

   Folder

   .....

   .....

   .....

2. Copying File

   .....

   .....

   .....

   Moving File

   .....

   .....

   .....

E. Answer the following questions.

1. Which are the four main folders in Windows 7?

   .....

   .....

2. What is a hard disk? How will we name several logical drives?

   .....

   .....

   .....

3. What is the role of Windows Explorer in Windows 7?

   .....

   .....

4. What is the use of Recycle Bin?

   .....

   .....

5. Why do we need to search the name of a file/folder?

   .....

   .....

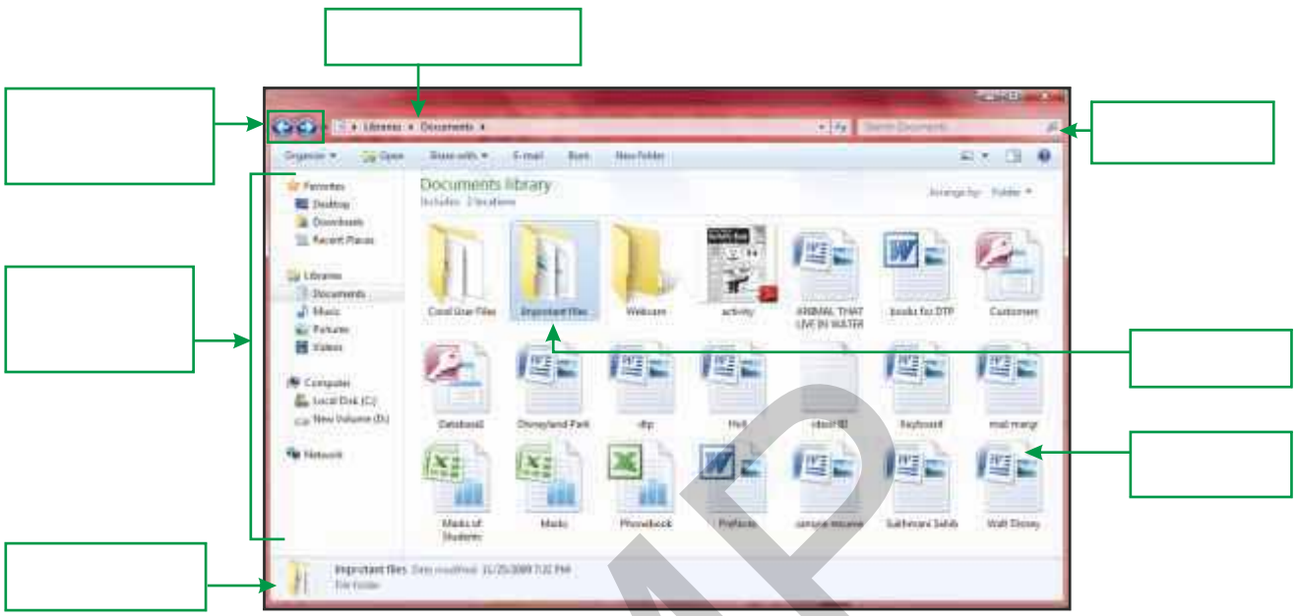
F. Application Based Question.

Kamal has created the files of different subjects and stored them on the desktop. By mistake, his one file has been deleted. Tell him the way to restore his deleted file in the desktop.

.....

Activity Section

Activity Label



Various Parts of Folder

Lab Activity

Create your own folder and sub-folders to manage your files.

- Create a folder on the Desktop and name the folder as '**Project**'.
- Open it by double-clicking on it.
- Create a sub-folder within the Project folder and name it '**Document**'.
- Double-click the 'Document' folder and the newly created folder will open in the window. This folder does not contain any other file or sub-folder in it.
- Now in this blank window, create two new sub-folders and name them as **Science** and **English**.
- To go back to the parent folder window, click on Back button on the toolbar. You will go to the parent folder 'Project'.
- Now, close the 'Project' folder.

Group Discussion

Divide the students into two groups and discuss the topic, 'Organizing our files and folders in the computer just like we organize our books, notebooks and other items properly'.

4 »Scratch - Programming

Topics Covered

•Introduction to Scratch •Working with Blocks •Generating a New Sprite •Sprite Stage •Project: Make the Cat Walk and Say Phew! •Working with Two Sprites •Forever Block •Project: Make a Person Walk in the Desert •Saving a Project

In your previous class, you learnt about Scratch, which is a free visual programming language. In this chapter, you will learn some more interesting things about Scratch.

Introduction to Scratch

Scratch is a simple fun-based visual programming language designed by the **Lifelong Kindergarten** learning group at **MIT** to introduce some basic programming concepts in an interactive manner.

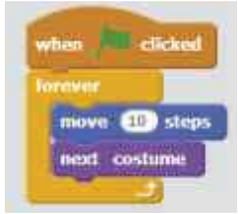
Scratch is not like other programming languages that require you to learn text commands and strict rules about how you can use them. This language is fairly easy for anyone to learn with fun. All commands are on screen, so you can just drag and drop them. It enables you to quickly see results of your work and even include **graphics** and **sounds**.

SPRITES

Scratch projects are made up of objects called **sprites**. You can change how a sprite looks by giving it a different **costume**. You can make a sprite look like a person, or a train, or a butterfly, or anything else. You can use any image as a sprite: you can draw an image in the paint editor, import an image from your hard disk, drag in an image from a Library or capture an image from the connected Web camera.

SCRIPTS

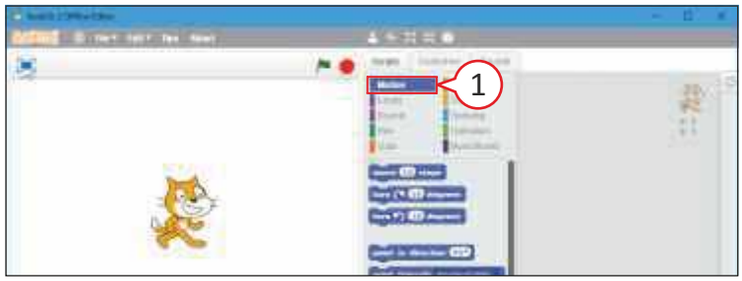
You can give **instructions** to a sprite, telling it to move or play music, or react to other sprites. To tell a sprite what to do, you snap together the blocks into stacks called **scripts (program)**. Scripts are created by snapping blocks together. Each block represents a different command or action that tells the application how to execute. When you execute or run a script, Scratch runs the blocks from the top of the script to the bottom.



Working with Blocks

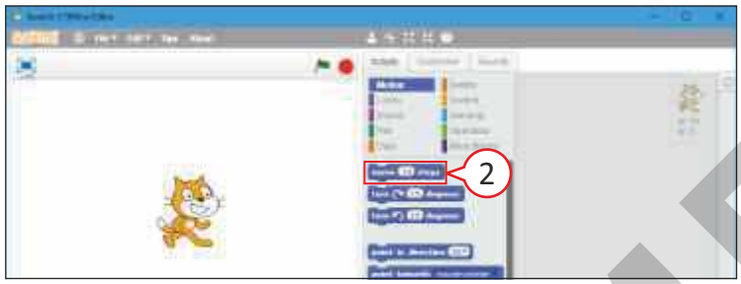
MOTION BLOCKS

These blocks control sprite placement, direction, rotation, and movement.



1. Click the **Motion** button to show the Motion blocks in the Blocks Palette.

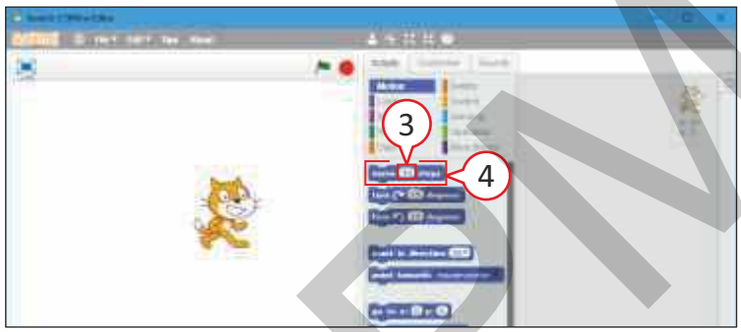
When you first start Scratch, Motion button is selected by default.



2. In the Blocks Palette, click the **move 10 steps** block.

The cat on the Stage moves in the direction of its face.

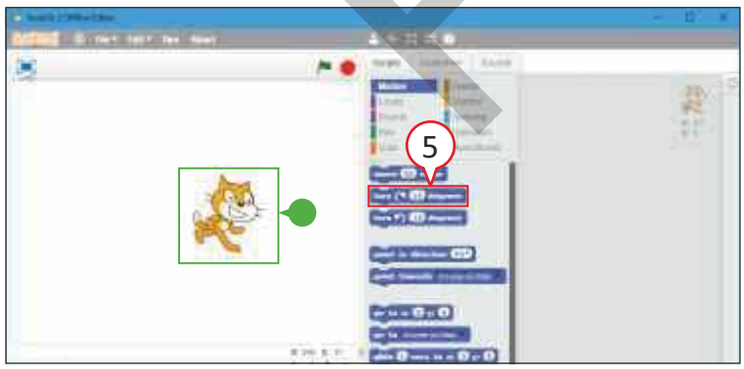
Each time you click the block, the cat moves once.



3. Click on the number **10** and change it to **50**.

The number determines how far across the screen you want the cat to move.

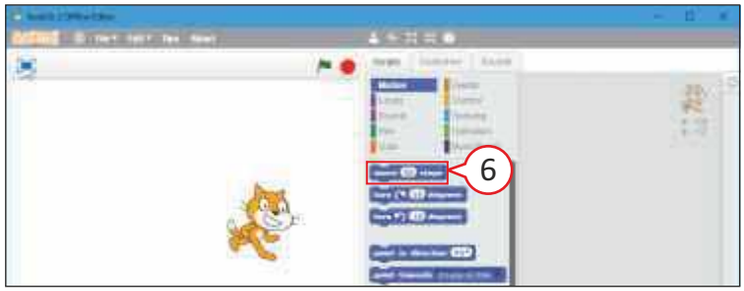
4. Click the block and the cat moves five times as far.



5. Click on the **turn clockwise 15 degrees** block.

- The cat will rotate 15 degrees clockwise.

*To change the angle of the turn, change the **number of degrees** and then click the block to make the cat turn.*



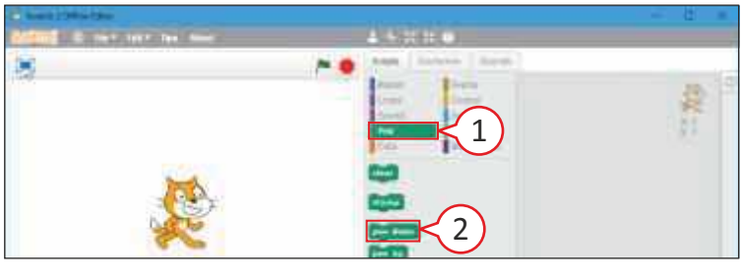
6. Now, click on **move 50 steps** block.

The cat walks in its new direction.

If the cat gets to the edge of the Stage, drag it back again with mouse pointer.

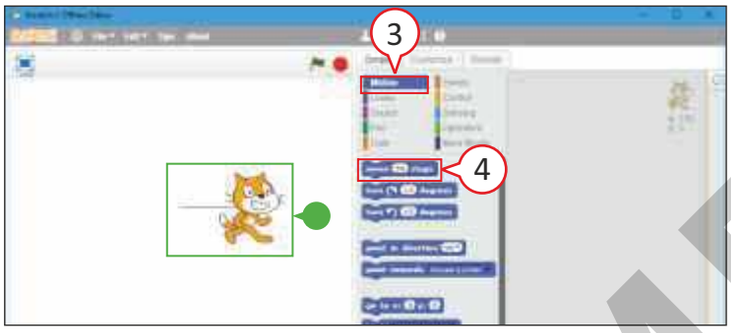
PEN BLOCKS

These blocks can be used to draw shapes using different colors and pen sizes.



1. Click the **Pen** button to show the Pen blocks.
2. Click on **pen down** block.

Now, if you click the **Motion** button and click the blocks to move the cat around, it will leave a line behind it, wherever it goes.



3. Click the **Motion** button to show the Motion blocks.
4. In the Blocks Palette, click the **move 50 steps** block.

- *The cat on the Stage moves in the direction of its face and leaves a **line** behind it.*

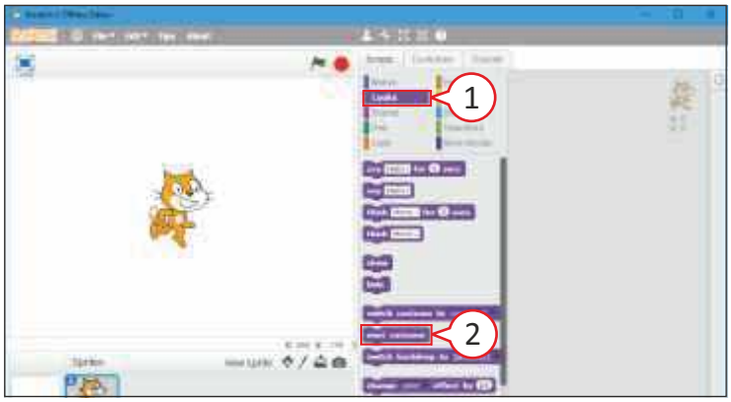
5. Now, click the **Pen** button to show the Pen blocks.
6. Click the **pen up** block.

It will turn off the Pen effect.

Now, if you click the **Motion** button and click the blocks to move the cat around, it will not leave a line behind it, wherever it goes.

LOOKS BLOCKS

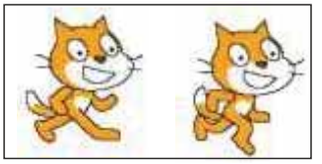
These blocks change the sprite and background appearance.



1. Click the **Looks** button to show the Looks blocks.
2. Click on **next costume** block.

It will make the cat's legs move, as if it is running on the spot.

Costumes are just different pictures a sprite can have. The cat has two costumes that shows its legs in different positions.



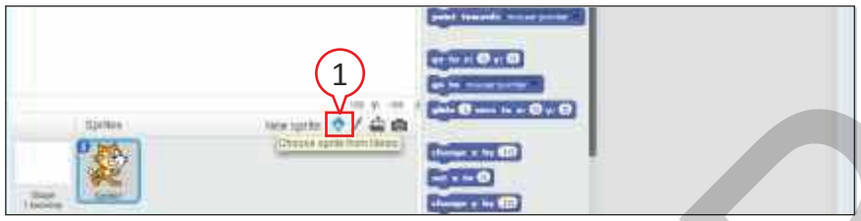
Generating a New Sprite

New sprite:

In Scratch, cat is the default sprite, but you can create a new sprite or import more sprites from the library in your project. Scratch provides **four** different options for adding sprite to your applications. These options are accessed through the **New Sprite** buttons located just below the stage. Let us generate a new sprite from these options.

CHOOSE SPRITE FROM LIBRARY

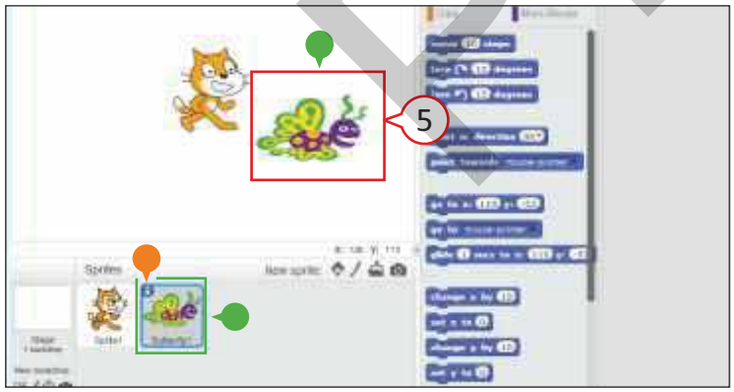
Scratch provides access to different collections of graphic files that you can add to your Scratch applications as sprites.



1. Click on **Choose sprite from library** button.

Sprite Library window appears.

2. Select the **Category** for the sprite. By default **All** is selected.
3. Click on the **sprite** you want to add.
4. Click on **OK**.



- Your new sprite is added to the **Sprites List** as well as displayed on the **Stage**.
- You can click on **Info [i]** button on the sprite in Sprites List area and give sprite a new name.

5. Drag the sprite to the place where you want it on the stage.

Sprite Info Pane [i]

The Sprite Pane includes info about the selected sprite and few tools for manipulating the sprite.

- A **sprite's name** can be changed by typing new name in the box.
- **Circular Arrow** — Enables full rotation in a sprite.
- **Linear Arrow** — Enables the sprite to only face left or right.
- **Disables Rotation** — The sprite will remain facing 90 degrees.
- Dragging the **blue line** located over the sprite will rotate the sprite.
- The sprite's **X** and **Y** coordinates as well as direction are listed.

PAINT OR CREATE NEW SPRITE

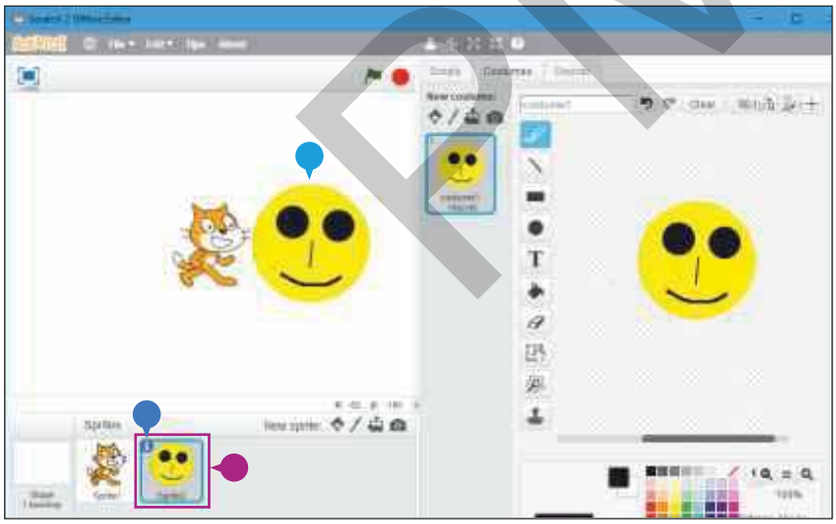
By using **Paint new sprite** button, you can create a new sprite for your project.

1. Click on **Paint new sprite** button.

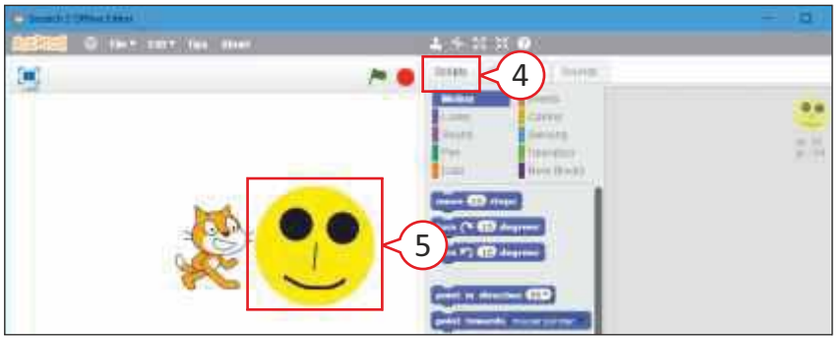
- The **Costumes** tab appears that can be used to create new sprites with the help of drawing tools from the toolbar and Color Palette.

2. Click on the **drawing tools** from the toolbar.
3. Draw the sprite on the canvas.

- You can use different colors and apply a range of special effects.



- The new sprite will be added on the stage with a name **Sprite2**.
- The new sprite will also appear in Sprites List area.
- You can click on **Info** [ ] button on the sprite in Sprites List area and give sprite a new name.



4. Click on **Scripts** tab to return to the Script view.
5. Drag the sprite to the place where you want it on the stage.

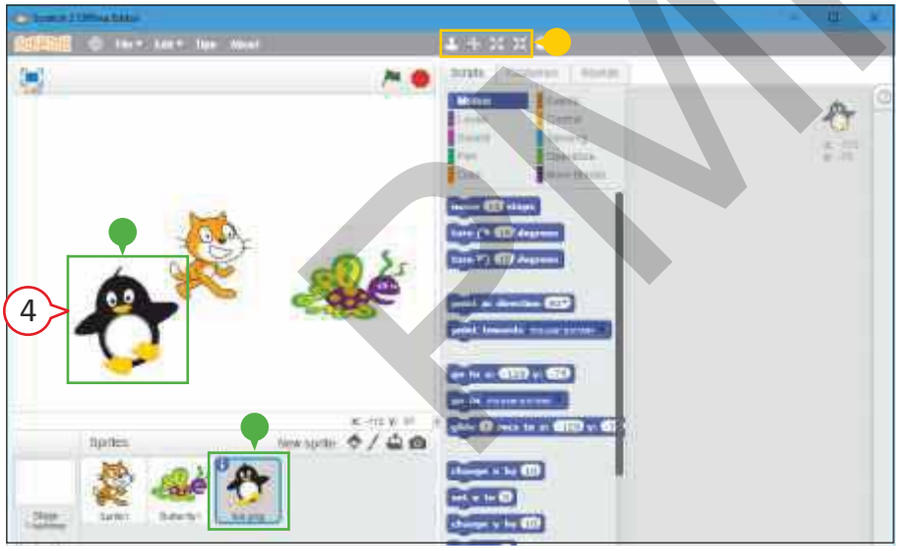
UPLOAD SPRITE FROM FILE

You can upload any image or sprite from the file stored on your computer.

1. Click on **Upload sprite from file** button.

Select file to upload dialog box will appear.

2. Navigate the **file** you want to upload as a sprite and click on it.
3. Click on **Open**.



- The new sprite will be added on the stage as well as in Sprites List area.
- You can use the tools from the Toolbar to **grow** or **shrink** the size of new sprite.

4. Drag the new sprite to the place where you want it on the stage.

UPLOAD SPRITE FROM CAMERA

You can upload your own image or sprite from the camera or web cam attached to your computer.

1. Click on **New sprite from camera** button.

Camera dialog box will appear showing your picture or the object which is in front of camera.

2. Click on **Save** button to capture the picture.

The new sprite will be added on the stage as well as in Sprites List area.

DELETING SPRITE

You can delete the sprite from the stage if you do not want it in your project.

1. **Right-click** the sprite you want to delete.

A menu will appear.

2. Click on **delete**.

or

- You can also click on **Delete** button [ ] from the toolbar and then click on the **sprite** you want to delete.

The sprite will be removed from the stage.

CHANGING THE COSTUME OF SPRITE

A **Sprite** is a small character that performs actions on the Stage. You can change how a sprite looks by giving it a different **costume**. It can have one or more costumes, allowing it to change its appearance as the application executes. The sprite must have at least one costume. For example, **cat** (default Sprite) has two costumes. Each costume is assigned a unique name and number. In this example, we have selected **butterfly** as a sprite. It also has two costumes.

1. Click on **Costumes** tab.

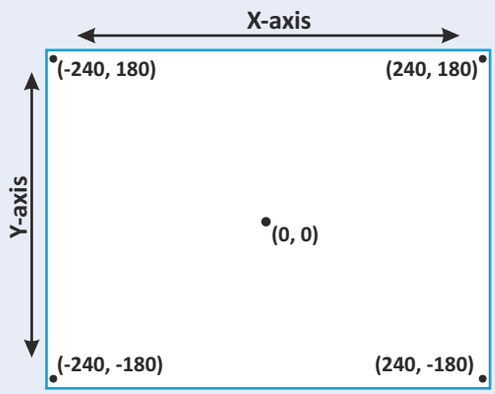
- You will see butterfly1-a and butterfly1-b costumes under the butterfly sprite's costume list.

2. Click on **butterfly1-b** costume.

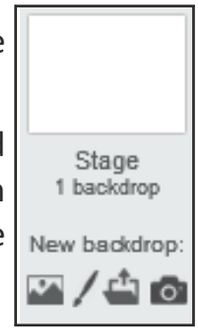
The new sprite costume will be added on the stage as well as in Sprites List area.

Sprite Stage

The **stage** provides the **canvas** upon which sprites are displayed and interact with one another. The stage is 480 units wide and 360 units high. As you can see, the X-axis runs from coordinates 240 to –240, and the Y-axis runs from coordinates 180 to –180. The middle of the stage has a coordinate location of (0, 0). Scratch keeps you informed of the pointer location whenever it is moved over the stage by displaying its (X, Y) coordinate position in the mouse x: and mouse y: fields, just beneath the bottom-right side of the stage.



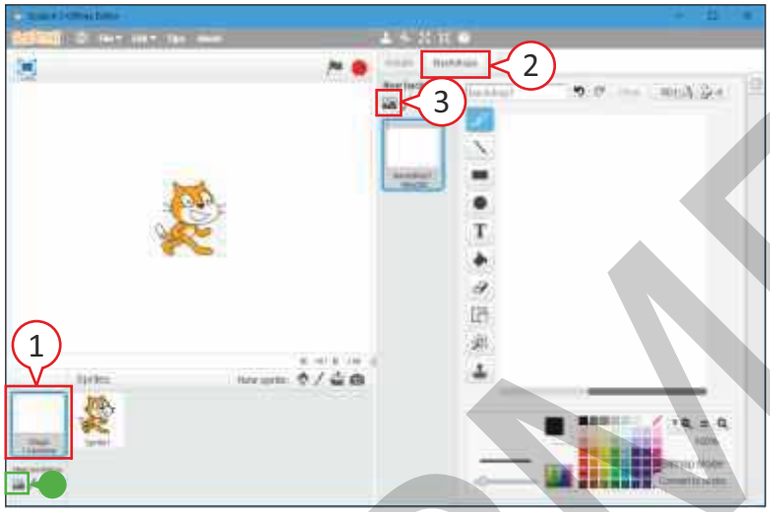
CHANGING THE BACKDROP OF STAGE



By default, the background of stage is white. You can change the background of the stage to make it more interesting and lively.

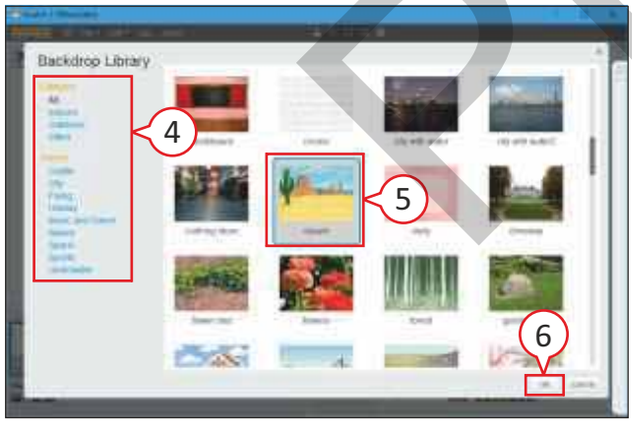
The **New Backdrop** icons [ ] are used to change the background of the stage. By using these **four** icons, you can choose backdrop from the library, paint a new backdrop, upload a backdrop from the file stored in your computer or click a backdrop image using the camera.

Choose a Backdrop from Library



1. Click the **white icon** (Stage) on the left of Sprites List.
2. Click the **Backdrops** tab.
3. Click on **Choose backdrop from library** button to upload a picture from the library.

- You can also click on **Choose backdrop from library** button from here.

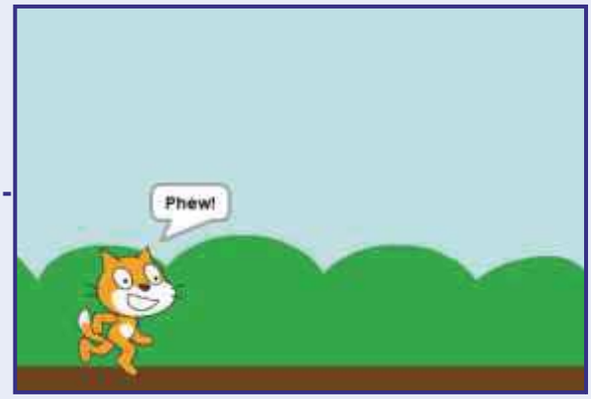


The **Backdrop Library** window appears.

4. Select the **Theme** or **Category** for the backdrop.
5. Click on the **backdrop** you want to add.
6. Click on **OK**.

New backdrop is added to the Stage, behind the cat (sprite).

Project: Make the Cat Walk and Say Phew!

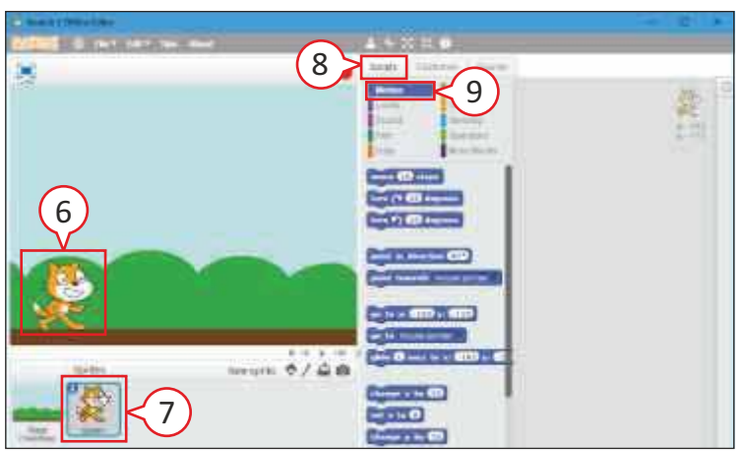


CREATING A PROGRAM

When you **click** blocks in the Blocks Palette, the sprite moves immediately; it will only test what blocks do, but it is not a program. A **program** is a set of repeatable instructions that you can store to carry out later.

The **Scripts Area** is a place where you make your programs in Scratch by dragging the blocks from Blocks Palette and dropping them on top of each other.

1. Click the **white icon** (Stage) on the left of Sprites List.
2. Click the **Backdrops** tab.
3. Click on **Choose backdrop from library** button to upload a picture from the library.
4. From the Backdrop Library window, click on the **blue sky** backdrop.
5. Click on **OK** to add backdrop.



6. Drag the Sprite (cat) to the place where you want it for the project.
7. Click the **cat** in the Sprites List.
8. Click the **Scripts** tab.
9. Click the **Motion** button.

For making a program, you have to drag the blocks into the Scripts Area from the Blocks Palette.

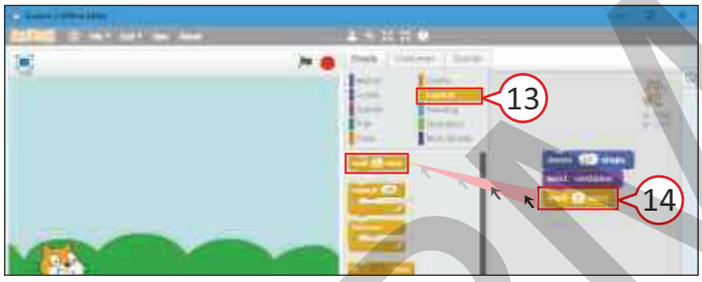
10. Select **move 10 steps** block and drag the block from the Blocks Palette into the Scripts Area using the mouse.

This first block will move the cat 10 steps in the direction of its face.

11. Click the **Looks** button.
12. Select **next costume** block, drag it into the Scripts Area, and place it underneath the **move 10 steps** block.

The blocks will snap together. These joined-up blocks are called **script** or **program**.

The **next costume** block will make the cat's legs move, which will appear like it is walking on spot.



13. Click on the **Control** button.
14. Drag the **wait 1 secs** block into the Scripts Area and snap it under the other two blocks.

This block adds a 1-second delay. Without it, our cat will change the costume very fast. Slowing the cat down enables us to see the legs moving.

15. Right-click the **move 10 steps** block.

A menu appears.

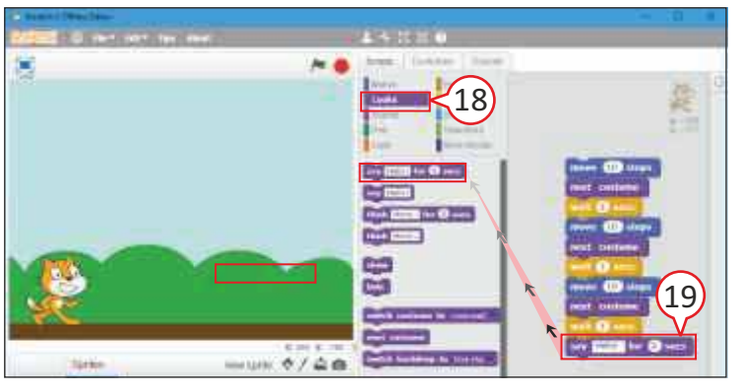
16. Click on **duplicate**.

This copies the first block and any blocks underneath it. In this example, it copies the **move**, **next costume** and the **wait** blocks.

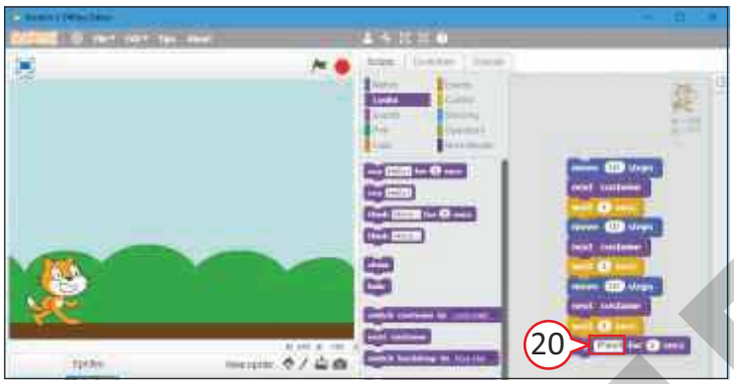
17. Move the duplicated blocks to the bottom of your program and click to place the blocks there.

You can repeat the steps **15** to **17** several times to make the cat walk further.

Now, let's make the cat say something at the end.



18. Select **Looks** button.
19. Drag the **say Hello! for 2 secs** block into the Scripts Area and snap it under the other blocks.



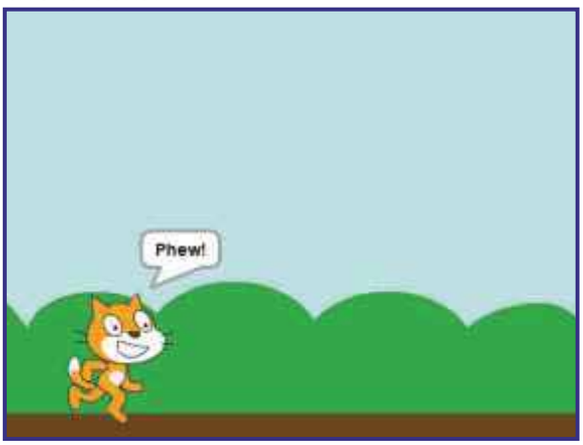
20. Click on **Hello!** and change it to **Phew!**

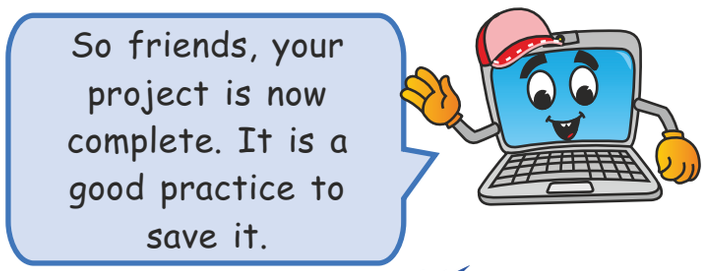
RUNNING THE PROGRAM

1. Click any of the joined-up blocks in Scripts Area.

- Scratch carries out all the joined-up instructions in order, starting from the top and working its way down the blocks.

Keep clicking on the joined-up blocks in Scripts Area. On every click, Scratch carries out all the joined-up instructions in order, starting from the top and working its way down the blocks.

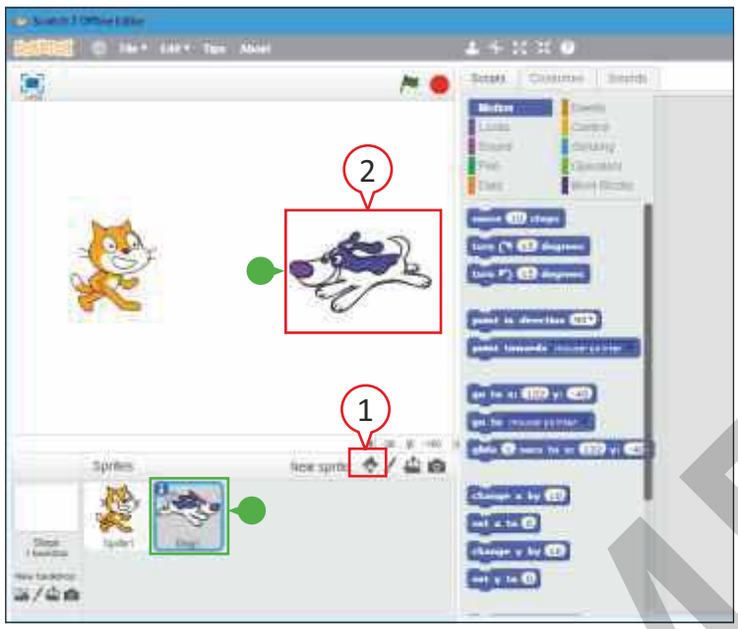




Working with Two Sprites

In Scratch, you can work with more than one sprite on the stage.

ADDING A SPRITE



1. Add one more sprite on the stage by clicking on **Choose new sprite from library** button.

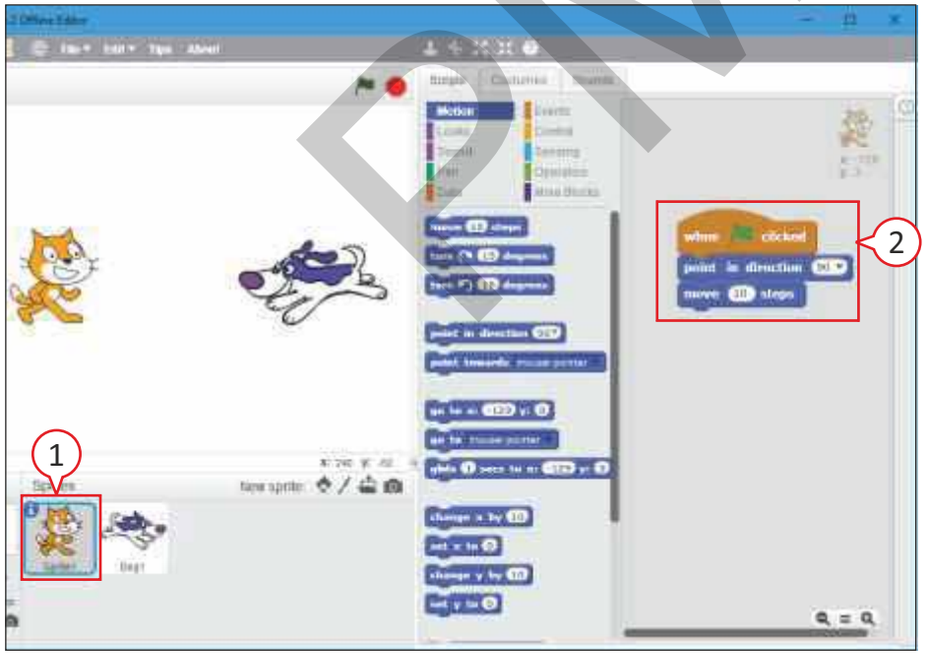
- Your new sprite (Dog1) will be added in the **Sprites List** as well as displayed on the **Stage**.

*You can rotate the sprite by using **Sprite info pane** [ ].*

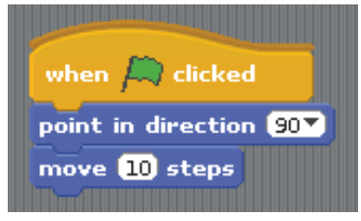
2. Drag the new Sprite to the place where you want it on the stage.

You can also import the costume of the added sprite.

CREATING SCRIPT FOR THE SPRITE

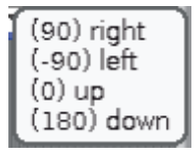


1. In the **Sprites List**, click on the **Sprite icon** (Sprite1) for which you want to create a script.
2. Create a **script** (program) in the **Scripts Area** for selected sprite.

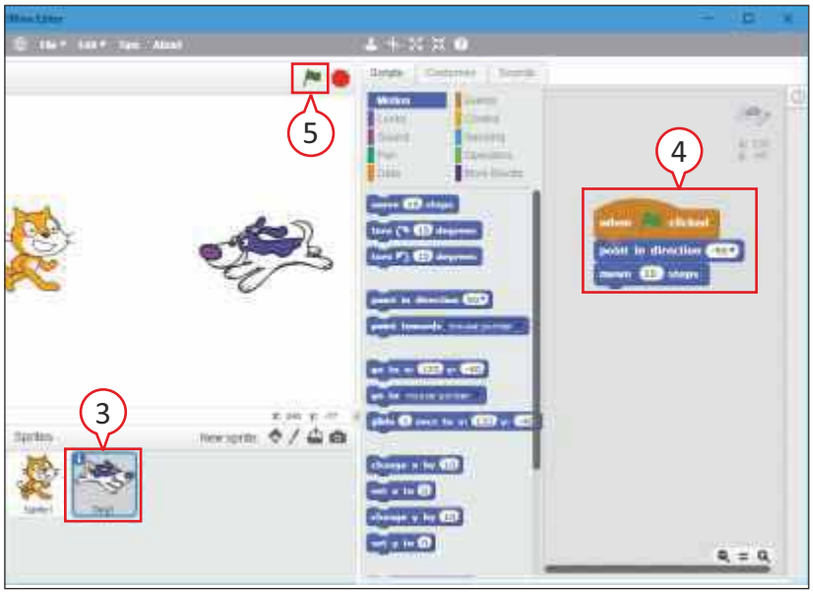


In the above script, first we insert **Flag** block from **Events Block** menu on the stage.

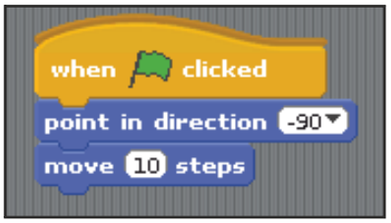
Then, we add **point in direction** block from **Motion Blocks** and set the option to **90** which is **right** direction.



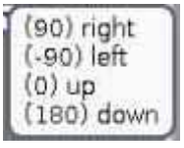
Then, we add **move steps** block from **Motion Blocks** and set **10** in it.



3. In the **Sprites List**, click on the **Sprite icon** (Dog1) for which you want to create a script.
4. Create a **script** (program) in the **Scripts Area** for selected sprite.



In the above script, first we insert **Flag** block from **Events Block** menu on the stage.



Then, we add **point in direction** block from **Motion Blocks** and set the option to **-90** which is **left** direction.

Then, we add **move steps** block from **Motion Blocks** and set **10** in it.

5. Click on **Green Flag** button [ ] above the stage. Green flag is used to start your main program. You will observe that both the sprites move 10 steps toward each other.

You can keep clicking on **Green Flag**. On every click, Scratch executes all the joined-up blocks for both sprites, and you will observe both the sprites coming closer to each other.

Forever Block

The **Forever** block is a **Control** block which runs the script continuously until the **Stop** button is pressed. When you click **Forever** block, the blocks held inside this block will be executed in a loop and that loop will never end until the **Stop** sign is clicked. This block is mainly used to perform a task **repeatedly**.

Stop button [ ] is in **red** color and is used to stop the project any time. This is located on the top right corner of the Scratch stage.

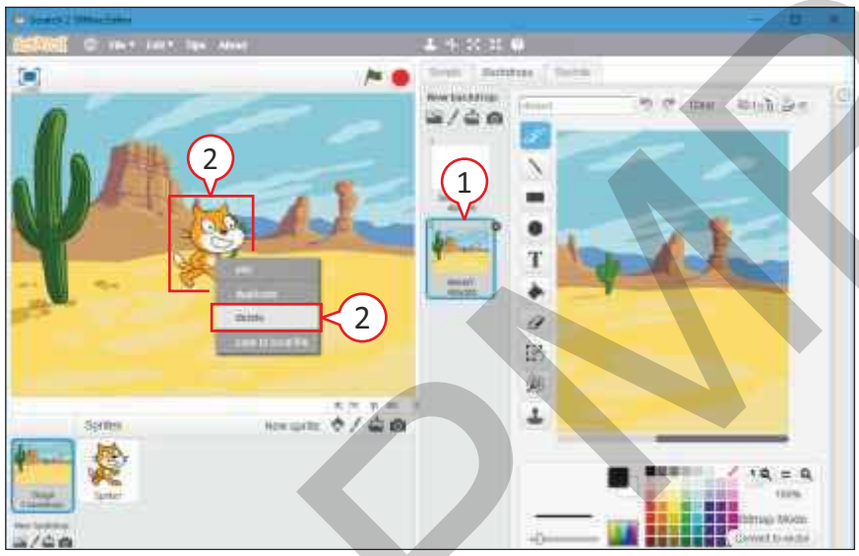
FOREVER IF BLOCK

The **Forever if** block is a **Control** block that will always check the condition. If the condition is **true**, the blocks held inside this block will run, and then the script continues; but if the condition is **false**, nothing will happen until it becomes true again.

Project: Make a Person Walk in the Desert

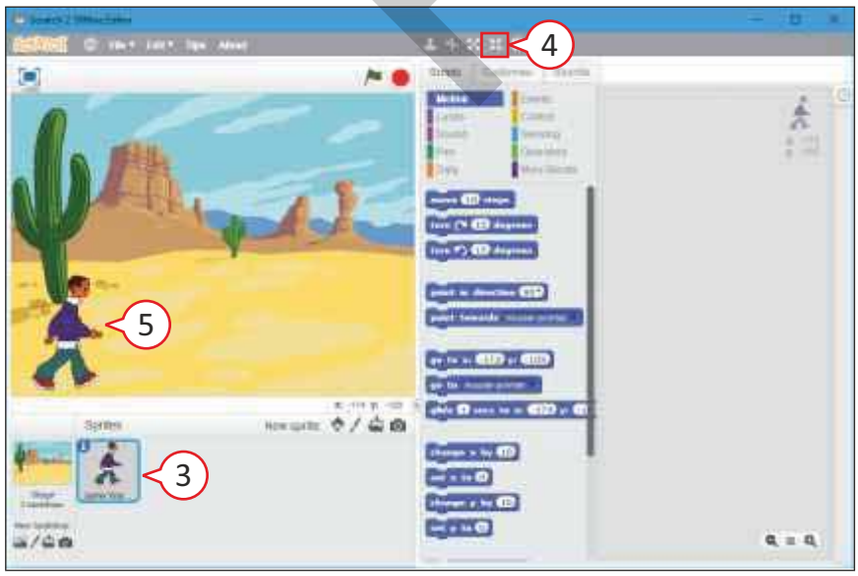
In this project, you will see a person is walking in a desert.

When you start Scratch, you will see a cat as a sprite and a white background.



1. Change the white background to **Desert** backdrop.
2. Remove the cat sprite by right-clicking on it and select **Delete** from the menu that appears.

   Cat will be removed.

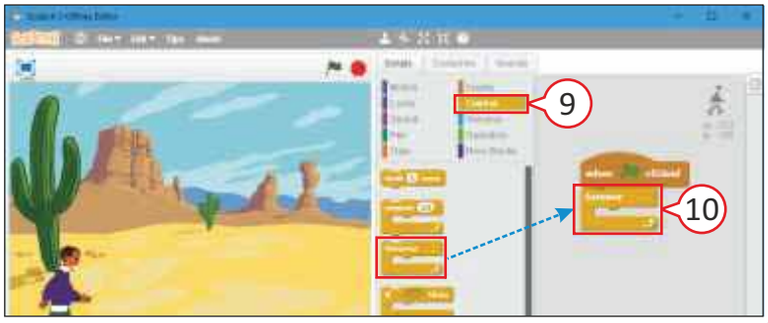


3. Add new sprite.
4. Resize the sprite by clicking on **Shrink** tool in the toolbar and then click on the sprite.

   The size of the sprite will decrease.
5. After resizing, drag the sprite to the left of the stage.

Note: You have already learnt about changing backdrop, adding and deleting sprite, and changing the costume of sprite.

6. Click the **Scripts** tab.
7. Click the **Events** button.
8. Select **when flag clicked** block and drag it into the Scripts Area.

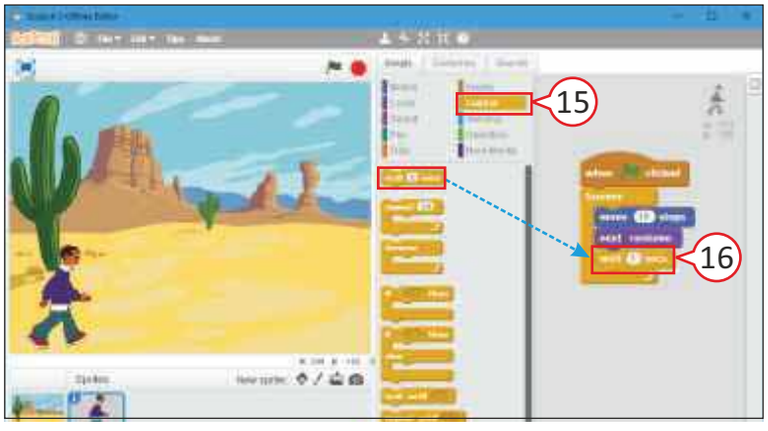


9. Click on **Control** button.
10. Select **Forever** block, drag it into the Scripts Area, and place it underneath the **when flag clicked** block.

11. Click the **Motion** button.
12. Click the **move 10 steps** block, drag it into the Scripts Area, and place it inside the **Forever** block.

13. Click the **Looks** button.
14. Select **next costume** block, drag it into the Scripts Area, and place it inside the **Forever** block and underneath the **move 10 steps** block.

In this example, we have changed the costume that shows its legs in different positions. It will make the sprite's legs move, which will appear like it is walking.



15. Click the **Control** button.
16. Select **wait 1 secs** block, drag it into the Scripts Area, and place it inside the **Forever** block and underneath the **next costume** block.

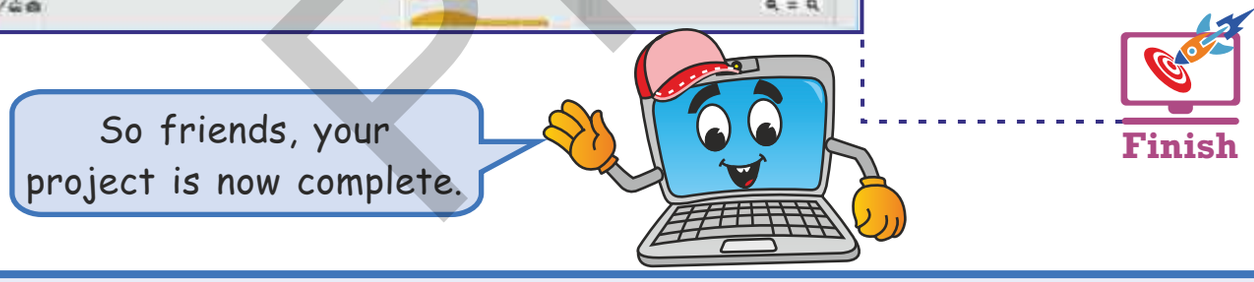
17. Click on **green flag** to start the script.

The sprite starts walking in the desert.

You have used **Forever** block which is used for continuous loop. So, the sprite will keep walking until you press the **Stop** button.

18. Click on **red stop** [●] button to stop the script.

The sprite will stop walking.



Saving a Project

A **project** includes all the sprites, scripts, and backgrounds that are used in it. It's a good idea to save your projects so you can reuse or modify them in future. The file extension of Scratch is **.sb2**.

1. Click on **File** menu.
2. Click on **Save**. **Save Project** dialog box appears.

Navigate the location where you want to save the project.

3. Type the name of your project in the **New Filename** text box.
4. Click on **OK** to save your project.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
I know that Scratch is a free visual programming language.	☐	☐
I know that Scratch projects are made up of objects called sprites.	☐	☐
I know that Paint new sprite button is used to create a new sprite.	☐	☐
I know that Stage provides the canvas upon which sprites are displayed and interact with one another.	☐	☐
I fully know that background of the stage can be made more interesting and lively.	☐	☐
I know that we can work with more than one sprite on the stage.	☐	☐
I know that the Forever block runs the script continuously until the Stop button is pressed.	☐	☐
I know that the file extension of Scratch project is .sb2.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. Scratch projects are made up of objects called ..... .
   a. Sprites ☐ b. Script ☐ c. Block ☐
2. Snapping the blocks together into stacks is called ..... .
   a. Costume ☐ b. Stage ☐ c. Script ☐
3. ..... block will make the cat's legs move, which will appear like it is running.
   a. Next Costume ☐ b. Motion ☐ c. Pen Down ☐
4. ..... Sprite button is used to create a new Sprite.
   a. Draw New ☐ b. Paint New ☐ c. Select New ☐
5. The ..... block runs the script continuously until the Stop button is pressed.
   a. Motion ☐ b. Looks ☐ c. Forever ☐

B. Write 'T' for True and 'F' for False statements.

1. A Script is a small character that performs actions on the Stage. ☐
2. You can change how a sprite looks by giving it a different costume. ☐
3. The stage of Scratch window is 580 units wide and 380 units high. ☐
4. You can upload own image from the camera as a sprite on the stage. ☐
5. You can work with more than one sprite. ☐

C. Fill in the blanks.

1. Scratch provides ..... different options for adding sprite to your applications.
2. Stage provides the ..... upon which sprites are displayed and interact with one another.
3. ..... block slows down the cat and enables us to see what's going on.
4. By default, the background of stage is ..... in color.
5. ..... flag is used to start your main program in Scratch window.

D. Differentiate between the following.

1. Upload Sprite from File

   .....
   .....
   .....

   Choose Sprite from Library

   .....
   .....
   .....

2. Forever Block

   .....
   .....
   .....

   Forever If Block

   .....
   .....
   .....

E. Answer the following questions.

1. What do you mean by Scratch?

   .....
   .....

2. In how many ways can we generate a new sprite? Name them.

   .....
   .....

3. What does changing the Costume mean?

   .....
   .....

4. What is the need of changing backdrop of stage?

   .....
   .....

5. What do you mean by Sprite Stage?

   .....
   .....

F. Application Based Question.

Shikha has made a project by adding motion blocks, looks blocks, and has executed the project. Now, she wants to add her own picture as a sprite in her project. Tell her by which feature she will do so.

.....

Activity Section

Lab Activity

Animate the letters of your name, initials, or favorite word.

DANCING LETTER

1. Choose a background.
2. Choose or create a letter (sprite).
3. Add the following code:

Type a positive number to move forward.

Type a negative number to move back.

You can choose any drum from the menu.

4. Now, click on the Green Flag button to see the animation.

SPINNING LETTER

1. Choose or create a letter (sprite).
2. Add the following code:

You can try different numbers.

You can try different numbers.

3. Now, click on the Green Flag button to see the animation.
4. Click the following block in the Blocks Menu to reset the sprite's direction.

CHANGING THE COLOR OF LETTER

1. Choose a background.
2. Choose or create a letter (sprite).
3. Add the following code:

You can try different numbers.

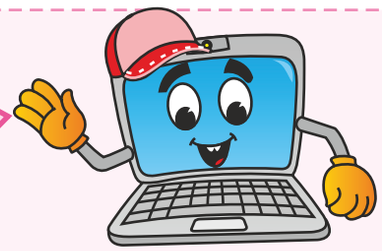
4. Now, click on the Green Flag button to see the animation.

5 »Internet – Electronic Mail (E-Mail)

Topics Covered

•E-mail or Electronic Mail •E-mail Programs •Parts of E-mail Message •How an E-mail Travels? •Common E-mail Terms •Creating an E-mail Account •Netiquettes

For thousands of years, people have been using various means to communicate with each other. Today, e-mail has become one of the most popular sources of communication.



E-mail or Electronic Mail

E-mail is the most popular service of Internet. E-mail enables us to electronically exchange messages with other Internet users, wherever they may be.

Today, almost anyone who has Internet access also has access to e-mail, so theoretically you can communicate with any Internet user in the world. This versatility has made e-mail one of the most popular Internet services.

HISTORY OF E-MAIL

Ray Tomlinson developed the first e-mail application for the ARPANET in 1971, consisting of a program called SNDMSG for sending mail and a program called READMAIL for reading mail. In the 1980s, such messages were exchanged between computers in offices and universities that had been linked together. By 1990, e-mail had gone worldwide, and today our lives without e-mail seems incomplete.

E-MAIL Vs. POSTAL MAIL

E-MAIL: Switch on the computer. Log in to your e-mail ID, just type the e-mail address, compose your message, and press the Send button. E-mail would be delivered in seconds or in minutes.

POSTAL MAIL: First get a headed notepaper, find an envelope, go to the post office to buy the stamps, print off the letter, put it in an envelope, and go to the postbox to drop the letter. Postal mail could take three-four days or more to be delivered.

ADVANTAGES OF E-MAIL

- E-mail is **extremely fast**. You can receive a message in a matter of seconds after it has been sent, irrespective of the geographical location of the sender and the recipient.
- E-mail is **convenient** because you can send messages anytime during the day, and your recipient does not need to be at his or her computer or even connected to the Internet.
- You can send a message to a group of people free of cost **quickly** and **easily**.
- You can send documents, graphics, sound files, or any file as an **attachment** along with your e-mail.
- E-mail is very economical because you do not have to pay to send messages, no matter where in the world you send them. E-mail can also save your money because you can send a message instead of placing a long-distance phone call.

E-mail Programs

You can create, send, receive, and manage an e-mail message by using different programs such as Windows Mail, Outlook, Hotmail, and Gmail.

The message can be simple text or can include an attachment, such as a word processing document, a graphical image, an audio, or a video clip.

Gmail

E-MAIL ACCOUNT

You must have an **e-mail account** to use e-mail service. E-mail account is provided by the companies which provide e-mail service such as yahoo.com, gmail.com, and many more. The account gives you a unique e-mail address to which others can send messages.

Every e-mail account comes with its own e-mail address. An e-mail address is a set of characters that uniquely identifies the location of your Internet mailbox.

E-MAIL ADDRESS

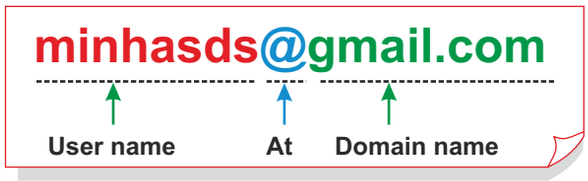
You can send e-mail messages anywhere around the world if you have an **e-mail address**. All e-mail users have their own, **unique** e-mail addresses. The messages are sent to the correct recipient because of the uniqueness of the address.

Parts of an E-mail Address

An **e-mail address** is a combination of a **user name** and a **domain name** that identifies the user so that he or she can receive messages. The **user name** and **domain name** are separated by the **@** symbol, which means **at**.

Your **user name** is a unique combination of characters that identifies you, and it must differ from other user names located on the same mail server. Your user name is sometimes limited to eight characters, and is often a combination of your first and last names, such as the initial of your first name and your last name.

Domain name is separated into two parts by a **period (.)**. The first part is the name of the service provider such as yahoo, gmail, and many more. The second part depicts the type of website, for example - .com means commercial, .gov means government and many more.



An e-mail address cannot use commas, spaces, or brackets. Instead, hyphen and underscore can be used.

ELEMENTS OF AN E-MAIL PROGRAM

- **Inbox:** Inbox stores your incoming messages.
- **Outbox:** Outbox stores outgoing messages that you have not yet sent.
- **New (Compose):** Clicking this button allows you to write a new e-mail message to someone.
- **Reply:** This button will allow you to send a reply to someone who has sent you an e-mail.
- **Reply to All:** Sometimes you will receive an email of which you are not the only recipient. Pressing this button allows you to reply to all the e-mail addresses from that e-mail.
- **Forward:** This button will help you forward a message, that you have received, to someone else.
- **Send:** Pressing this button will send the message that you have written to your e-mail server.
- **Delete:** This button allows you to delete the selected messages.
- **Print:** This button allows you to take a printout if your system is connected to the printer.
- **Sent Mail:** Sent mail stores outgoing messages that you have sent.
- **Attachment:** It is used to send a file prepared in any program with your e-mail.

- **Junk:** E-mail stores messages that the e-mail program considers to be unsolicited commercial mail.
- **Drafts:** It stores messages that you saved but have not yet finished composing.

Parts of E-mail Message

While sending or receiving an e-mail, you should understand several parts of message, like **From:**, **To:**, **Cc:**, **Bcc:**, and **Subject**.

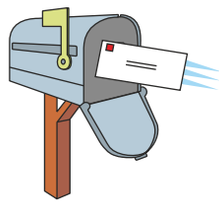
From: minhasds@pmpublishers.in
To: rajesh@pmpublishers.in
Cc: tminhas@hotmail.com
Bcc: rsharma@yahoo.com
Subject: Computer Books

Please send me the details of your computer books.

Thanks
With Regards,
Davinder Singh Minhas

FROM

It refers to a person who is sending the e-mail message; his or her e-mail address is written in this section.

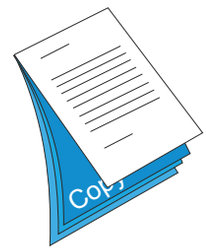


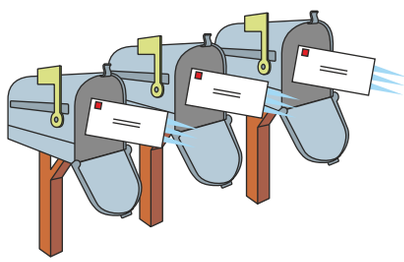
TO

The e-mail address of a person, who shall be receiving the e-mail message, should be written in this section.

CC

Cc stands for **carbon copy**. It is an exact copy of the message. The e-mail address of a person, who is not directly involved but you would like the message to be sent to him too, should be written in this section.



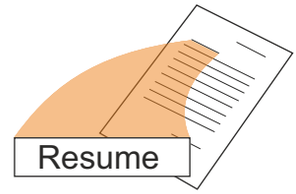


BCC

Bcc stands for **blind carbon copy**. You can take the help of Bcc if you want to send the same message to several people, without showing them that others have also received the same message.

SUBJECT

A very short description of your message is written in this section. For example, if you are sending a resume by e-mail, you can write **Resume** in the Subject section.

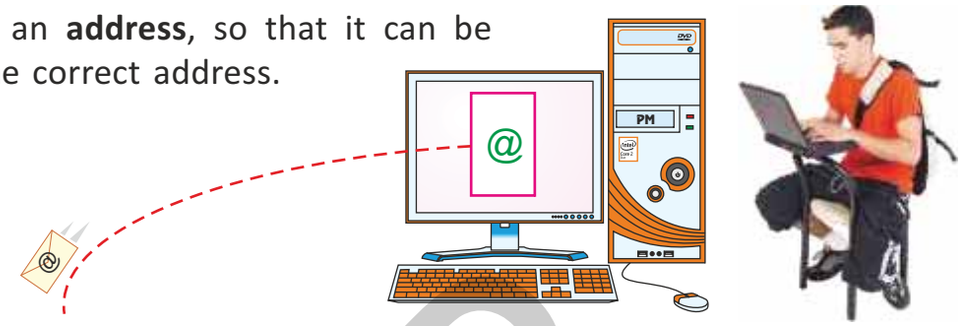


How an E-mail Travels?

The computers have to be linked together so that the e-mail message can travel.

1. An **e-mail message** is typed by the sender on his/her computer.

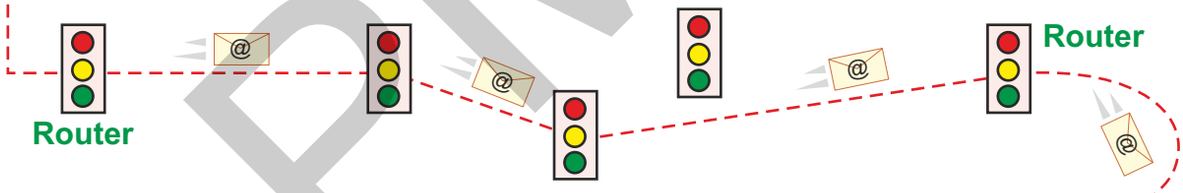
2. The message has an **address**, so that it can be sent directly to the correct address.



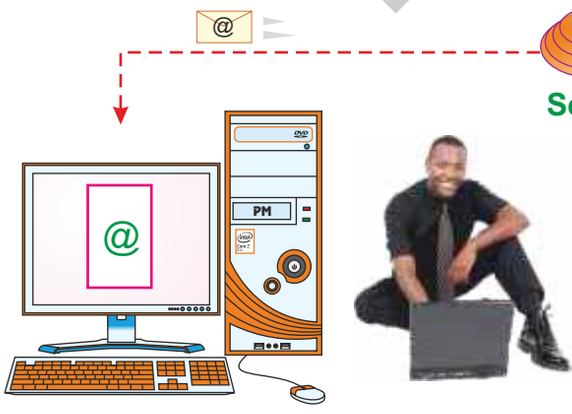
3. The message is sent to a **server** which is connected to the Internet.

4. The e-mail is then sent to a **router** by the server. The router sends the message to another router. Routers are connected to each other by telephone lines and cables.

5. The message is sent from one router to another until it reaches the correct one.



6. The e-mail is finally passed by the router to the server.



7. The server reads the address and passes the e-mail to the correct computer.

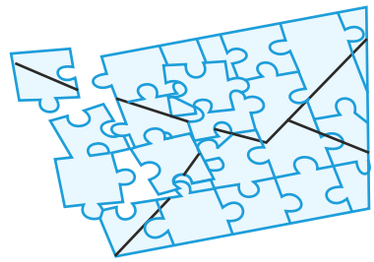
Sometimes routers are too busy or not working. In such cases, the e-mail messages are sent via other working routers.

HOW COMPUTERS EXCHANGE INFORMATION?

You need to have a set of rules like **protocol**, which determines how the information is to be sent. **Internet Protocol (IP)** is the most important protocol used on the Internet. It specifies that the information sent between computers, servers, and routers must be broken down into 'packets' of data.

What Are Packets?

Packets are small chunks of information which are broken by the Internet while sending the e-mail message from one computer to another. Each packet contains the address of the destination computer. The messages are put back together to form the e-mail message when this message reaches the designated computer.



Common E-mail Terms

There are some e-mail terms that you can use while composing the messages.

SMILEYS

You can use special characters, called **smileys** or **emoticons**, to express emotions in messages. These characters resemble human faces if you turn them sideways.

Cry	:'-(	Great!	:^D
Smile	:-)	Screaming	:-@
Laugh	:-D	Tongue out	:-&
Sad	:-(	kissing	:*
Wow	:-o	Angel	O:-)
Wink	;-)	clowning	:*)

ABBREVIATIONS

Abbreviations are commonly used in messages that you can use to save time while typing. Here are some of the most commonly used abbreviations.

AISI	As I See It	BTW	By The Way
AS	Another Subject	CU	See You
ASAP	As Soon As Possible	DK	Don't Know
B4N	Bye For Now	IC	I See
BAK	Back At Keyboard	LY	Love You
BBIAB	Be Back In A Bit	LOL	Laughing Out Loud
BBL	Be Back Later	SYS	See You Soon
TC	Take Care	Gr8	Great

SHOUTING

A MESSAGE WRITTEN IN CAPITAL LETTERS IS ANNOYING AND HARD TO READ. THIS IS CALLED **SHOUTING**.

Always use a combination of upper and lower case letters while typing messages.

BOUNCED MESSAGE

A message that returns to you because it cannot reach its destination is called a **bounced message**. A message usually bounces because of mistake in typing an e-mail address. So make sure that you check the receiver's e-mail address for accuracy before you send the message.

SIGNATURE

You can add information about yourself at the end of every message you send through an e-mail program. This is called **signature**. This prevents you from having to type the same information over and over again.

ATTACHMENT

Most e-mail messages consist only of text but you can also attach some other types of information, such as a photo, a spreadsheet file, a word processing document, to share. When you attach a file and send the message, the file or information is sent along with the e-mail as **attachment**.

Creating an E-mail Account

Electronic mail or **e-mail** is used to send messages electronically from one place to another. But to use this facility, you need to get **registered** with an e-mail service provider to get your e-mail ID.

Following are the steps to create e-mail account in Gmail.

CREATING AN E-MAIL ACCOUNT IN GMAIL

- Start **Web browser**, and enter the web address **www.gmail.com** in the address bar.
- **Gmail log in** page will appear on the screen.
- Click on the link **'Create an account'** in the 'log in' page to open Gmail registration form.
- First, enter your **first name** and the **last name** in the form, and then enter the desired **login name**.
- If someone else has taken the same login name, a message will appear 'Someone already has this username. Try another'. It shows you the choices from where you can select the new user name.

- Once your login name is selected, enter a **password** of minimum 8 characters. Repeat the same password in the box called **'Re-enter password'**.
- Fill the rest of the entries in the form as they are asked, and finally click the button **'I accept'** or **'Continue to Gmail'**.
- If all the entries are correctly added by you, you will get a confirmation for your new account, and now your new e-mail address is **<login name>@gmail.com**.

SENDING AND RECEIVING E-MAIL IN GMAIL

After creating the e-mail account, you can share it with your friends and relatives to send you e-mail messages and to read your incoming mails. Follow these steps to check your mails using your login ID and password:

- Start **Web browser** once again, and enter the web address '**www.gmail.com**' in the address box.
- Click on **Go** button, or press **Enter** key to open **Gmail login page**.
- Click in the '**Username**' box, and type your **login ID**. Make sure that the letters are typed in the same case as they were typed while creating the account.
- Enter the **password** in the '**Password**' text box, which appears in the form of black dots or asterisks.
- Click '**Sign in**' button to open your mailbox.
- It will show you the list of all your incoming mails. You can now click any one of them to open and read the contents of that mail.
- You can click '**Inbox**' button for coming back to your mailbox.
- To send an e-mail, click the '**Compose**' button to open compose mail web page.
- In the **To:** box, write the e-mail address of your friend, relative or anyone to whom you want to send the mail. Write the **subject** and then type the **message** in the space provided.
- Click on '**Send**' button. Your mail will be sent to the recipient instantly.
- Close your mail box by clicking the '**Sign out**' link.

Consideration while choosing username and password

- Usernames can have letters (a - z), numbers (0 - 9), dashes (-), underscores (_), and periods (.).
- Usernames should not contain an equal to sign (=), brackets (<, >), plus sign (+) or more than one period (.) in a row.

REPLYING TO A MESSAGE

Sometimes, a message you receive requires some kind of response or answer; then you can reply to the person who has sent the message.

- Click on the message to which you want to reply.
- Click on **Reply** to reply to the person who sent you the message, or click on **Reply All** to respond to all the persons in the To and Cc lines.
- A message window appears.
- Type your reply and click on **Send** button. Your reply will be sent to the person who sent the message.

FORWARD A MESSAGE TO ANOTHER PERSON

You can send a copy of a message that you have received to another person if you think that it might be relevant to him.

- Click the message you want to forward.
- Click on **Forward**. A message window appears.
- Type the e-mail address of the recipient in **To** line.
- Type your message and click on **Send** button.
- Your message will be forwarded to the person.

ATTACHING A FILE IN GMAIL

Most e-mail messages consist only of text. But you may attach other types of files like photo, a spreadsheet file, a word processing document, etc. in your mail. When you attach the file and send the message, the file is sent along with the e-mail.

- Click the **'Compose'** button to open New Message window.
- In the **To:** box, write the e-mail address of your friend to whom you want to send the mail. Write the **subject** and then type the **message** in the space provided.
- Click on **Attach Files** ( ) button. The **Open** dialog box appears.
- Click the **file** you want to attach and then click on **Open**.
- Gmail attaches the file to the message.
- Click on **'Send'** button. Your mail will be sent to the recipient with the attachment.

Opening an Attachment

If you receive a message with a file attached to it, you can open the contents of the attached file. Attachments are identified by a special **paperclip icon** ( ).

- Click the message containing an attachment. Message contents are displayed.
- **Right-click** the attachment.
- Click on **Open**. The file opens in the appropriate program.

Saving an Attachment

If you receive a message with a file attached to it, you can save the attached file.

- Click on the message that contains an attachment.
- **Right-click** the attachment.
- Click on **Save As**. The **Save Attachment** dialog box appears.
- Navigate the folder in which you want to save the file and click on **Save**.

Note: Always open the attachment from a trusted source because the attachment may contain virus which can affect your computer.

Netiquettes

Netiquette, also known as **Internet etiquette**, is the code of conduct that users should follow while using the Internet. While sending a message through e-mail, we must follow certain etiquettes; some of them are stated below.

- Your message should have a **subject line** that conveys its content clearly. For example, 'Can you send me your CD?' is better than 'Send CD'.

- The messages should be **simple** and **to-the-point**.

- The e-mail message should not be in capital letters. This is equivalent to **SHOUTING**!

- While including funny comments, you should add **smileys** because on the telephone it is easy to tell if someone is joking from the tone of his or her voice, but people can easily misunderstand the tone of an e-mail if it doesn't include emoticons.

- As most e-mail messages do not show bold or italic letters when they display a message, there is no need to include them.

- An e-mail is not always private, and messages can accidentally be sent to the wrong person. Please take care of what you write and where you send it.

- Use **abbreviations** and **acronyms** for phrases.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
⊙ I know that an e-mail enables us to electronically exchange messages with other users.	☐	☐
⊙ I know that an e-mail address is a combination of a user name and a domain name.	☐	☐
⊙ I know that Packets are the small chunks of information which are broken by the Internet while sending an e-mail message.	☐	☐
⊙ I know that a message written in capital letters is called Shouting.	☐	☐
⊙ I know that we can send file and photos as an attachment with the e-mail.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. First e-mail application was developed by ..... .
   a. Ray Tomlinson ☐ b. Sabeer Bhatia ☐ c. Charles Babbage ☐
2. Domain name is separated into two parts by a ..... .
   a. Comma (,) ☐ b. Period (.) ☐ c. Colon (:) ☐
3. @ symbol used in an e-mail address is pronounced as ..... .
   a. At ☐ b. As ☐ c. All ☐
4. The small chunks of e-mail message which are broken by the Internet are called ..... .
   a. Packets ☐ b. Pouches ☐ c. Boxes ☐
5. The message written in capital letters is called ..... .
   a. Bounced ☐ b. Shouting ☐ c. Abbreviation ☐
6. ..... button helps you to send a message that you have already received.
   a. Forward ☐ b. Move ☐ c. Reply ☐

B. Write 'T' for True and 'F' for False statements.

1. You can send only text files as an attachment with your e-mail. ☐
2. You cannot use commas, spaces, or brackets in an e-mail address. ☐
3. Password appears in the form of bullets or asterisks. ☐
4. You will receive the e-mail message only if your computer is on. ☐
5. 'From' section contains address of person who is writing the e-mail. ☐

C. Fill in the blanks.

1. An ..... is a unique address of each E-mail user.
2. Smileys are also called ..... .
3. ..... can save time while typing the e-mail message.
4. A username is sometimes limited to ..... characters.
5. ..... section is the very short description of your E-mail message.

D. Differentiate between the following.

1. E-mail — Postal mail

.....

.....

.....

2. To — From

.....

.....

.....

3. Reply — Forward

.....

.....

.....

E. Answer the following questions.

1. What are the advantages of an e-mail?

.....

.....

2. Define the different parts of an e-mail address.

.....

.....

.....

3. What is the purpose of 'attachment' in an email?

.....

.....

4. Describe some etiquettes of writing a good e-mail.

.....

.....

F. Application Based Question.

Ram needs to send his photograph urgently to his father who is out of station for some work. But he does not know which feature is used to send the photograph through e-mail. Help him.

.....

Activity Section

Lab Activity

Send e-mail messages with an attachment using an e-mail program.

To: abc@gmail.in
Cc: admin@hotmail.com
Bcc: info@yahoo.com
Subject: Painting Competition
Please find the details of next painting competition in the school.
Thanks
With Regards,
Davinder Singh Minhas

The following steps guide you through the process of sending an attachment:

- Open **Word** and create a **Notice** of Painting competition and save it on the desktop.
- Run any **email program** on your computer.
- Locate and then click on the button to compose a new email message.
- Type the recipient's email address in the **To:** text box. If you are sending the email message to multiple recipients, separate each email address with a semicolon (;).
- If you would like to send a carbon copy of the email message to one or more people, type their email address(es) in the **Cc:** text box.
- To send a copy of the email message to someone while hiding his or her email address from the other recipients, enter his or her email address in the **Bcc:** text box.
- Enter a descriptive subject in the **Subject:** text box. It is not a good practice to leave the subject blank when you send an email message.
- Type the body text of the email message in the appropriate area.
- Click on **Attach Files** ( ) button. The **Open** dialog box appears. Navigate the file you have created and save on the desktop.
- Click the **file** you want to attach and then click on **Open**. Email program attaches the file to the message.
- If your email program supports it, check the spelling of your email message and correct any errors found.
- Click on the **Send** button, which sends the email message to everyone listed in the **To**, **Cc**, and **Bcc** text boxes.

6 »Word - Table and Mail Merge

Topics Covered

•Microsoft Word •Project: Letter regarding Annual Function •Creating Document •Inserting Table •Using Mail Merge •Views of Document •Saving a Document

Hello children! In the previous class, you have learnt about Word. Now, we will learn some more different features provided in Word.

Microsoft Word

Microsoft Word or **Word** is a full-featured **word processing program**. It allows users to **create** and **manipulate** documents, containing mostly text and sometimes graphics.

A major advantage of using Word is that users can easily change what they have written. You can also send a copy of your Word document to various e-mail addresses when connected to the Internet. Millions of people use Word every day to create documents such as letters, memos, reports, fax, cover-sheets, mailing labels, and newsletters.

FEATURES OF WORD

Spelling & Grammar Checker: You can use the spelling and grammar checker to spell check or proof-read documents for writing style and sentence structure errors in your document.

Thesaurus: With Thesaurus, you can look up **synonyms** (words with the same meaning) for words in a document while you are using your word processing software.

Columns: Most word processing software programs can arrange text in two or more columns like a **newspaper** or **magazine**. The text from the bottom of one column automatically flows to the top of the next column.

Tables: Tables are a way of organizing information into **rows** and **columns**. You can easily re-arrange rows and columns, change column widths, or format the contents of a table.

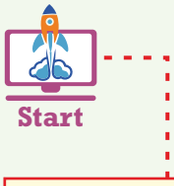
Mail Merge: It creates personalized letters, mailing labels, and envelopes for each person on your mailing list at once.

Macro: A macro saves your time by combining a series of actions into a single command.

AutoCorrect: This feature corrects common spelling errors. For example, if you type the word **adn**, the word processing software automatically changes it to the correct word **and**. AutoCorrect also corrects errors in capitalization. For example, it capitalizes the names of days, the first letter in a sentence, etc.

AutoFormat: It automatically creates symbols, fractions, and ordinal numbers. For example, when you type **:)**, it changes to a **smiling face** symbol. The fraction **½** is created when you type **1/2**; and the ordinal **2nd** is created when you type **2nd**.

Tracking Changes/Comments: If multiple users work with a document, you can instruct the word processing software to highlight or color-code the changes made by various users. This way, you can see easily what changes have been made to the document. You can also add **comments** to a document, without changing the text itself. These comments allow you to communicate with the other users working on the document.



Project: Letter regarding Annual Function

March 10, 2019

This is to bring to your kind notice that on 30th January 2019, Annual Function – **PM Public School (2018-19)** was organized in the school premises. **Mr. Rajesh Bajaj** was the honorable Chief Guest. The function commenced by lighting of the lamp by the School Principal **Mrs. Renu Khare**.

At the end of the function, **Award Ceremony** was conducted to recognize the efforts of the students. The awards were conferred by the Chief Guest and the Principal.

Following table shows the names of winners in various categories.

PM PUBLIC SCHOOL

List of Awardees				
CATEGORY	**STUDENT NAME**	**CLASS**	**SECTION**	**COMPETITION**
Best Athlete	Ankur Srivastava	8th C		Annual Sports
Best Dancer	Kanak Chawla	10th A		Inter-school Dancing
Best Singer	Pooja Sharma	5th B		Inter-school Singing
Best Orator	Anchal Melhotra	9th A		Inter-school Debate

Merge the above document to be shared with the parents of the winners.

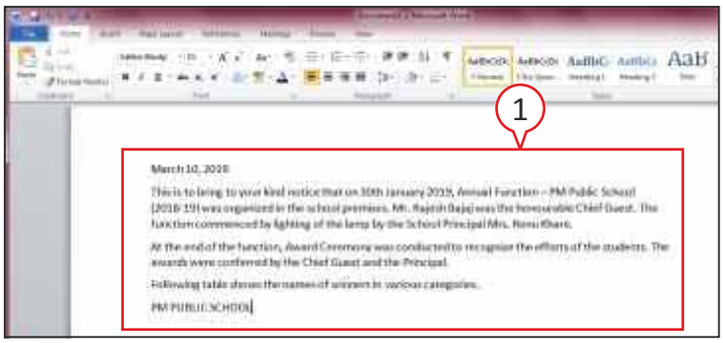
NAME	ADDRESS	CITY	PHONE
Kamal Srivastava	B-17/T1, Sector 2	Noida	24567789
Shalini Chawla	40-J, Mayur Vihar	Delhi	22834556
Rahul Sharma	109, Sector 8	Ghaziabad	23467889
Manya Melhotra	A-1/3, Sector 19	Noida	34566778

This project deals with creation of Letter and Table, and performing Mail Merge. Now, let us create the project by using various features of Word.

Creating Document

ENTERING TEXT

With the help of a keyboard, you can enter text into a document.



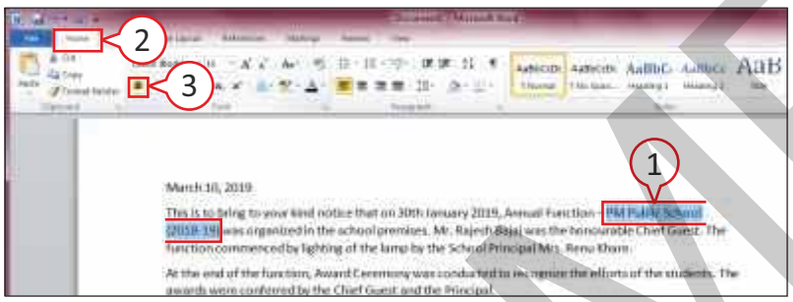
The text you type will appear where the **insertion point** flashes on your screen.

1. Type the text for your document.

The text appears to the left of the insertion point as you type.

MAKING THE TEXT BOLD

You can make your text bold to emphasize information in your document.

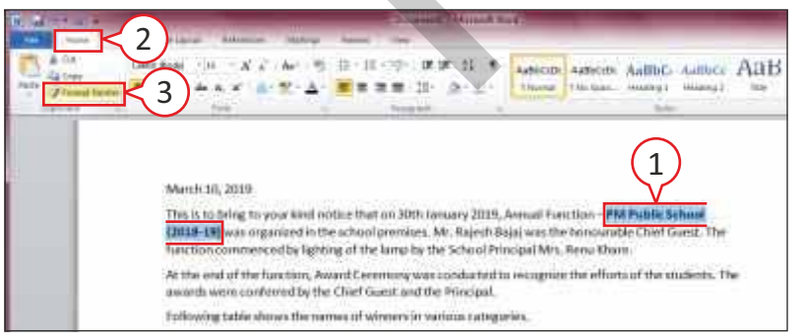


1. Select the text you want to make bold.
2. Click on **Home** tab.
3. Click on **Bold** [**B**] button.

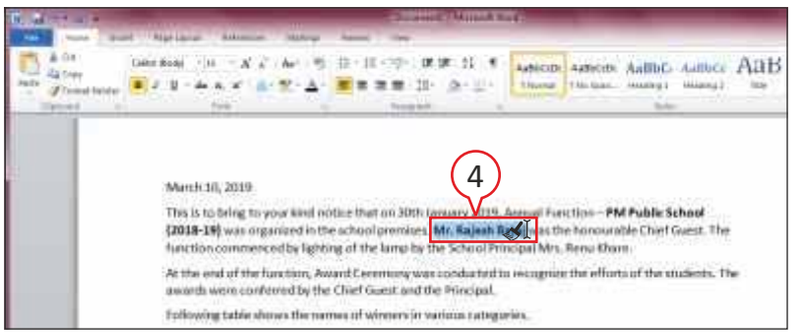
The text you selected appears in the new style.

FORMAT PAINTER

Format Painter tool is used to copy the formatting that you apply to text in one portion of your document to another portion of your document. This will save your time and give the text in your document a consistent appearance.



1. Select the text that displays the formatting (Bold) you want to copy.
2. Click on **Home** tab.
3. Click on **Format Painter** ( ) to copy the formatting of the text.

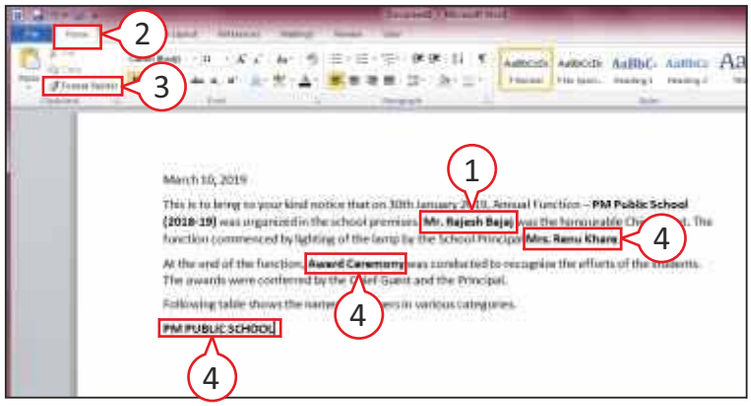


The **mouse pointer** changes to ( ) when over your document.

4. Select the text you want to display with the same formatting.

The text you selected displays the formatting.

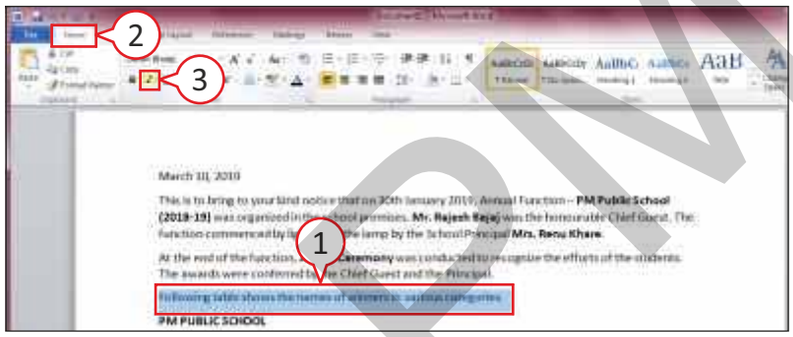
Copy Formatting To Several Areas



1. Select the text that displays the formatting you want to copy.
2. Click on **Home** tab.
3. Double-click on **Format Painter** tool [ ] to copy the formatting of the text.
4. Select each area of the text you want to display with the same formatting.
5. When you finish selecting all the text you want to display with the formatting, press **Esc** key.

MAKING THE TEXT ITALIC

You can make your text slanting to let it stand apart from the surrounding sentence in your document.

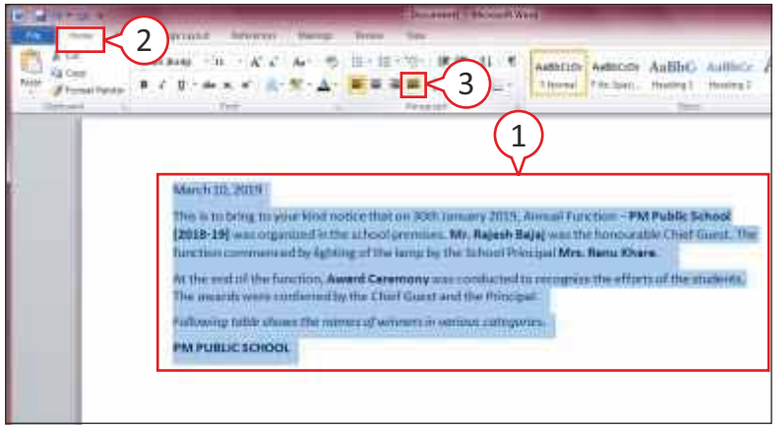


1. Select the text you want to make italic.
2. Click on **Home** tab.
3. Click on **Italic** [I] button.

The text you selected appears in the new style.

CHANGING ALIGNMENT OF TEXT TO JUSTIFIED

You can align the text to determine the appearance and orientation of the edges of the paragraph. By default, Word assigns the **Left Align** command.

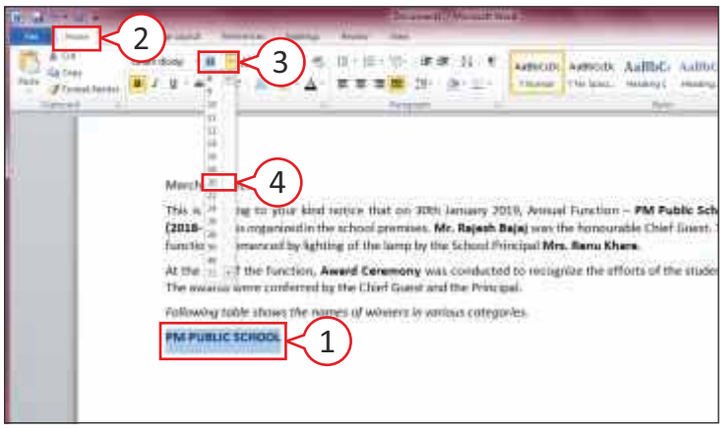


1. Select the text that you want to format.
2. Click on **Home** tab.
3. Click on **Justify** ( ) to justify text between the left and right margins.

The text is displayed with the new alignment.

CHANGING THE FONT SIZE OF TEXT

Font Size controls the height of the font, generally measured in **points**. You can increase or decrease the size of the text in your document.

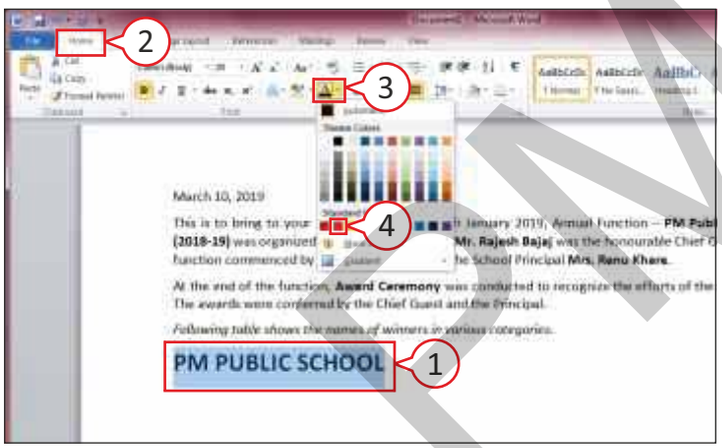


1. Select the text you want to change to a different font.
2. Click on **Home** tab.
3. Click on the down arrow of **Font Size**.
4. Click on the size you want to use.

The text you selected changes in the new size.

CHANGING THE COLOR OF TEXT

Color of the text can be changed to draw attention towards headings or important information in your document.



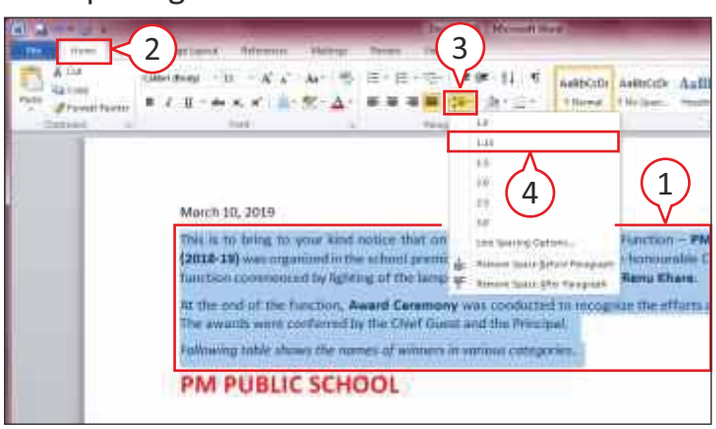
1. Select the text you want to format.
2. Click on **Home** tab.
3. Click on the down arrow of **Font Color**.
4. Click on any color.

Word applies color to the text.

In this example, we have applied **red color** to the text.

CHANGING THE LINE SPACING

You can change the amount of space between the lines of the text. Increasing the line spacing can make a document easier to review and edit.

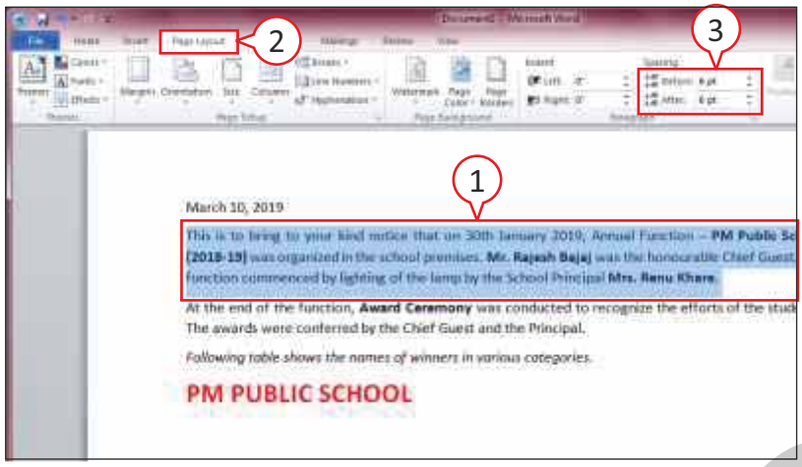


1. Select the text you want with different line spacing.
2. Click on **Home** tab.
3. Click on **Line spacing** button to display the line spacing options.
4. Click on the line spacing you want.

The text appears with the line spacing you selected. In this example, we have applied **1.5** line spacing.

CHANGING PARAGRAPH SPACING

Paragraph spacing is the space **before** and **after** a paragraph in the document. You can change the amount of space between paragraphs of text.



1. Click anywhere in the paragraph or select it to set spacing before and after it.
2. Click on page **Layout** tab.
3. Click on arrows to increase or decrease the space **before** and space **after** the selected paragraph.

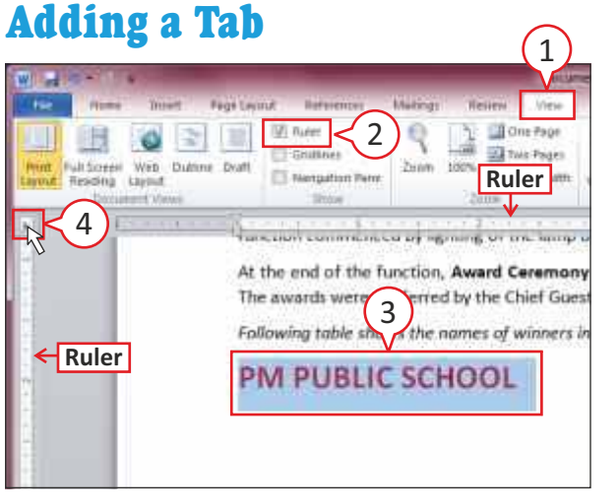
Word applies the spacing before and after the selected paragraph.

CHANGING TAB SETTING

Tab is short for **tabulation** and is used for controlling the position of the text exactly where you would like it in the document or to line up information in your document. By default, Word creates tab stops every **0.5 inch** across the page and left aligns the text on each tab stop. The five different types of tabs are:

- **Left Tab (Normal):** It aligns the following text on the left of the tab stop. The text flows to the right.
- **Right Tab:** It aligns the following text on the right of the tab stop. The text flows to the left.
- **Center Tab:** It aligns the text at the middle of the tab stop.
- **Decimal Tab:** The decimal tab is used to align numbers and text with a period.
- **Bar Tab:** It creates a vertical line at the designated tab stop.

Adding a Tab

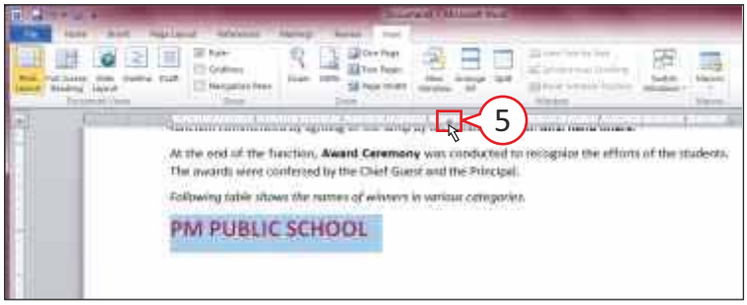


1. Click on the **View** tab.
2. Click on **Ruler** checkbox to show the **ruler**.
3. Select the text where you want new tab.
4. Click on this area until the type of tab you want to add appears.

(⌞) Left tab (⊥) Center tab

(⌟) Right tab (⫠) Decimal tab

(⌶) Bar tab



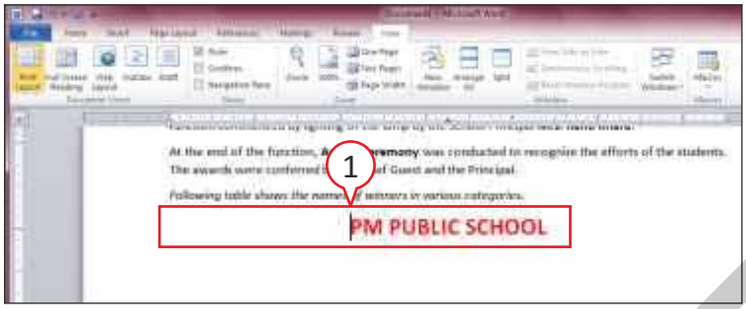
5. Click on bottom half of the ruler where you want to add the tab.

The new tab appears on the ruler.

In this example, we have selected ***Center*** *tab.*

You can **remove** the tab by dragging the tab off the ruler.

USING A TAB



1. Click on the beginning of the line you want to move to the tab. Then, press the **Tab** key from the keyboard.

The Insertion point and text that follows move to the tab you set.

Inserting Table

In Word, tables are the powerful and useful tools. They are extremely flexible, and easy to create and manipulate. They are a way of organizing information into horizontal **rows** and vertical **columns**, which intersect to form **cells**.

You can insert all types of data in cells, including text and graphics. Tables can be customized and are useful for various tasks, such as presenting textual information and numerical data.

CREATING A TABLE

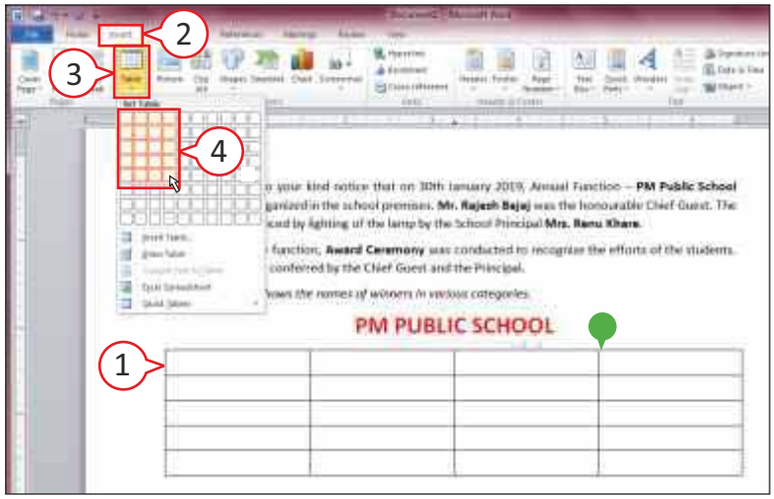
You can create table in your document by three different ways:

- Firstly, you can create a **blank** table and type data in it.
- Secondly, you can insert a **preset** table in the document and replace the text of present table with your own text.
- Thirdly, you can draw a **customized** table by controlling how the rows and columns appear in it.

Margin and Indentation

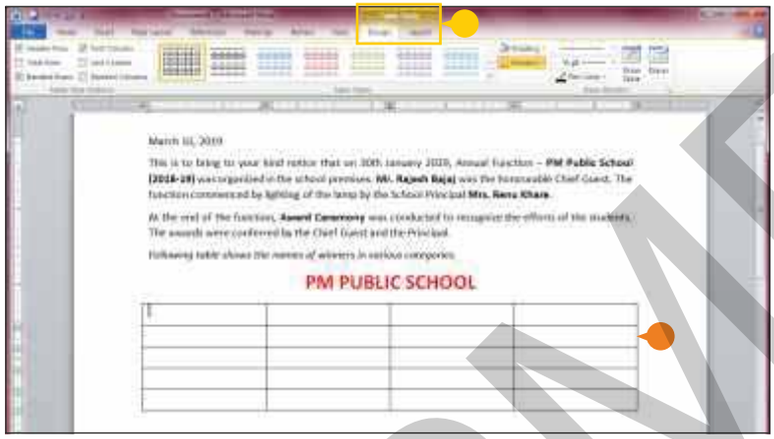
- **Margin:** A margin is the space between the text and the edge of your document. You can adjust the right, left, top, and bottom margins of your document. When you adjust margins, Word sets the margins from the position of the insertion point to the end of the document. By default, Word sets all margins — left, right, top, and bottom —to 1 inch.
- **Indenting:** Indenting refers to the blank space used to separate a paragraph from the left or right margins. You can indent paragraphs in your document from the left and right margins. You also can indent only the first line of a paragraph or all lines except the first line of the paragraph.

Creating a Blank Table



1. Click in the document where you want to insert a table.
2. Click on **Insert** tab.
3. Click on **Table** button.
4. Drag the mouse pointer until you highlight the number of rows and columns, you want the table to contain.

- Word previews the table as you drag over the cells.



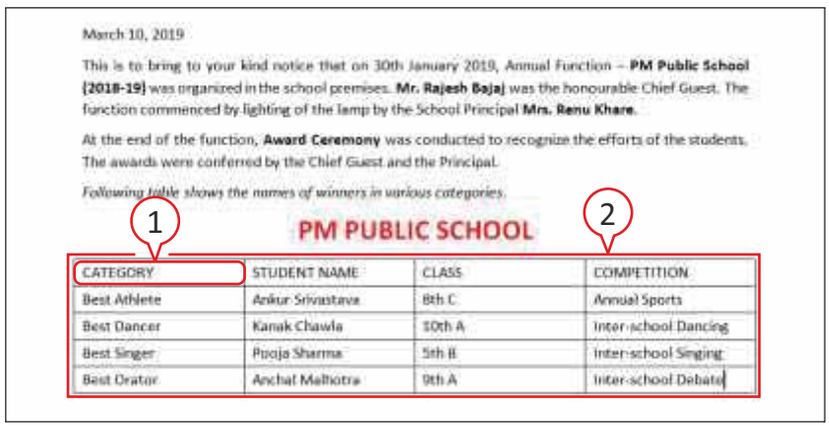
- *Word adds table to the document.*
- **Table Tools** option appears on the Ribbon.

To move the insertion point from cell to cell in a table, you can do any of the following:

- Press **Tab** key to move to the next cell (to the right, or to the beginning of the next row if in the right most cell).
- Press **Shift+Tab** keys to move to the previous cell.
- Use the **Arrow** keys to move one cell in the arrow's direction.
- Click on the cell in which you want to type.

ENTERING TEXT IN TABLE

You can enter the text in the table as you enter it in the document.

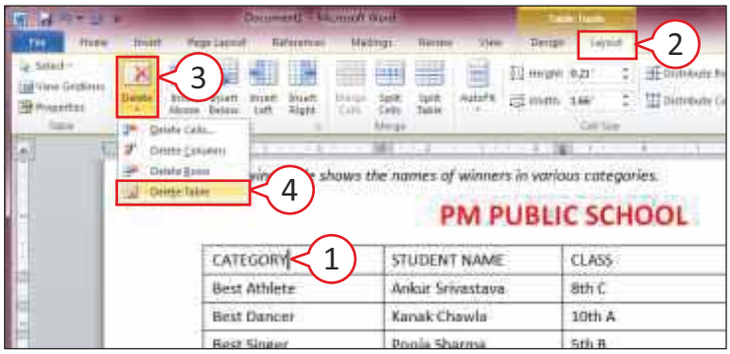


1. Click on the cell where you want to enter text. Then type the text.
2. Repeat step **1** until you finish entering all the text inside the table.

*You can press the **Tab** key to move the insertion point to the next cell.*

DELETING A TABLE

You can delete your table whenever you want.

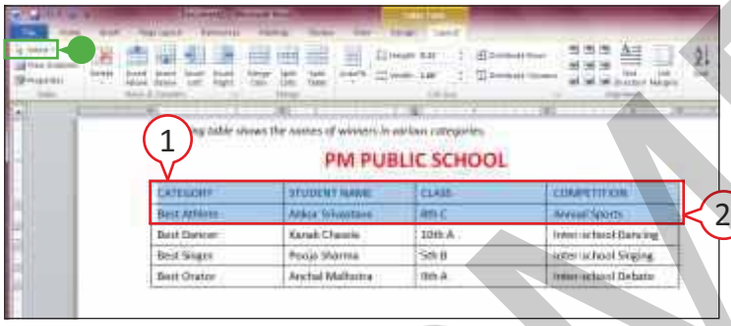


1. Click anywhere in the table which you want to delete.
2. Click on **Layout** tab.
3. Click on **Delete** button.
4. Click on **Delete Table**.

The table and its contents disappear from your document.

SELECTING CELLS IN TABLE

You can select table cells, rows, and columns in a table to perform editing tasks, and apply formatting to all the selected areas of the table.



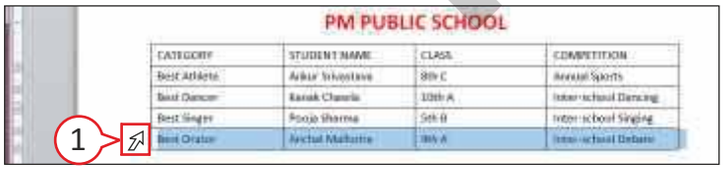
1. Click and drag the mouse over cells that you want to select.
2. Release the mouse button to **Select** cells.

- In the **Layout** tab, you can also use **Select** tool to select parts of your table.

To Select A Single Cell

1. You can **triple-click** the cell to select everything in it.

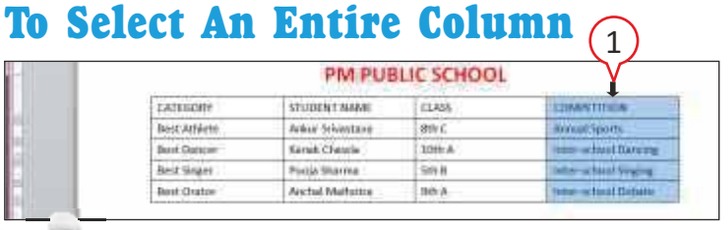
To Select An Entire Row



1. Take your mouse near the left border of row and click on it.

The entire row will be selected.

To Select An Entire Column



1. Take your mouse near the top border of column and click on it.

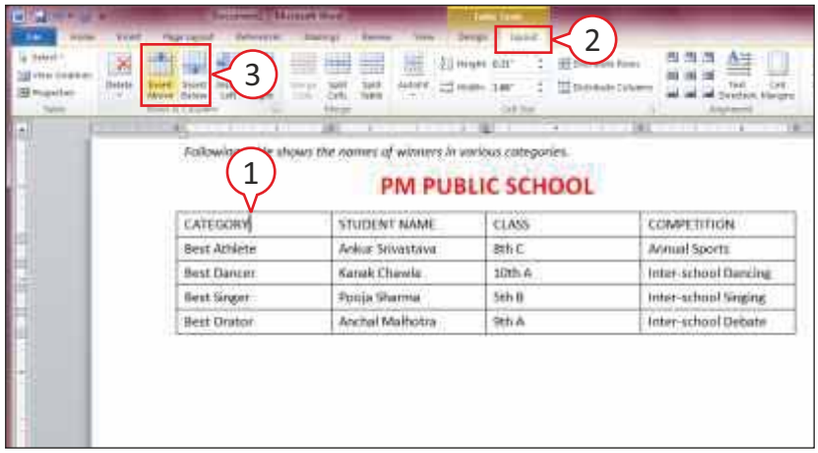
The entire column will be selected.

Update Your Knowledge

- Tables can be customized and are useful for various tasks, such as presenting textual information and numerical data. You can create a blank table, and apply a variety of styles and formats to existing tables.
- You can press **Alt+N+T+I** to insert Table and **Alt+N+T+D** to draw Table.

ADDING ROWS IN A TABLE

You can add rows in your table to insert additional information.



1. Click in the row where you want to add another row.

If you select more than one row, Word duplicates the number when you activate Insert command.

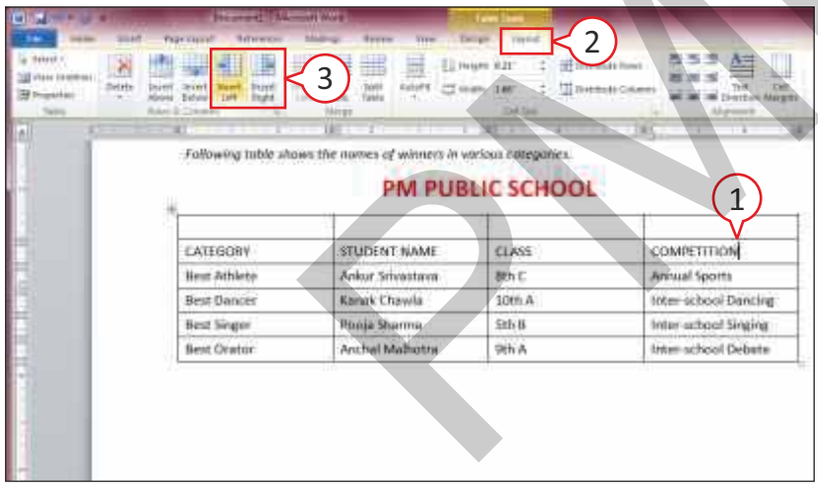
2. Click on **Layout** tab.
3. You can click **Insert Above** or **Insert Below** button to add new rows.

Word adds a row to the table.

*In this example, we have inserted a row **above** the selected row.*

ADDING COLUMNS IN A TABLE

You can add columns in your table to insert additional information.



1. Click in the column where you want to add another column.

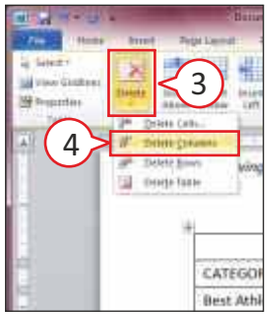
If you select more than one column, Word duplicates the number when you activate Insert command.

2. Click on **Layout** tab.
3. You can click **Insert left** or **Insert right** button to add new column.

Word adds a column to the table.

DELETING A ROW OR A COLUMN IN A TABLE

You can delete a row or column you no longer need from your table.

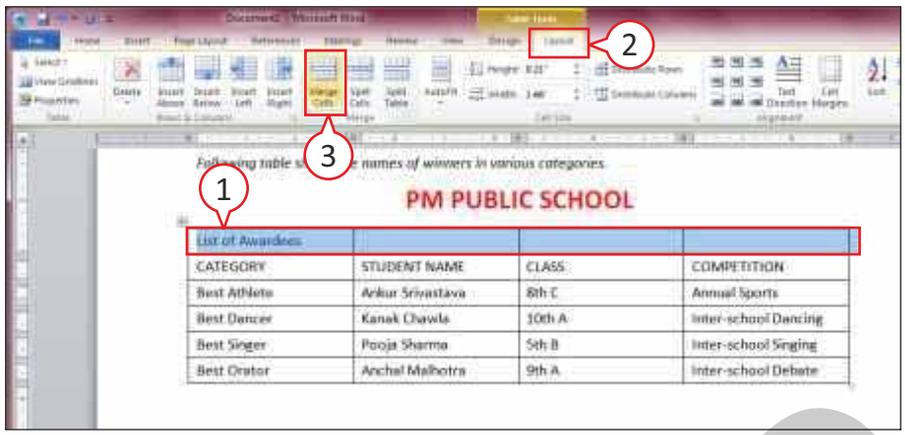


1. Select a **row** or **column** you want to delete *(not shown)*.
2. Click on **Layout** tab *(not shown)*.
3. Click on **Delete** button.
4. Click on **Delete Columns** to delete the column or click on **Delete Rows** to delete the rows.

Word removes the column or row and the text it contained from the table.

COMBINING CELLS IN A TABLE

You can combine two or more cells in your table to create one large cell. Combining cells is useful when you want to display a title across the top or the down side of your table.

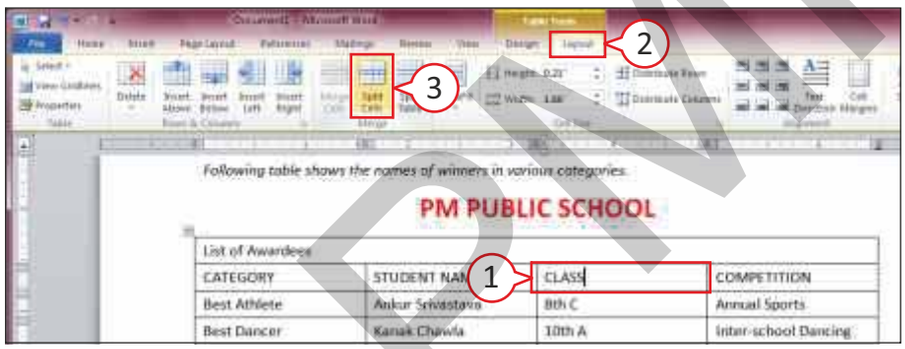


1. Select the cells that you want to merge.
2. Click on **Layout** tab on the Ribbon.
3. Click on **Merge Cells** button.

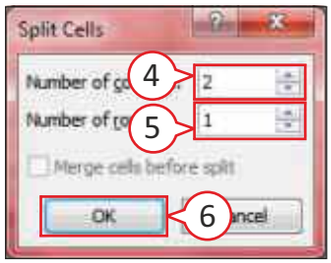
The cells will combine together to create one large cell.

SPLITTING CELL IN A TABLE

You can split one cell into two or more cells in your table to create more than one section. You can even split cells into columns or rows.

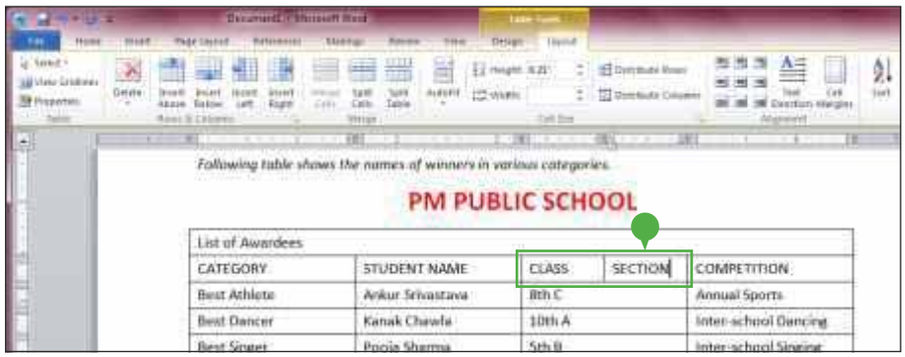


1. Click inside or select the cell that you want to split.
2. Click on **Layout** tab on the Ribbon.
3. Click on **Split Cells** button.



The **Split Cells** dialog box appears.

4. To split the cell into **columns**, double-click on this area and type the number of columns you want to split the cell into.
5. To split the cell into **rows**, double-click on this area and type the number of rows you want to split the cell into.
6. Click on **OK** to split the cell.



- The cell splits into desired number of cells.
- You can now enter text in these cells.

FORMATTING A TABLE

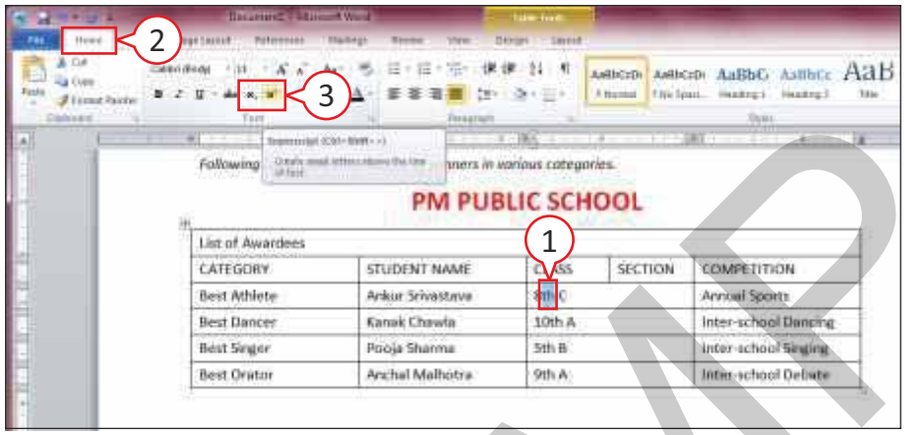
You can format the table to enhance its look and make it attractive.

Superscript or Subscript Text

You can assign superscript or subscript notation to any text to make it appear **above** or **below** the regular line of text.

Superscript will make the text appear **above** the regular line of text. **Subscript** will make the text appear **below** the regular line of text.

Superscripting and subscripting are often used in Mathematical equations.



1. Type and select the text that you want to superscript or subscript.
2. Click the **Home** tab.
3. Click the **Superscript** icon (x^2) or the **Subscript** icon (x_2).

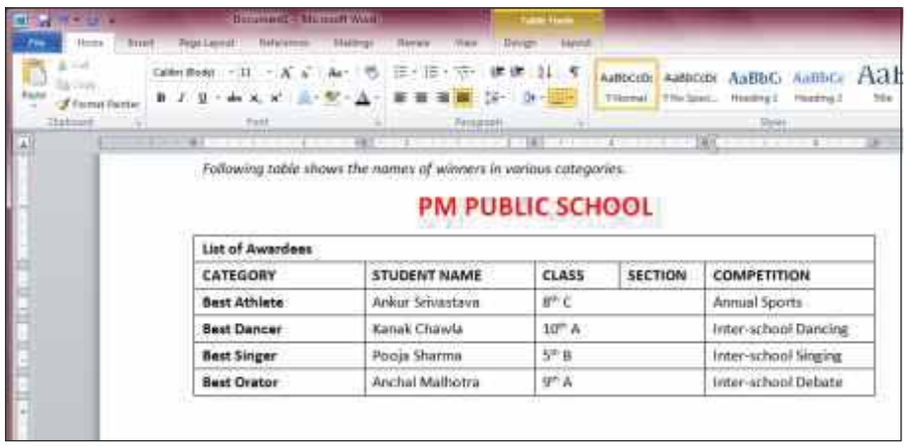
CLASS	SECTION
8^{th} C	
10^{th} A	
5^{th} B	
9^{th} A	

- In this example, Word superscripts the selected text.

By using the same way, you can superscript or subscript the other text also.

Bold the Text in Table

You can make your text darker to emphasize information in the table.

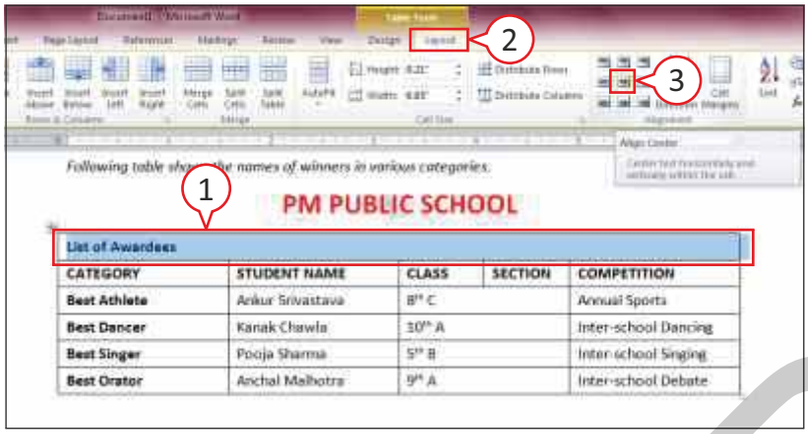


By using **Bold** command and **Format Painter** tool, you can bold the certain text in the table as per the project.

Note: *You have already learnt about Bold and Format Painter in this chapter.*

Aligning the Text in Cell

You can enhance the appearance of your table by changing the position of the text in cells. Word table alignment options include the basic left, right, center, and justify alignments, as well as vertical alignments, such as bottom center and top right. By default, Word aligns your table text to the **left** inside each cell.



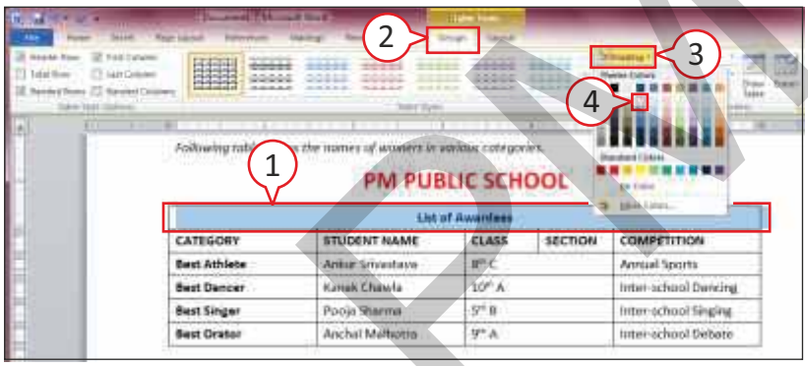
1. Select the cells that you want to format.
2. Click on **Layout** tab.
3. Click on alignment from the Alignment group.

Word will apply the alignment.

This example **centers** the heading in the cell.

Add Shading to Cell

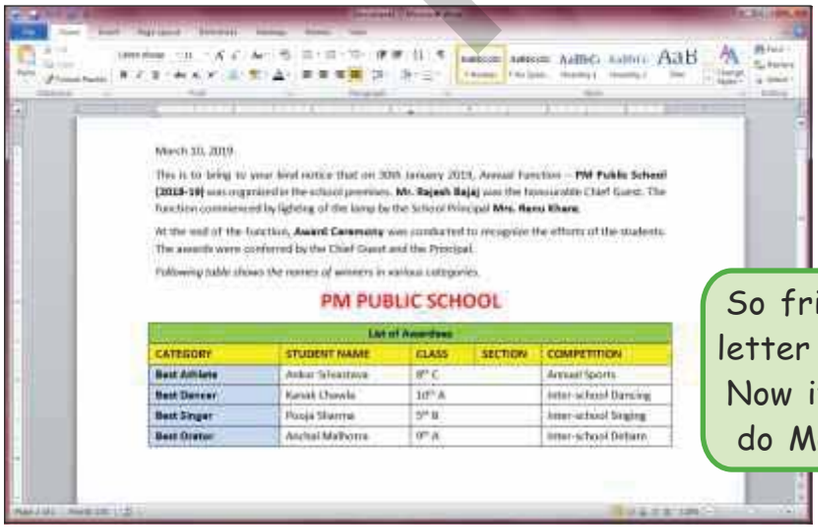
You can add shading to cells to make them more appealing.



1. Select the cell or cells to which you want to add shading.
2. Click the **Design** tab.
3. Click on **Shading**.

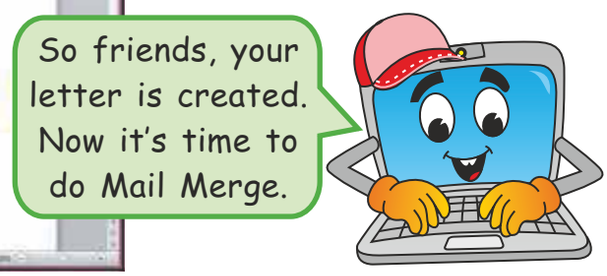
The **Shading** Gallery appears.

4. Click on a color.



Word applies the shading to the selected cell.

You can apply the shading to other cells as per your project.



Although the steps in this project focus only on shading in Design tab, you can also use these steps to practice other table design formats to make more appealing document.

Till now, you have created the letter that included a table. Now, we will send the same letter to various persons through Mail Merge.

Using Mail Merge

You can use the **Mail Merge** feature to produce a personalized document such as an announcement or greeting card for each person on your mailing list.

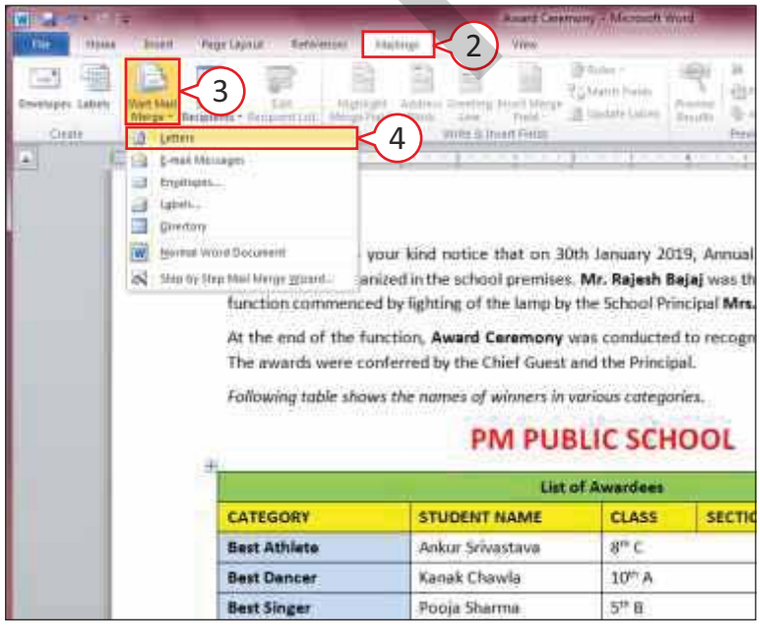
Mail Merge is a process of **combining** or **merging** the main document with the data source. The **data source** contains the name and address of each recipient, to whom you want to send the document.

Suppose you want to send a circular to 100 different students for an event in the school. With the Mail Merge feature, you can write one circular for all the students; only the student's name and address will be different in each circular. The Word merges each student's information with the circular that you created. This process is very simple and much faster than the manual alternative.

Benefits of Mail Merge

- Easy to make a change to a single letter and for that change to happen in every letter, e.g., change the date.
- Once the merge has been set up, hundreds of letters can be produced very quickly.
- Much easier to proof-read just one letter rather than hundreds of individual letters.
- You can save the main document and re-use it in the future.

CREATING MAIL MERGE

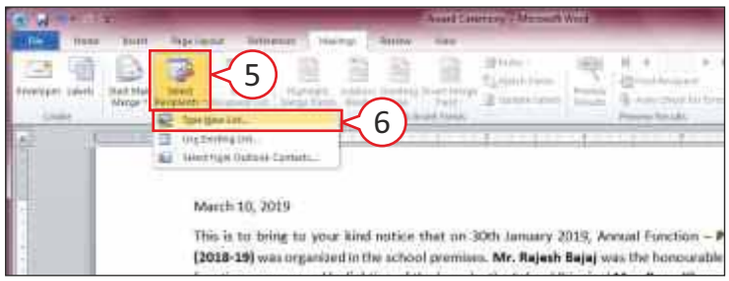


1. Open the Word document that you want to use as the letter.

The information of the letter should not change from letter to letter.

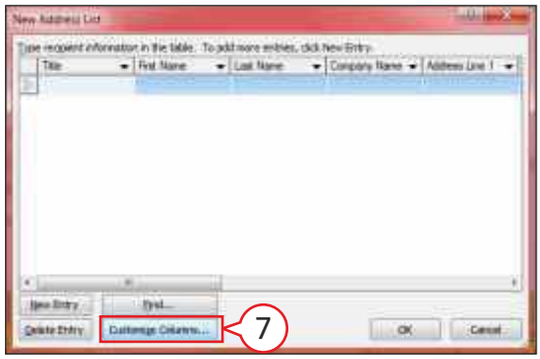
2. Click the **Mailings** tab.
3. Click on **Start Mail Merge** button.
4. Click on **Letters**.

Nothing happens on-screen, but Word sets up for a mail merge.



5. Click on **Select Recipients**.
6. Click on the option to identify the type of recipient list you plan to use.

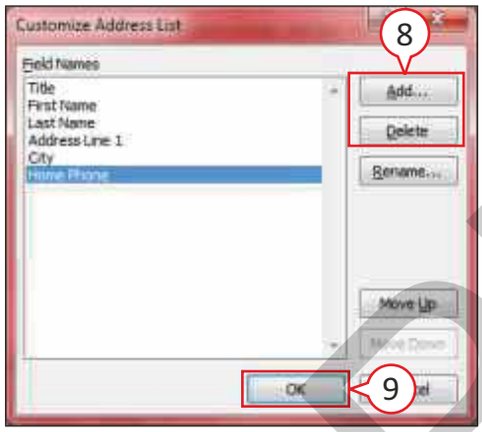
*This example uses a **New List**.*



The **New Address List** dialog box appears, displaying columns where you can enter the information.

7. Click on **Customize Columns**.

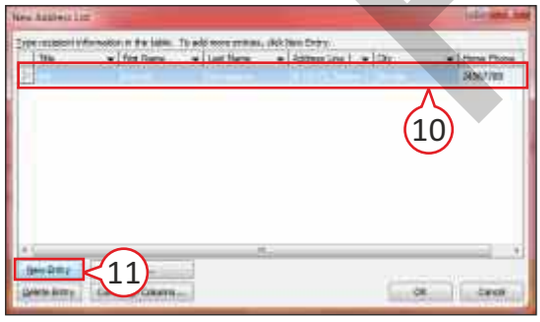
The **Customize Address List** dialog box appears.



8. Click on **Add** button to add any new entry or click on **Delete** button to delete any unwanted entry.

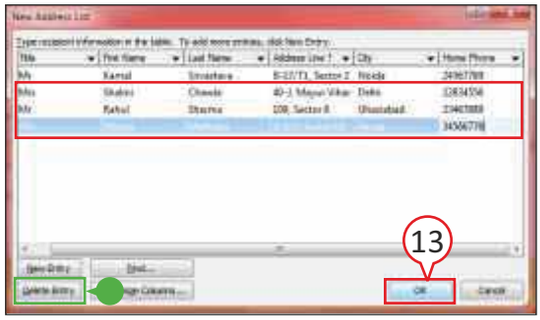
In this example, we have deleted some of unwanted enteries.

9. Click on **OK**.



The **New Address List** dialog box appears again.

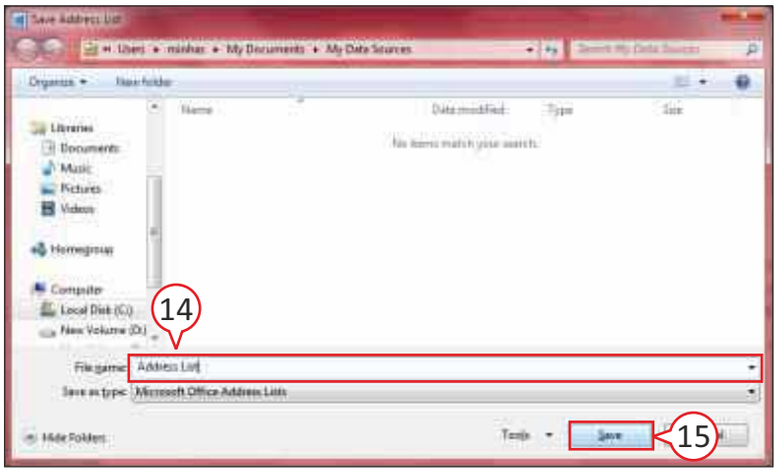
10. Click on each area and type the appropriate information for each person.
11. To enter the information for another person, click on **New Entry**.



12. Repeat steps **10** and **11** for each person to be added on your mailing list.

- To delete an entry, click on the entry and then click on **Delete Entry**.

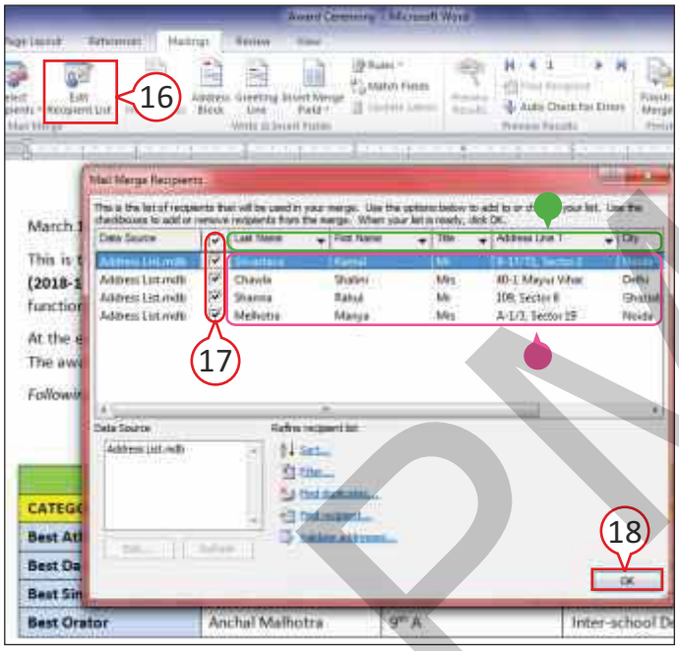
13. When you finish creating your mailing list, click on **OK**.



The **Save Address List** dialog box appears.

14. Type a name (Address List) for the file that will store your mailing list.
15. Click on **Save** button to save the file.

Now, you can select specific recipients from the mailing list to send the letter.

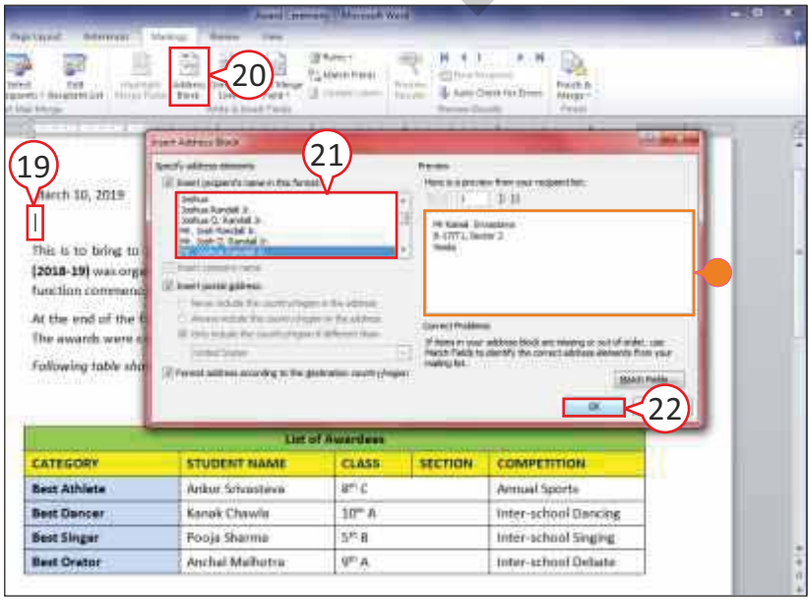


16. Click on **Edit Recipient List**.

The **Mail Merge Recipients** window appears.

- This area lists all the people on your mailing list.
- To **sort** the list, click on the down arrow of heading of the column you want to use.

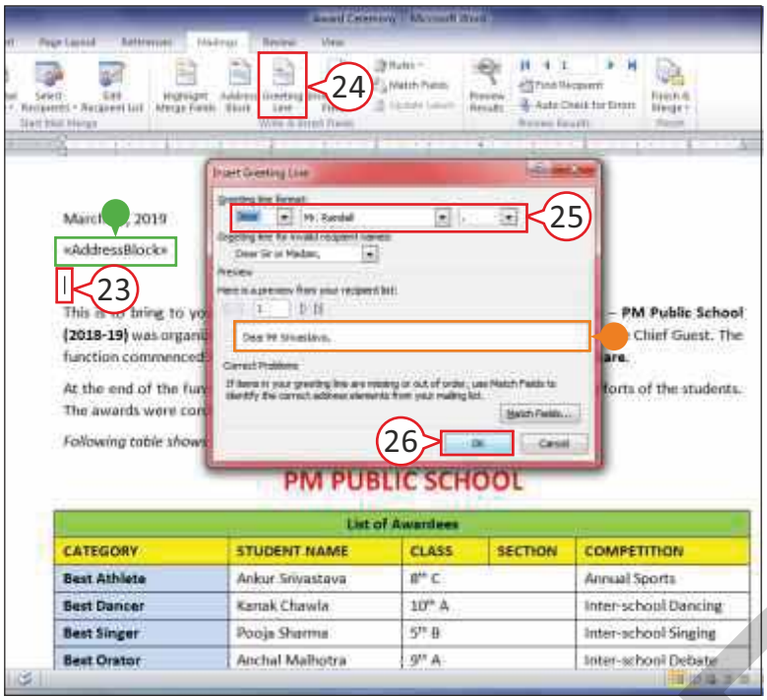
17. A **check mark** beside a person's name indicates that the Word will create a personalized letter for the person. To add or remove a check mark, click on the box beside the person's name.
18. Click on **OK**.



19. Click on the location where you want the address to appear in the letter.
20. Click on **Address Block**.

The **Insert Address Block** dialog box appears.

21. Click on a format for each recipient's name.
    - You can **preview** the format here.
22. Click on **OK**.



- A merge field, representing the address block, appears in the letter.

23. Click on the location where you want the greeting to appear.

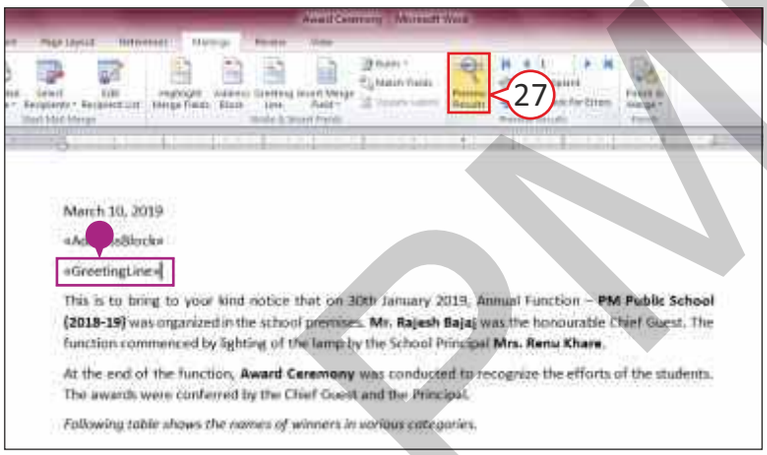
24. Click on **Greeting Line**.

The **Insert Greeting Line** dialog box appears.

25. Click on these areas to specify the greeting format.

- *A preview of the greeting appears here.*

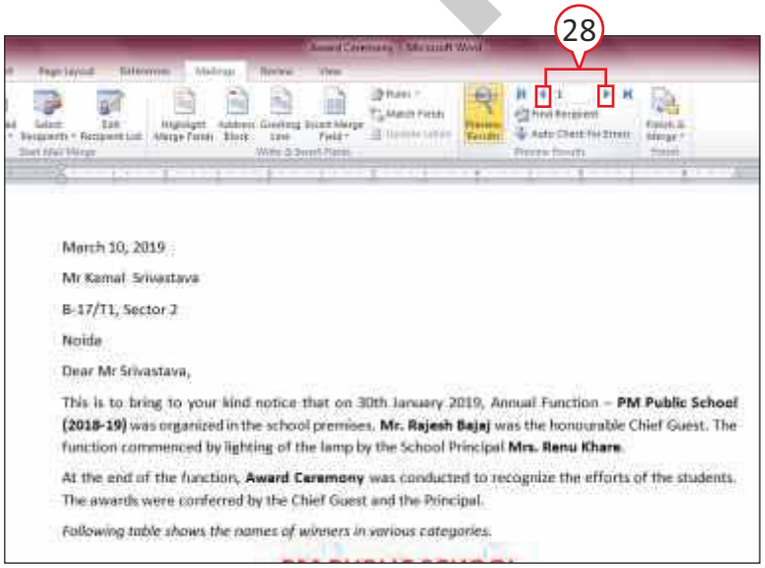
26. Click on **OK**.



- *A merge field, representing the greeting line, appears in the letter.*

After completing the merge, Word will replace the merge field with greeting information.

27. Click on **Preview Results**.



Word displays a preview of the merged letter, using the unchanged content of the letter and information from the address file.

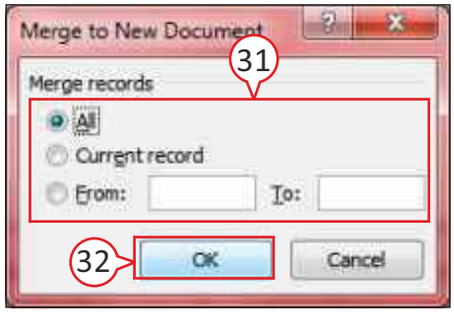
28. Click on the **Next Record** icon to preview the next letter, and the **Previous Record** icon to move back and preview the previous letter.

You can click on **Preview Results** to redisplay merge fields.

29. Click on **Finish & Merge**.

30. Click on **Edit Individual Documents**.

The **Merge to New Document** dialog box appears.



31. Click on any radio button to specify which people from your mailing list, you want to create letters for.

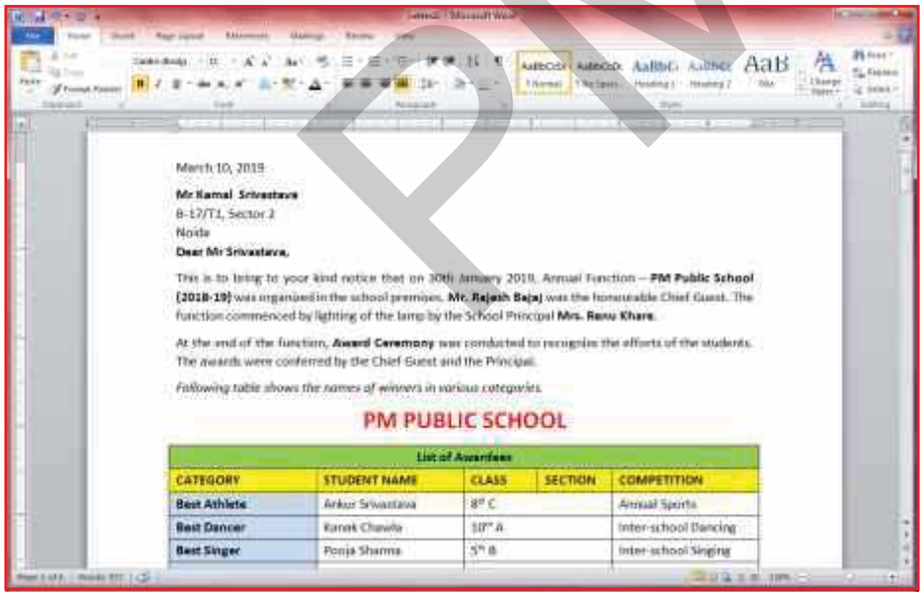
All: All people on your mailing list.

Current record: Only the displayed person.

From: People on your mailing list that you specify.

If you have selected **From** option in step **31,** click on the first text box and type the number of the first person you want to create a letter for. Then press the Tab key and type the number of the last person you want to create a letter for in the second text box.

32. Click on **OK** button to create the letters.



Word opens a new document and creates the personalized letters in the document.

You can edit, format and print the letters as you edit, format and print any document.

You can scroll through to see all the pages of your mail merge.

So friends, your project is now complete.

Views of Document

Word offers **five** different views that you can use to display your document. These views are Print Layout, Outline, Web Layout, Full Screen Reading Layout, and Draft view.

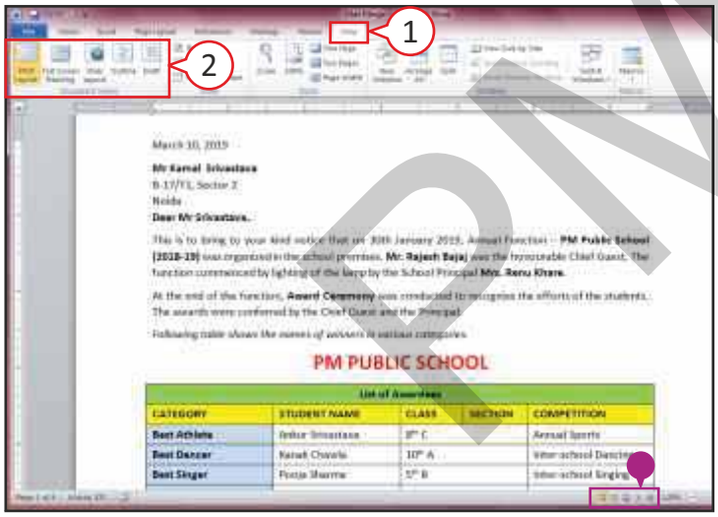
Print Layout: This view shows margins, headers, and footers.

Outline view: This view shows the outline levels in a document. Word indents text styled as headings based on the heading number; you can move or copy entire sections of a document by moving or copying the heading.

Web Layout view: This view displays a web page preview of your document.

Full Screen Reading: This view optimizes your document for easier reading. It minimizes eye strain when you read a document on full screen. This view removes most toolbars.

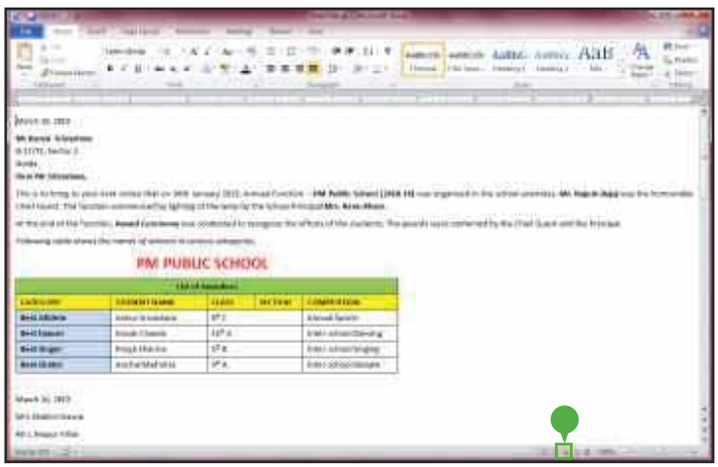
Draft view: This view shows the draft version of your document, i.e., without graphics. This view is designed for editing and formatting; it does not display your document the way it will print.



1. Click on the **View** tab in the Ribbon.
2. Click on any **Document Views** option.

- You can also switch views using the **View buttons** at the bottom of the program window.

Word immediately displays the new view.



- In this example, **Web Layout** view displays the text as a web page preview.

You can click on another layout view icon to view your document in different views.

Keyboard Shortcuts

- **(ALT+CTRL+P)** Switch to Print Layout view
- **(ALT+CTRL+O)** Switch to Outline view
- **(ALT+CTRL+N)** Switch to Draft view

Saving a Document

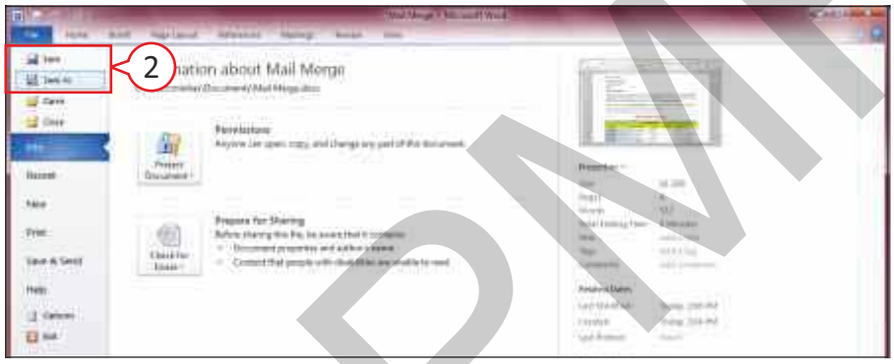
After creating the project, it must be saved into the memory of the computer. Once the document is saved, you can review and edit it any time in future. When you close Word program without saving your work, a dialog box appears that reminds you to save your work before closing the program. In the previous class, you learnt to save your document in simple Word format. Now, we will save the document in **PDF format**.

SAVING A DOCUMENT IN PDF FORMAT

You can save Word documents in **PDF** format. You can open a PDF file by using free Adobe Acrobat Reader.

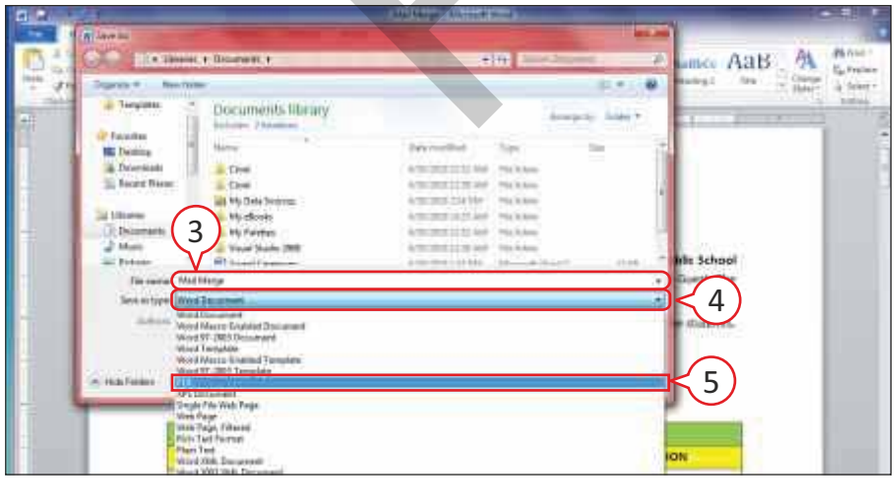
1. Click on **File** tab.

Backstage view will appear.



2. Click on the **Save As** button.

Save As dialog box will appear.



3. Click in the **File name** text box and type a name for the file.
4. To save the file in **PDF** format, click on the down arrow of **Save as type**.
5. Click on **PDF**.
6. Click on **Save** *(not shown)*.

The Word saves the file in PDF format, and the new filename appears on the Title bar.

Although the steps in this section focus on saving a document as PDF document, you can also use these steps to save a document in any file format like web page, rich text, plain text, XML, OpenDocument or Microsoft Works.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
• I know that Word is a full-featured word processing program.	☐	☐
• I know that Format Painter tool is used to copy the formatting that we have already applied to a portion of text.	☐	☐
• I know that we can change the amount of space between paragraphs and lines of text.	☐	☐
• I know that Tab is used for controlling the position of the text.	☐	☐
• I know that Tables are a way of organizing information into rows and columns.	☐	☐
• I know that Mail Merge feature produces a personalized letter for each person on mailing list.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. ..... is used for controlling the position of the text.
   a. Ruler ☐ b. Tab ☐ c. Columns ☐
2. ..... refers to the intersection of a row and a column in the table.
   a. Record ☐ b. Cell ☐ c. Label ☐
3. By default, Word aligns your table text to the ..... inside each cell.
   a. Center ☐ b. Right ☐ c. Left ☐
4. ..... will make the text appear above the regular line of text.
   a. Subscript ☐ b. Shadow ☐ c. Superscript ☐
5. ..... is used to produce a personalized letter for more than one person.
   a. Mail Merge ☐ b. AutoCorrect ☐ c. Macro ☐

B. Write 'T' for True and 'F' for False statements.

1. Word is a popular word processing program. ☐
2. Table consists of a grid of boxes, arranged in rows and columns. ☐
3. You cannot insert a preset table in the Word document. ☐
4. Superscript and Subscript are often used in mathematical equations. ☐
5. Mail merge is useful to send the same document to many people. ☐
6. Mail merge is done by merging data document with the data source. ☐
7. You cannot save the document in PDF format. ☐

C. Fill in the blanks.

1. ..... tool is used to copy the formatting that you apply to text.
2. By default, Word creates tab stops every ..... across the page.
3. To select everything in the cell, ... on it.
4. ..... contains the name and address of each recipient, to whom you want to send the document.
5. To start mail merge, click on ..... tab.

D. Differentiate between the following.

1. AutoCorrect ..... AutoFormat .....

2. Merge Cell ..... Split Cell .....

E. Answer the following questions.

1. What is the use of Format Painter?

2. How many types of Tab settings are available in Word? Name them.

3. Why do we need Table?

4. What are the three ways to create a table in Word?

5. What do you mean by Mail merge?

F. Application Based Question.

The computer teacher asked Ravi to quickly prepare the same letter for 50 students with different names. Then take 50 different printouts. For this, he has to compose all the letters. If not, what should he do?

Activity Section

Lab Activity

A. Create a table in Word to store the Fee details in tabular format.

- Open a blank document in Word.
- Insert a table in the document containing 5 rows and 6 columns.
- Enter the following values in the table:

Roll No.	Name	Tuition Fee	Conveyance	Annual Charges	Computer Fee
1	Ajay	4200	800	1550	300
2	Rahul	4000	760	1250	300
3	Jitender	4000	650	1000	300
4	Gopal	4800	850	1250	300

- Insert another column between Tuition Fee and Conveyance, and give the heading 'Examination Fee' to this column.
- Enter the examination fee as 400 for all the cell values in that column.
- Add a new row to the table and store the following record in it.

5	Harshit	4500	400	750	1550	300

- Save the document as 'My First Table'.

B. Create multiple letters using Mail Merge feature in Word.

- Create the following document in Word regarding Annual Swimming Competition.

<<NAME>>

<<Class>> <<Section>>

<<ADDRESS>>

<<CITY>>

<<PHONE>>

Dear <<NAME>>

This is to inform you that your name has been short-listed for the Annual Swimming Competition which is to be held on 15th December 2019. You are requested to come for the meeting with the coach on 2nd November 2019 at 9:30 a.m. in the school playground. The purpose of meeting is to discuss the training schedule for the upcoming competition.

With regards,

Authorized Signatory

PM Public School

- Create a **data source** for at least 5 students, containing **Students' names**, **Class**, **Section**, **Address**, **City**, and **Phone**.
- Merge the above document with created data source.

7 »PowerPoint - Introduction

Topics Covered

•Introduction to PowerPoint •Using Themes and Templates •Changing PowerPoint Views •Modify a Background

Hey friends! Did you enjoy typing in Word? Now, let's have some more fun. Let's learn about presentation software, PowerPoint.

Introduction to PowerPoint

PowerPoint is a **presentation** program developed by **Microsoft**. It provides various views and tools, with which you can build a presentation that includes words, graphics, and media. Through presentations, you can communicate ideas, messages, and other information to a group of people.

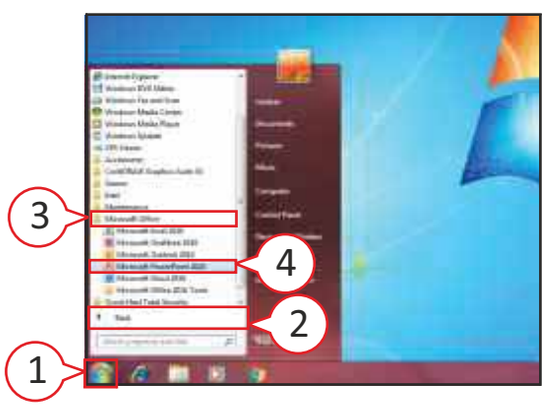
A PowerPoint presentation is also known as a **slide show**. One page of your presentation is called **Slide**, and a group of pages on any one topic is called **Presentation**.

FEATURES OF POWERPOINT

PowerPoint contains several features for creating a presentation. You can add text, shapes, drawing, pictures, photos, chart, sound, video, and animation to your presentation using PowerPoint. It gives you the flexibility to make presentations, using a projection device attached to a personal computer and using the slides.

STARTING POWERPOINT 2010

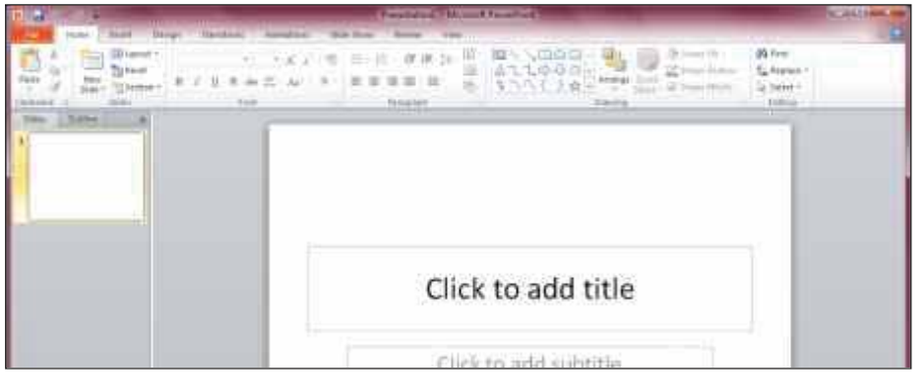
Windows must be running to start PowerPoint.



1. Click on **Start** button to open Start menu.
2. Click on **All Programs**.

A list of all installed apps appears on the left.

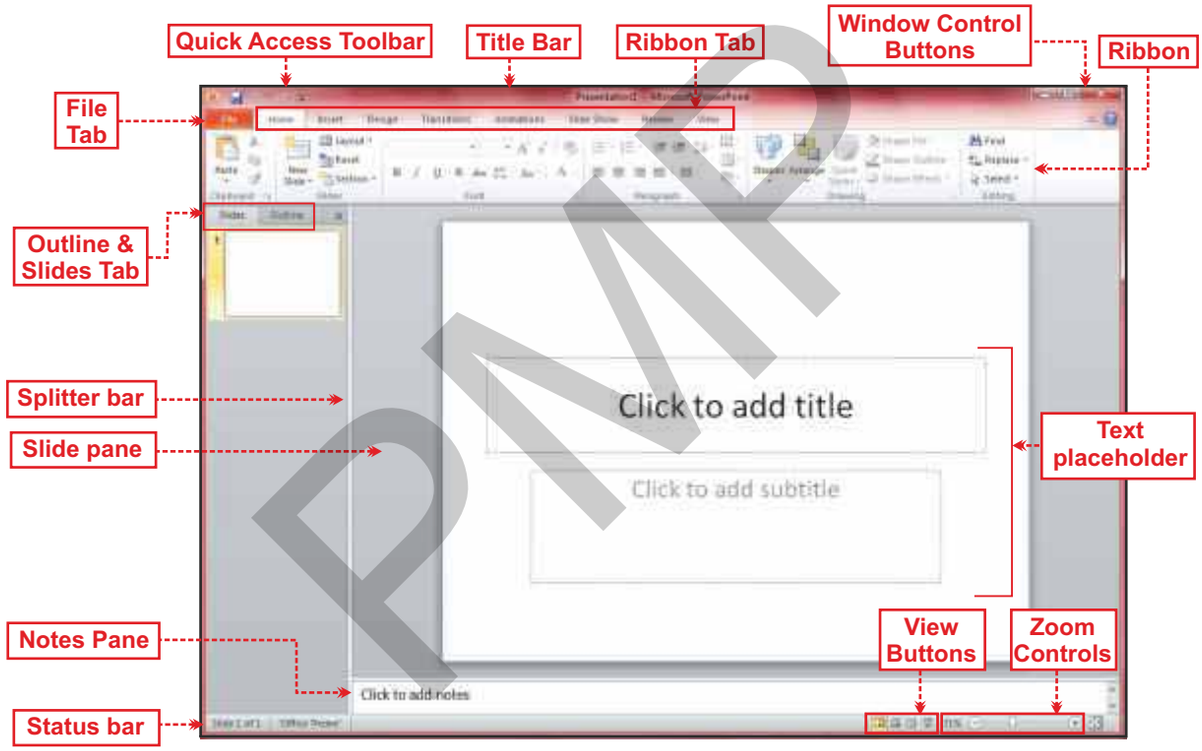
3. Scroll down and click on Microsoft Office.
4. Click on **Microsoft PowerPoint 2010**



An empty presentation titled **Presentation 1** appears on your screen.

POWERPOINT WINDOW

With the help of several components displayed in the PowerPoint window, you can perform your tasks efficiently.



Title Bar: Title bar shows the name of the displayed presentation.

File Tab: When you click on File tab, a Backstage view appears. In Backstage view, you will find a list of commands such as save, open, and print.

Quick Access Toolbar: It displays quick access buttons to the Save, Undo, Redo, and Slide Show commands.

Ribbon: It displays groups of related commands in tabs. Each tab offers shortcut buttons to common tasks.

Ribbon Tab: Each ribbon tab provides a set of tools related to an overall task you are likely to be performing in a specific presentation.

Outline & Slides Tab: These tabs are present in the navigation panel to view and edit slide show's outline.

Window Control Buttons: Use these buttons to minimize the program window, restore the window to full size, or close the window.

Slide Pane: It displays a large view of the current slide on the right side of the window. You can enter text, graphics, and animations directly in the slide pane.

Splitter Bar: You can adjust the width of the slide pane by dragging the splitter bar.

Notes Pane: It displays the notes for the current slide. This is a text area that consists of remarks to share with your audience.

Status Bar: The Status bar consists of a message area. The message area displays the current slide number and the total number of slides in the slide show.

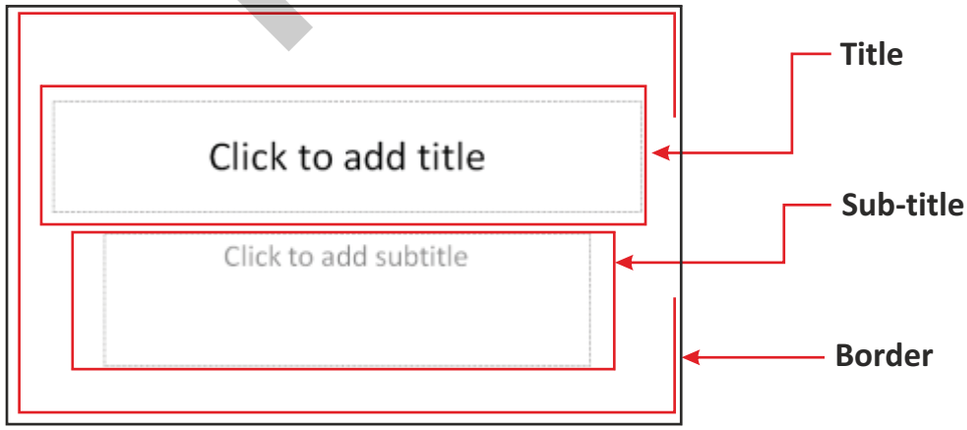
Text Placeholder: It allows you to type titles, body text, and bulleted lists in slides.

View Buttons: They allow you to quickly change the way your presentation is displayed on the screen. Normal view, slide sorter view, reading view, and slide show view are the four main views of PowerPoint.

Zoom Controls: They are used to enlarge or reduce the view of Presentation.

BASIC ELEMENTS OF A SLIDE

A **slide** is the basic unit of a PowerPoint presentation. Slide contains objects which are its building blocks, such as title, text, table, charts, and pictures. In PowerPoint, the first slide is assumed to be the **title slide**, the aim of which is to introduce presentation to the audience. When you start PowerPoint, the default slide layout is **landscape orientation**, where the slide width is greater than its height.



Title is a descriptive heading, which identifies a slide. It describes the contents of the slide in limited words.

Sub-title is a distinctive message or brief description of the slide data.

Border is a frame for the slide. It is similar to a frame around a painting.

Using Themes and Templates

When you start PowerPoint, a new blank presentation file appears. You can start making presentation on the **blank presentation**, or you can use a **theme** or a **template**.

Theme is the look, color, and graphics that the slides in your presentation have in common. When you create a new presentation, PowerPoint prompts you to choose a theme. When you choose a specific non-blank theme, PowerPoint applies a set of colors, fonts, and placeholders to the slides. All these elements vary from theme to theme.

Templates provide a quick way to create a new PowerPoint presentation. They contain layouts, theme colors, fonts, effects, background styles and the content. You can replace them with your own text, graphics, charts, tables and multimedia while maintaining the preset layout.

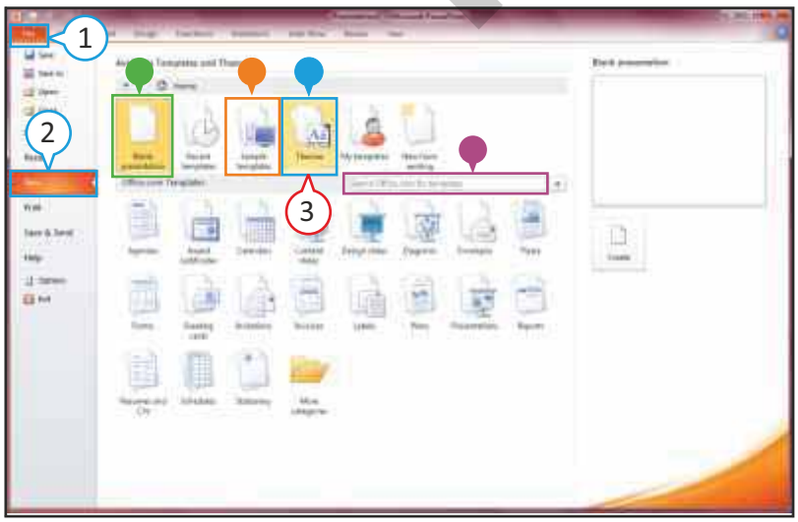
Some templates are installed or built-in on your hard disk, but some need to be downloaded from the Internet. Your computer should be connected to the Internet to download online templates.

APPLYING THEMES

It is easy to apply a theme to a single slide, a section, or the entire presentation. Generally, it is better to use one theme for an entire presentation so that the slides have a consistent look and feel.

1. Click on **File** tab. **Backstage view** will appear.
2. Click on **New**.

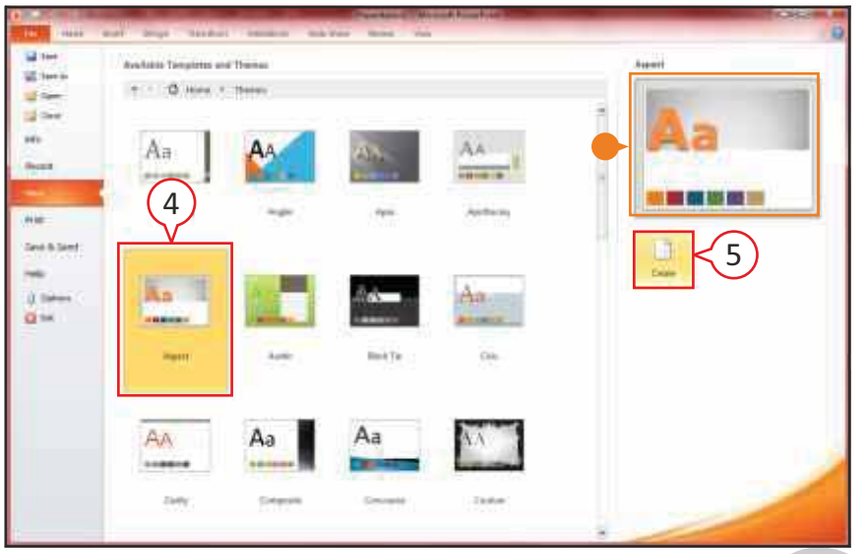
The Available Templates and Themes page appears.



- You can choose a blank presentation to open an empty presentation.
- You can choose a blank template, with a particular theme.
- Some templates are on your hard drive as sample templates.
- You can search for templates by typing a key word or phrase in the Search box.

3. Click on **Themes**.

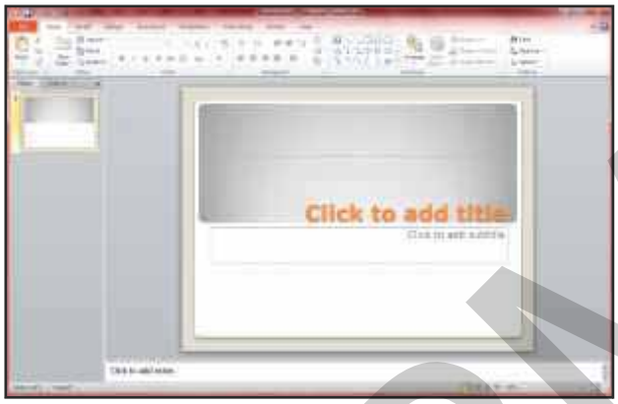
The **theme layouts** appears.



4. Click on any one of the themes.

- You can **preview** the selected theme designs here.

5. Click on **Create** to start a presentation with new theme.



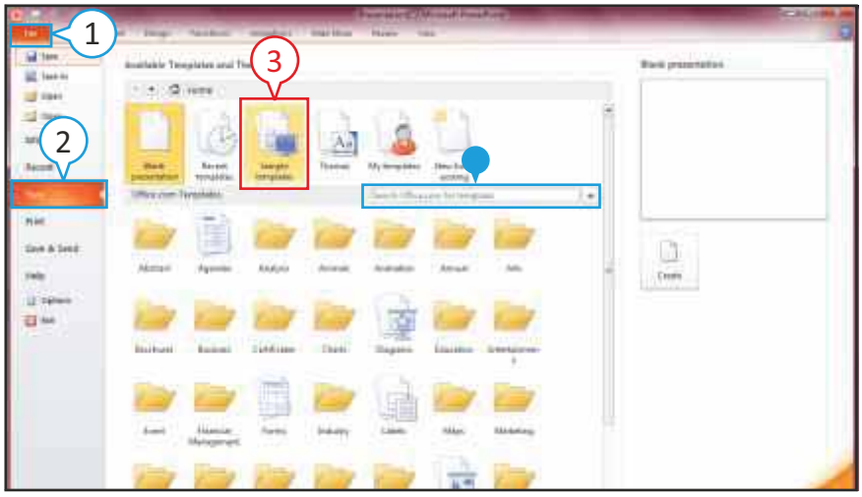
The theme selected by you appears.

Update Your Knowledge

A **template** contains several preset slide layouts that consist of different combinations and arrangements of placeholders.

APPLYING TEMPLATE

There are some templates stored on your hard drive as sample templates. But you can get many PowerPoint templates available online. You can search for them by using the PowerPoint search feature. Type the keyword in the search feature, and it shows you online presentation templates associated with that keyword.

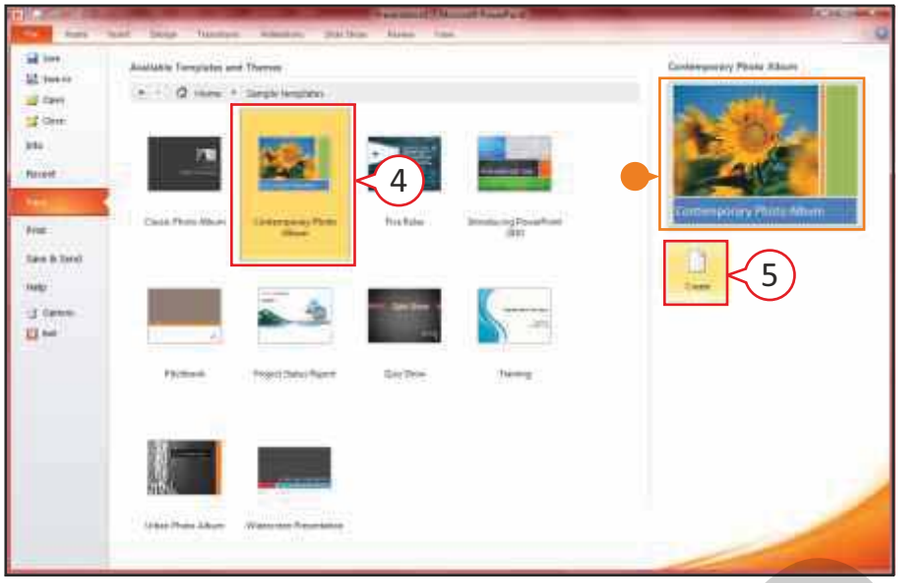


1. Click on **File** tab.

Backstage view appears.

2. Click on **New**.
3. Click on **Sample template**.

- You can type a **keyword** in the Search text box and then click on [→].

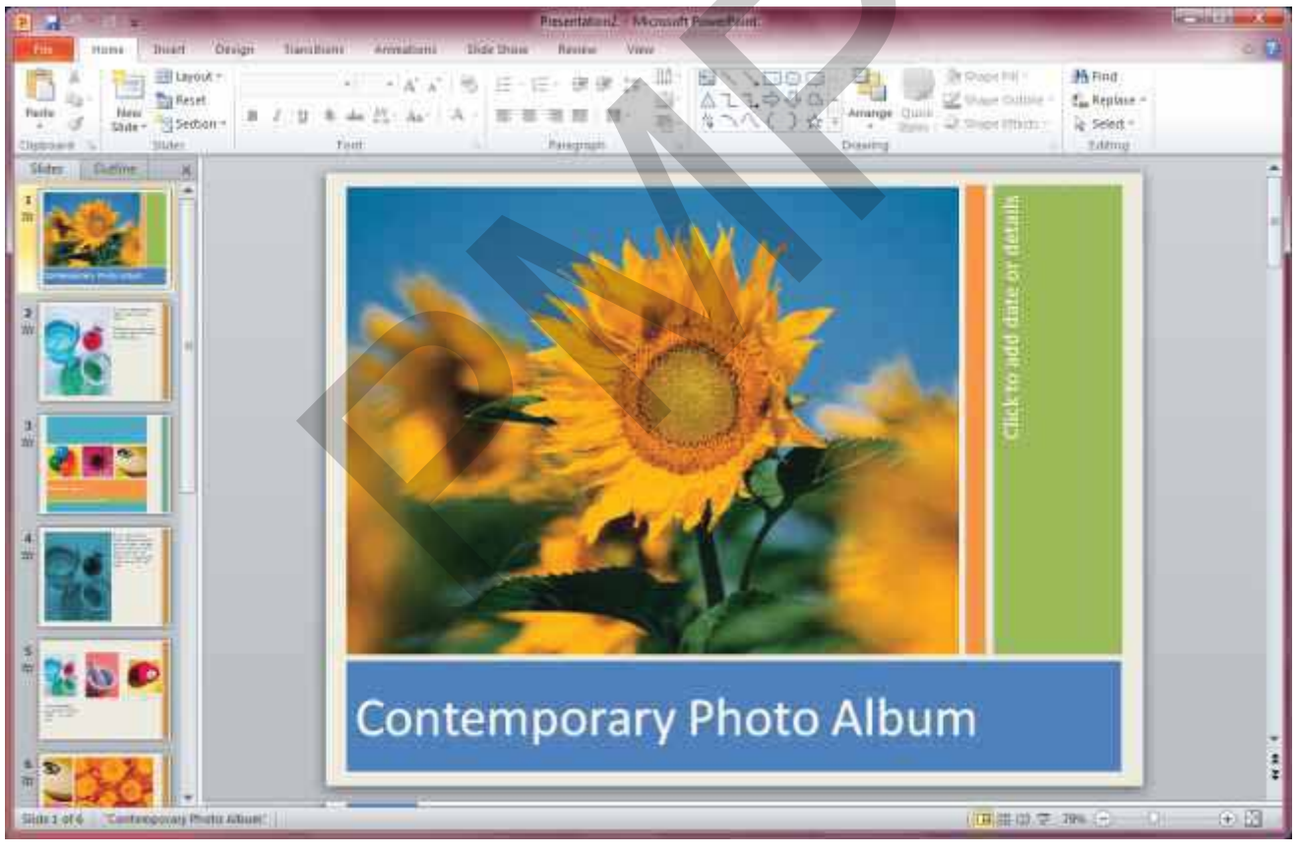


PowerPoint shows the templates that are stored on your computer.

4. Click the **template** of your choice.

- You can **preview** the selected template here.

5. Click on **Create** to start a presentation with new template.



Selected template appears in the PowerPoint window.

It contains layouts, theme colors, fonts, effects, background styles and the content.

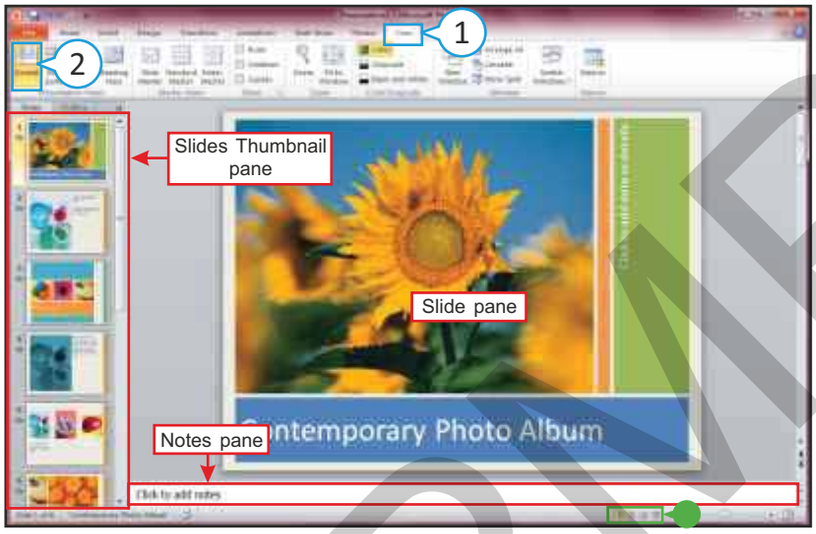
Now, you can replace them with your own text, graphics and multimedia while maintaining the preset layout. It helps you to create a professional-looking presentation very quickly.

Changing PowerPoint Views

You can use various PowerPoint views to change the appearance of your presentation on screen. PowerPoint 2010 has Normal, Slide Sorter, Notes page, Reading and Slide Show views. By default, PowerPoint displays your presentation in **Normal view**.

USING NORMAL VIEW

Normal view displays a single slide where you can create, position, and format objects. It contains three panes — **Slide pane**, **Slides thumbnail pane** and **Notes pane**. The size of these panes can be adjusted by dragging the pane border.



1. Click on **View** tab.
2. Click on **Normal** button.

PowerPoint shows the default view, displaying the current slide in the presentation.

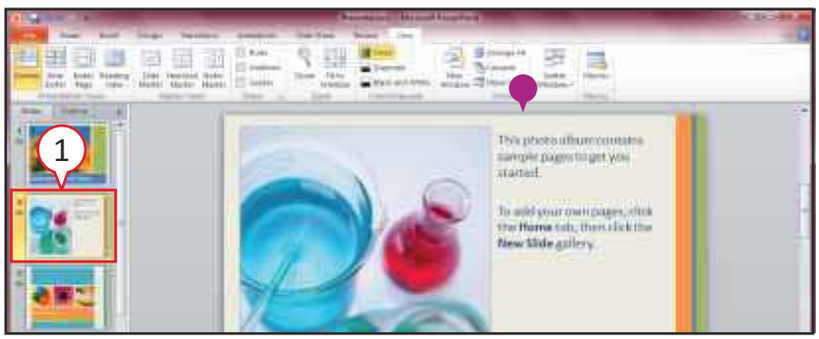
- *You can also click on **View** buttons on the Status bar. These buttons include **Normal** view (), **Slide Sorter** view (), **Reading** view (), and **Slide Show** view ().*

Slide Pane

Slide pane is the largest pane in Normal view that shows all its contents. Here you can create and manipulate slide objects, and type text directly onto the slide.

Slides Thumbnail Pane

Slides thumbnail pane contains thumbnails of each slide. The thumbnails are numbered in the order in which they appear in the slide show. You can click and drag the thumbnails to change the order of slides, and you can even delete slides from this pane.



1. Click on the **thumbnail** of a slide, from the Slides thumbnail pane, to view a particular slide.

- PowerPoint displays selected slide in the Slide Pane.

Notes Pane

The Notes pane appears below the Slide pane. You can type notes associated with each individual slide that you can refer to while presenting the slide show.

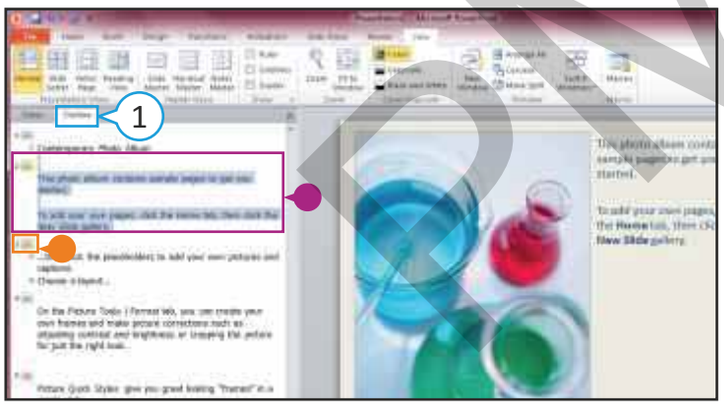
1. Display the slide in which you want to create notes.
2. Click inside the Notes pane and type the notes for the slide.

If you type more than one line of the text, you can use the **scroll bar** to browse through the text.

- If the Notes pane is not visible then click on **Notes** button to display or hide Notes pane.

USING OUTLINE TAB

In **Outline Tab**, your presentation appears as an outline made up of titles and main text from each slide. Top-level headings in the outline are **slide titles**, and entries at the second-level appear as **bullet points**. In this view, the Outline pane replaces the Slides Thumbnail pane.



1. Click on **Outline** tab.

PowerPoint displays the presentation in an outline format.

- You can click on the outline text to edit it.
- You can click on a **slide icon** to view the slide.

USING SLIDE SORTER VIEW

You can see miniature slides of the presentation in this view. This makes it easy to add, delete, and move slides; add timings; and select animated transitions for moving from one slide to another.

1. Click on **View** tab.
2. Click on **Slide Sorter** button.

PowerPoint displays the miniature of all the slides in the presentation.

USING READING VIEW

Reading View on your computer screen allows you to view a presentation not in a full-screen Slide Show view, but in a window with simple **controls** that make the presentation easy to review.

1. Click on **View** tab. (not shown)
2. Click on **Reading View** button. (not shown)

PowerPoint shows the presentation in full screen, but with Title bar and Status bar with simple controls.

3. Press **Esc** key to come back to **Normal** view.

USING SLIDE SHOW

The **Slide Show** view is used to view the presentation in full screen.

1. Click on **Slide Show** tab.
2. Click on **From Beginning**.

*You can also press **F5** key to begin the slide show.*

PowerPoint displays your presentation as a slide show.

3. Press **Esc** key to come back to **Normal** view.

Update Your Knowledge

If you have a large text for the Notes pane then you can **resize** the Notes pane by positioning the mouse pointer on the upper border of pane until the pointer becomes a resizing tool; then click and drag to resize the Notes pane.

Do You Know?

Outline view is the best way to organize and develop the content of your presentation as you can see all the titles and main text on the screen while working.

Do You Know?

You can also click on **Slide Show** view ( ) button on the Status bar.

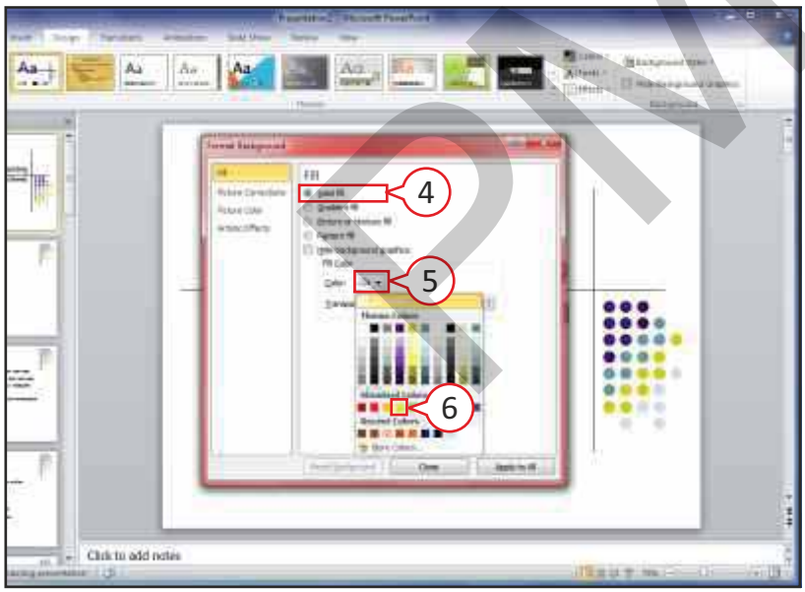
Modify a Background

Every slide has a background on which all slide elements reside. You can make the background colorful or plain white, or you can even use a texture or digital image as a background. It can greatly enhance the look of your presentation. You can change the background for one slide or throughout the presentation. Be careful with your choice of background — a complicated background can make the presentation hard to read or distracting.

In this example, we have used a template of **Sales Training** for modifying the background. But you can also modify the background of Blank presentation.

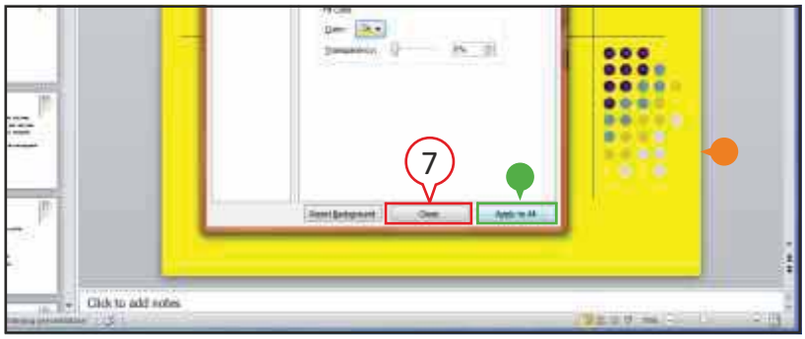
SOLID BACKGROUND COLOR

1. Click on the **Design** tab.
2. Click on **Background Styles**.
3. Click on **Format Background**.



The **Format Background** dialog box appears.

4. Click on the radio button options of **Solid fill**.
5. Click on the **Color** button to open the color palette.
6. Select the color you want to apply as a background.

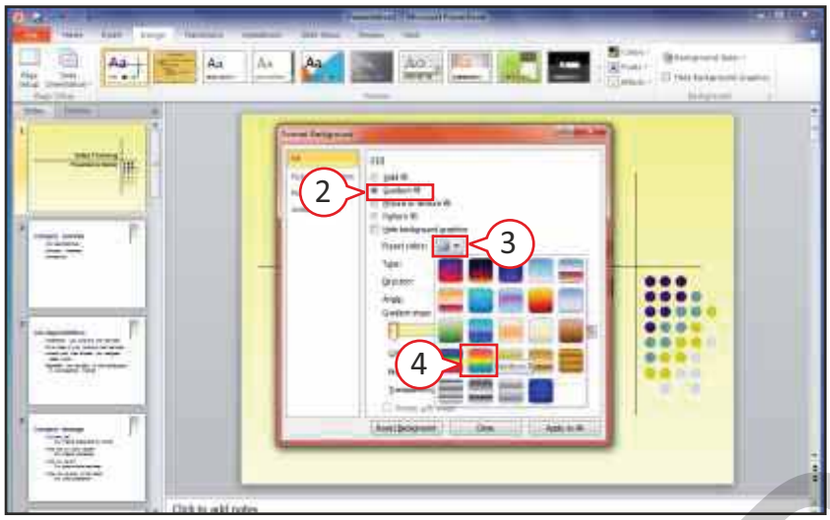


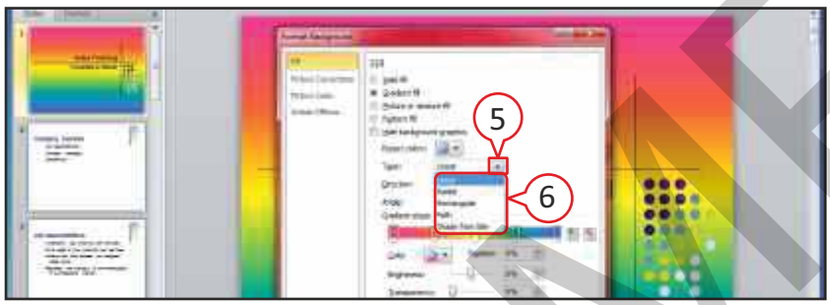
7. Click on **Close** button to apply **solid color** on the current slide.

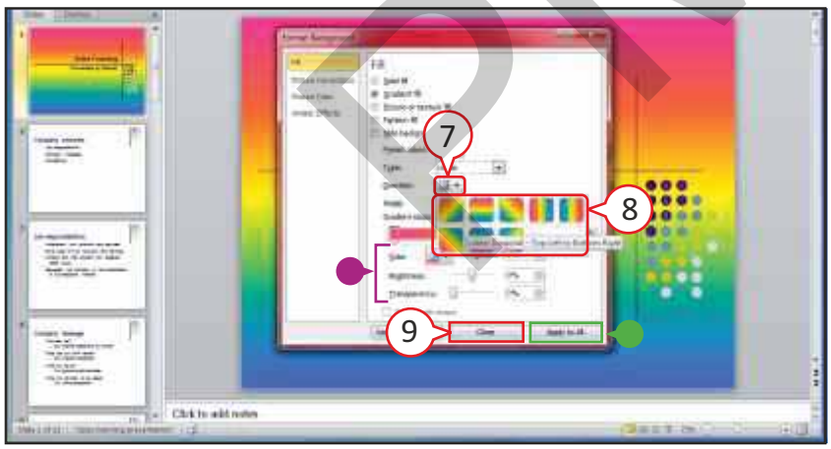
- You can click on **Apply to All** button to apply **solid color** on all the slides.
- The color selected by you is applied in the current slide.

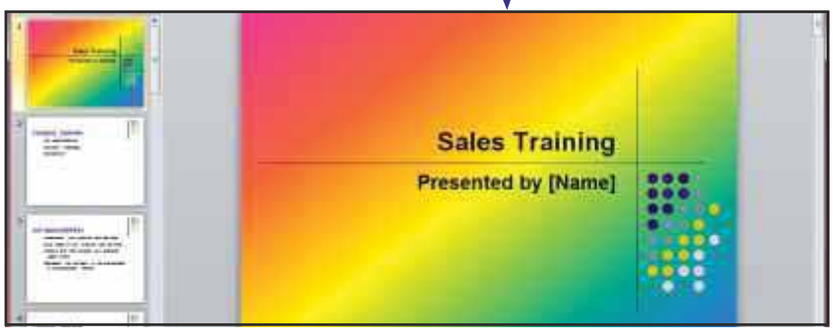
GRADIENT COLOR

1. Repeat steps **1** to **3** of the previous session to bring **Format Background** dialog box.









The **Format Background** dialog box appears.

2. Click on the radio button options of **Gradient fill**.
3. Click on the **Preset Colors** button to open **gradients** pattern.
4. Select the pattern you want to apply as a background.
5. Click on the down arrow button of **Type**.
6. Select the type of gradient pattern.
7. Click on the down arrow button of **Direction**.
8. Select any direction of gradient fill.

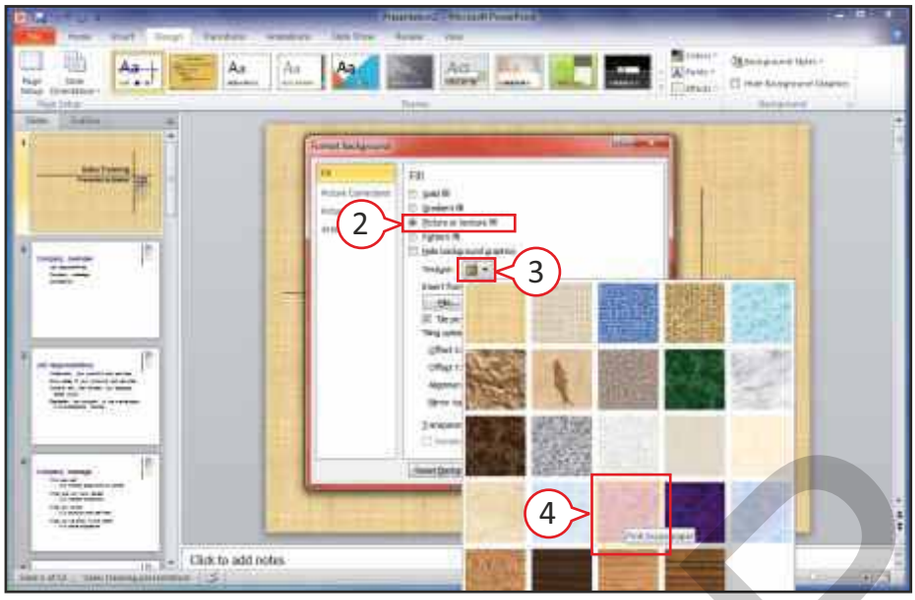
- You can fine-tune the gradient by adjusting its characteristics, such as color, brightness, and transparency.

9. Click on **Close** button to apply **gradient fill** on the current slide.

- You can click on **Apply to All** button to apply **gradient fill** on all the slides.
- The gradient fill, selected by you, is applied to the current slide.

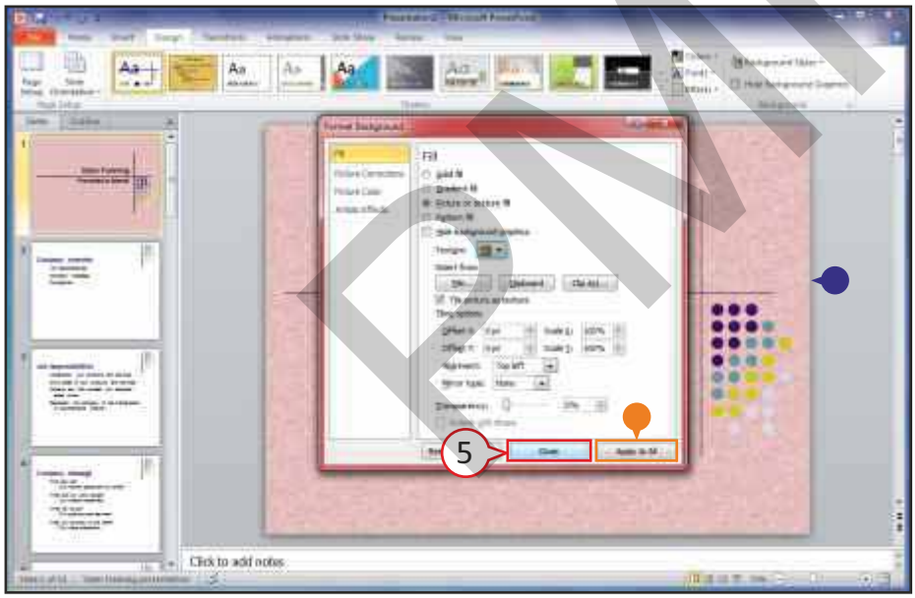
TEXTURED FILL COLOR

1. Repeat steps **1** to **3** of the previous session to bring **Format Background** dialog box.



The **Format Background** dialog box appears.

2. Click on the radio button options of **Picture or texture fill**.
3. Click on the **Texture** button to open a list of textures.
4. Select the texture you want to apply.



5. Click on **Close** button to apply **Texture Fill** on the current slide.

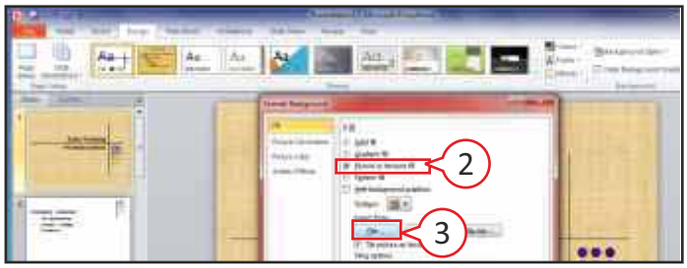
- You can click on **Apply to All** button to apply **Texture Fill** on all the slides.
- The Textured fill selected by you is applied to the current slide.

Theme vs Background color

When you apply a theme, it changes the colors of the background plus all the geometric shapes on the slide, including charts and tables. When you format the background and change its color, it affects only the background and not the geometric shapes. Objects such as pictures and clip art are not affected by either type of change. You can change the background and foreground of objects such as clip art and pictures by formatting them.

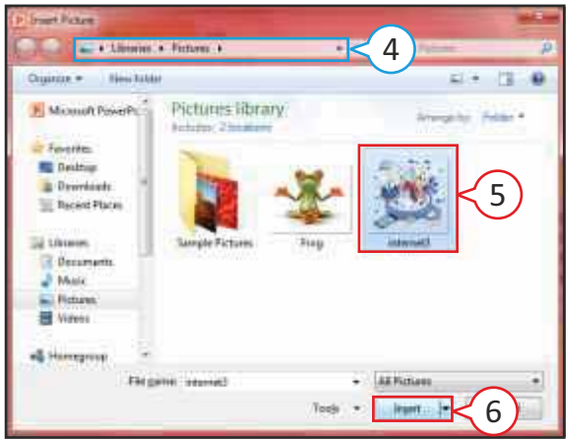
CUSTOM IMAGE FILL

1. Repeat steps **1** to **3** of the previous session to bring **Format Background** dialog box.



The **Format Background** dialog box appears.

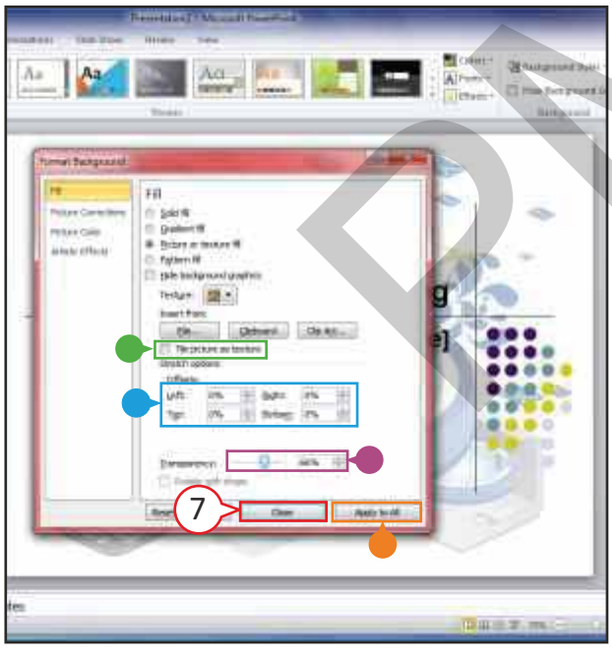
2. Click on the radio button options of **Picture or texture fill**.
3. Click on **File** button to open Insert Picture dialog box.



The **Insert Picture** dialog box appears.

4. Click on this area and locate the folder containing the file you want to use as the background image.
5. Click on the file you want to use.
6. Click on **Insert**.

PowerPoint applies the background image to the current slide.



- If the image is small, you can click the check box of the **Tile picture as texture** to repeat the image so that it covers the entire slide background.
- If the image does not quite cover the entire background, increase the values in the **Left**, **Right**, **Top**, and **Bottom** spin boxes as necessary to stretch the image to the full background size.
- If the image is dark or hazy, you can make the slide text easier to read by increasing the **Transparency** value.

7. Click on **Close** button to apply Custom Image on the current slide.

- You can click on **Apply to All** button to apply Custom Image on all the slides.

- After all the setting is done, the Custom Image is applied to the current slide.

Self-Evaluation

CHECKLIST

	Agree	Disagree
I know that PowerPoint presentation is also known as slide show.	☐	☐
I know that one page of a presentation is called a slide.	☐	☐
I know that different views in PowerPoint are Normal view, Slide Sorter view, Reading view, and Slide Show view.	☐	☐
I know that the background of a slide can be changed by inserting a solid color, gradient, texture, or custom image.	☐	☐

After reading the chapter, I know these points:

Exercises

A. Tick [✓] the correct answer.

1. A presentation program which is developed by Microsoft is ..... .
   a. Word ☐ b. Paint ☐ c. PowerPoint ☐
2. A PowerPoint presentation is also called ..... .
   a. Theme ☐ b. Slide Show ☐ c. Slide View ☐
3. The view in which PowerPoint displays the presentation by default is ..... .
   a. Outline View ☐ b. Slide View ☐ c. Normal View ☐
4. Miniature slides of the presentation can be seen in ..... view.
   a. Slide Sorter ☐ b. Reading ☐ c. Outline ☐
5. ..... helps you to refer to individual slide, while presenting the slide show.
   a. Notes Pane ☐ b. Normal View ☐ c. Reader View. ☐
6. ..... displays a large view of the current slide on right side of the window.
   a. Notes Pane ☐ b. Ribbon ☐ c. Slide Pane ☐

B. Write 'T' for True and 'F' for False statements.

1. A group of pages on any one topic is called a presentation. ☐
2. PowerPoint presentation is known as a document. ☐
3. The Slide Sorter view contains all the slide thumbnails. ☐
4. Outline tab shows the titles and main text from each slide. ☐
5. There are thousands of PowerPoint templates available online. ☐
6. Theme provides a quick way to create a new presentation. ☐

C. Fill in the blanks.

1. ..... allows to type titles, body text, and bulleted lists in slides.
2. The default slide layout of PowerPoint is ..... orientation.
3. ..... view allows full-screen view of a presentation in a window with simple controls.
4. ..... Sorter view is used to reorder, delete, or duplicate a slide.
5. Slides thumbnail Pane contains ..... of each slide.
6. Every slide has a ..... on which slide elements reside.

D. Differentiate between the following.

1. Slide

   .....
   .....
   .....

   Slide Show

   .....
   .....
   .....

2. Theme

   .....
   .....
   .....

   Template

   .....
   .....
   .....

E. Answer the following questions.

1. What is PowerPoint?

   .....
   .....

2. Name the different presentation views available in PowerPoint.

   .....
   .....

3. Explain Normal view of PowerPoint.

   .....
   .....

4. What is the use of Reading view?

   .....
   .....

5. Name the four ways in which we can change the Background of the slide.

   .....
   .....

F. Application Based Question.

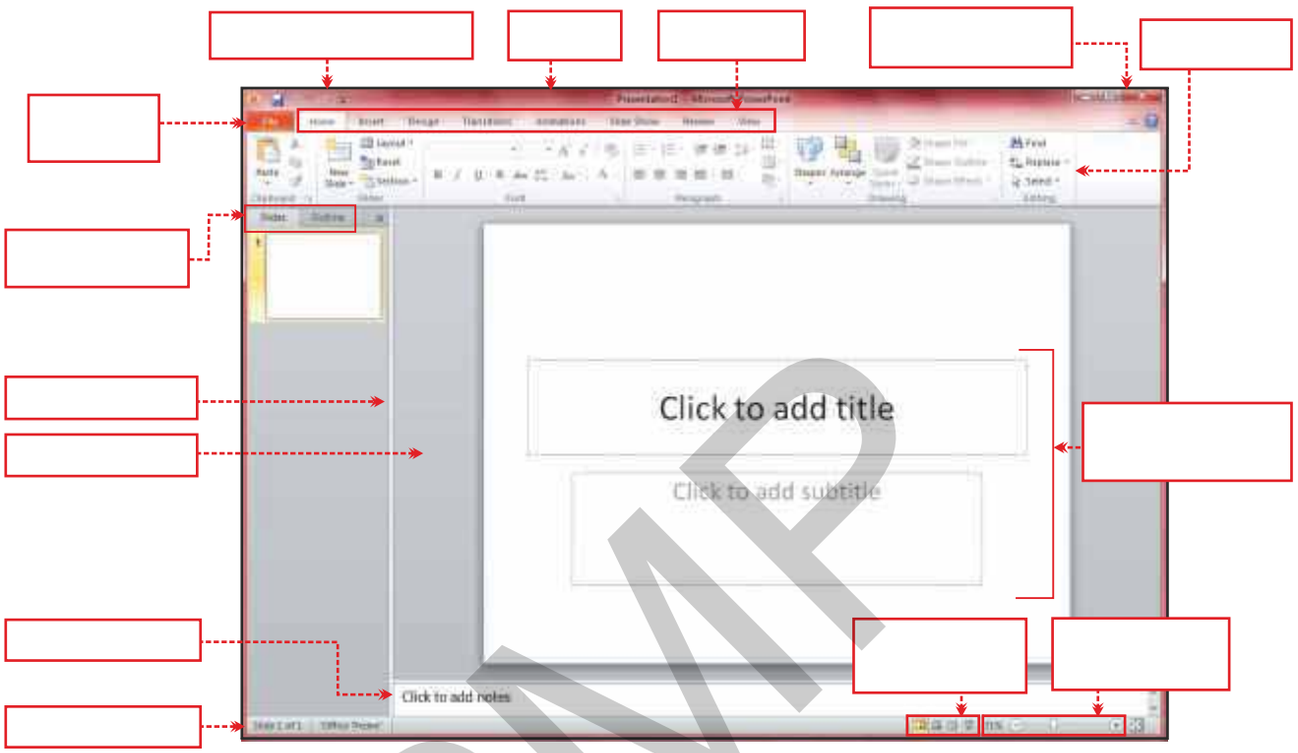
Pawan has made a presentation of 10 slides, which have the same white background. He wants to change the background color of all the slides. Which option will he use to apply the same background color to all the slides?

.....

Activity Section

Activity Label

Label the following PowerPoint window.



Lab Activity

Create a PowerPoint presentation using Template.

- Start PowerPoint program.
- Click on **File** tab, **Backstage view** appears.
- Click on **New**.
- Click on **Sample templates** (Quiz Show).
- A dialog box appears showing you a preview of the template. Click on **Create**.
- Selected template appears in the PowerPoint window which contains layouts, theme colors, fonts, effects, background styles and the content.
- You can change your own content in place of built-in contents.
- Now, check this presentation in all the views like Normal, Slide Sorter, Reading and Slide Show.

Group Discussion

Divide the students into two groups and discuss the topic, 'Presenting a topic verbally vs. Presenting a topic through presentation'.

8 »PowerPoint - Creating Slides

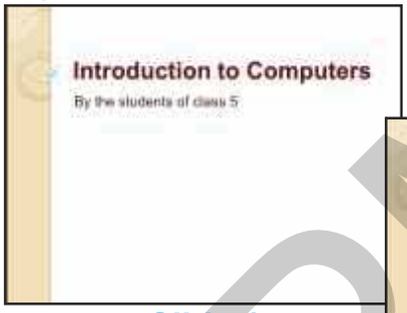
Topics Covered

•Project: Presentation on Computers • Creating a Presentation •Changing Slide Layout — Adding Online Picture, Picture, Table, Chart, SmartArt, Media Clips •Adding Slide Transition •Adding Animation Effects •Running a Presentation •Saving a Presentation •Printing a Presentation

Hey friends! You have learnt about PowerPoint, which is a presentation software. Now, in this chapter, you will learn more about PowerPoint and also learn about creating presentation.

Project: Presentation on Computers

Start

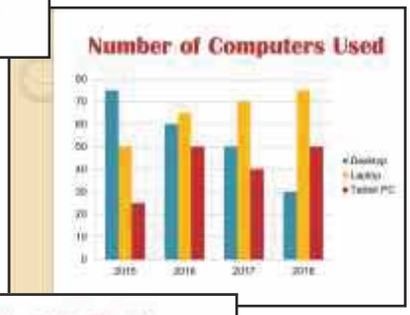


Slide 1

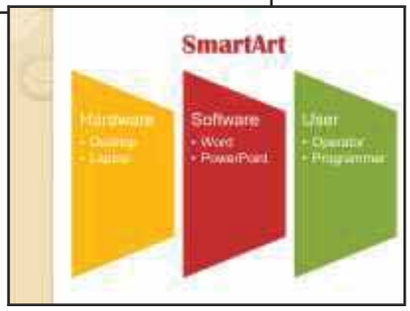
Slide 2

Slide 3

Slide 4



Slide 5



Slide 6

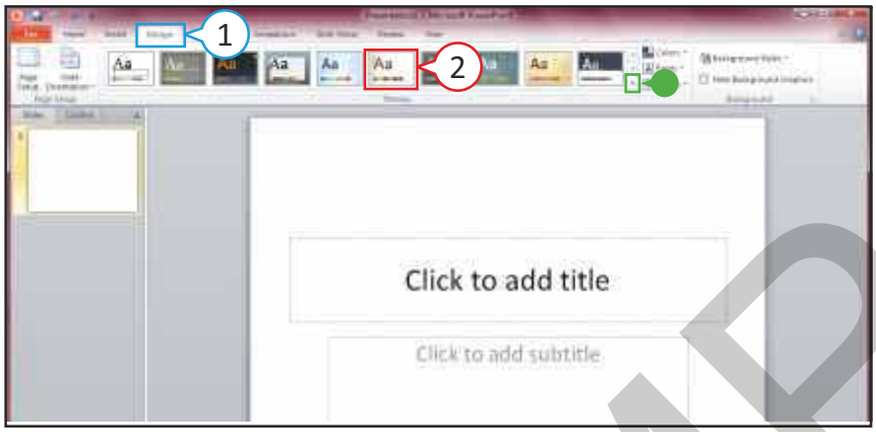
Slide 7

This project deals with creation of 7 slides which include text, graphics, charts, Table, SmartArt and media clip. Now, let us create the project by using various features of PowerPoint.

Creating a Presentation

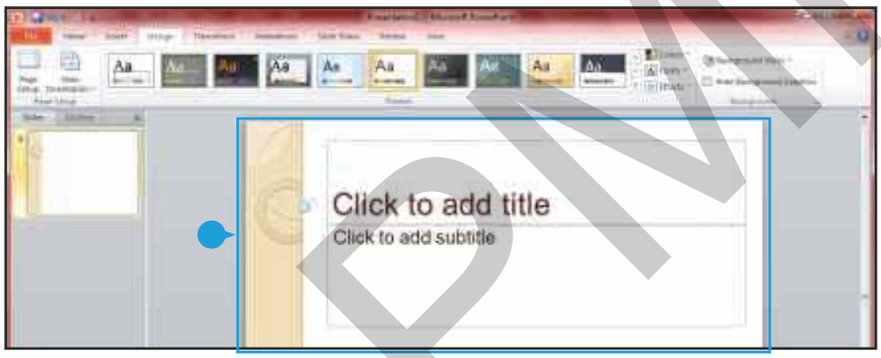
CREATING A BLANK PRESENTATION WITH DESIGN THEME

Design theme is built-in design for creating a presentation which includes pre-defined information, layout, background, text, and color. You can select a particular **design theme** using the **Design** tab on the ribbon. By default, PowerPoint opens a blank slide for you whenever you start the program.



1. Click on **Design** tab.
2. Click on a **theme.**

- *You can click on the down arrow of **More** button to view the full palette of themes.*

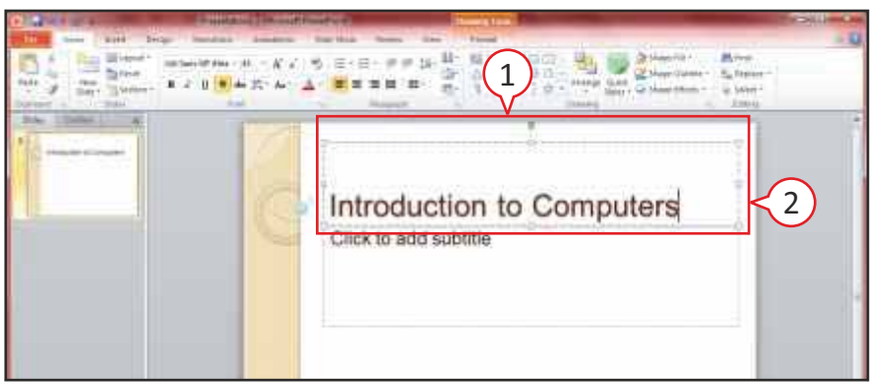


- The theme is applied to Slide 1.

When the theme is applied to the Slide, you can start adding the text

CREATING THE TITLE SLIDE

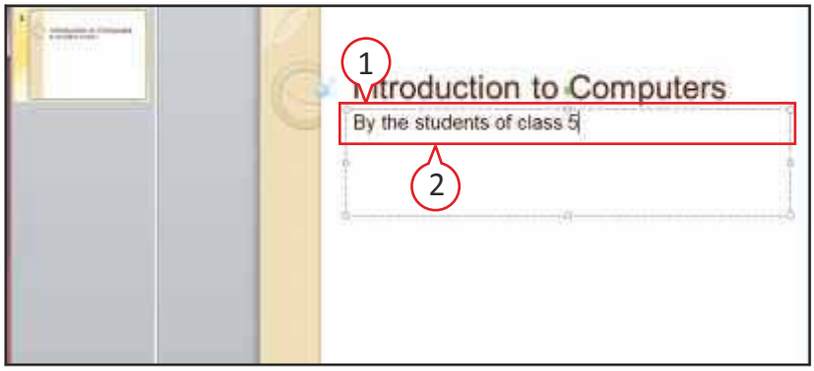
When you create a new presentation, PowerPoint displays a blank title slide. It assumes that every new slide has a **title** whenever you create a new one. Any text typed after a new slide display becomes **title text** in the title text placeholder.



1. Click on the **title text placeholder** box.
2. Type your text in text placeholder box.

The typed text is displayed in the **title text placeholder** and in the Slides thumbnail pane.

Entering Text in Subtitle

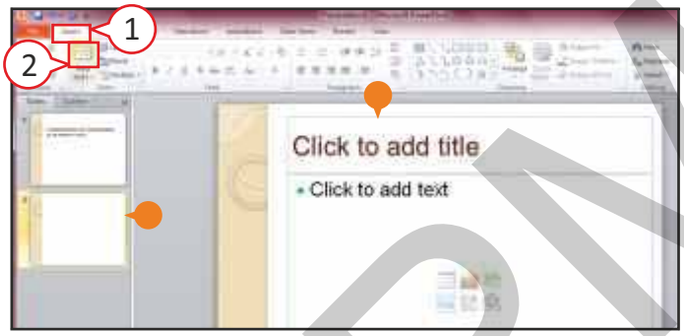


1. Click on the **subtitle text placeholder** box.
2. Type your text in subtitle text placeholder box.

The subtitle text is displayed in subtitle text placeholder and in the Slides thumbnail pane.

ADDING A NEW SLIDE TO A PRESENTATION

Your next step is to add a new slide after creating a title slide. To build a presentation, you can add as many slides as you like. Normally whenever a presentation is created, in addition to slides, one can add text, graphics, and charts. Follow these steps to add a new slide:

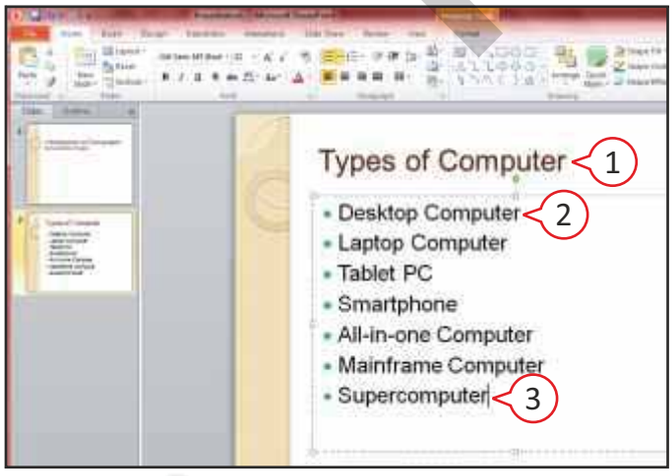


1. Click on **Home** tab.
2. Click on the **New Slide** button.

- The slide 2 appears in the presentation and in Slides thumbnail pane.

Adding Text to Slide 2

You can type the text in the same way as you typed text for slide 1.



1. Click on the title text placeholder box, and type your text.
2. Click on the subtitle text placeholder box, and type your text.

A **bullet** appears beside your text. When you press the **Enter** key, a new bullet appears in the next line.

3. Complete your remaining text as you did in earlier steps.

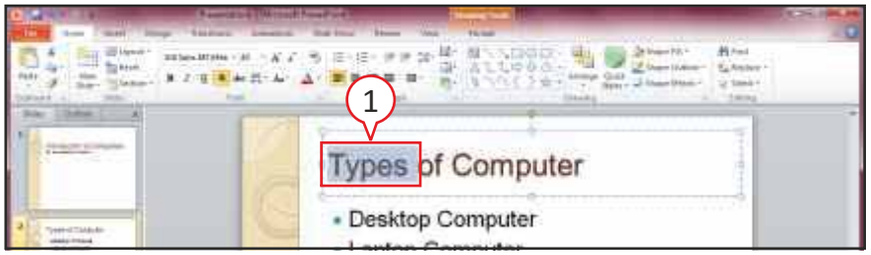
Update Your Knowledge

Bullet points are discussion points, not detailed sentences; remember to keep them short.

SELECTING TEXT

You will often need to select the text you want to work with before making changes to the text in your presentation. The selected text appears **highlighted** on your screen.

To Select a Word



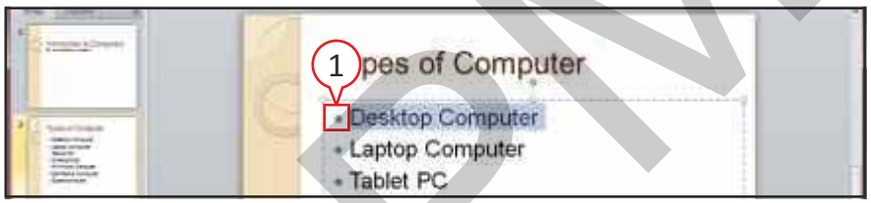
1. **Double-click** on the word you want to select.

To deselect the text, click outside the selected area.

To Select a Sentence

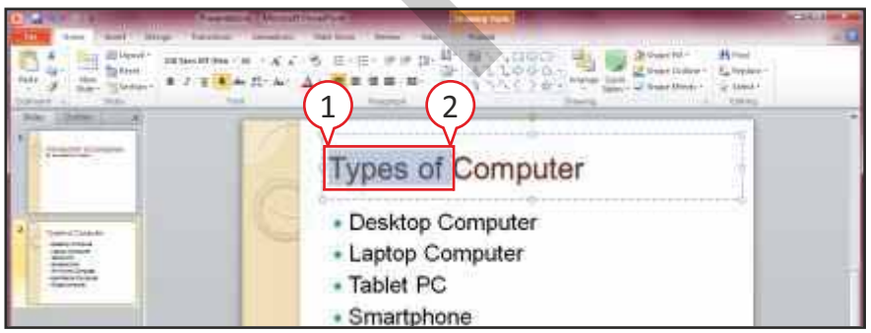
1. Click **three times** quickly on the sentence you want to select.

To Select a Point



1. Click on the **bullet** (•) beside the point you want to select.

To Select any Part of Text



1. Position the mouse pointer (I) over the first word you want to select.
2. Drag the mouse pointer (I) over the text you want to select.

DELETING TEXT

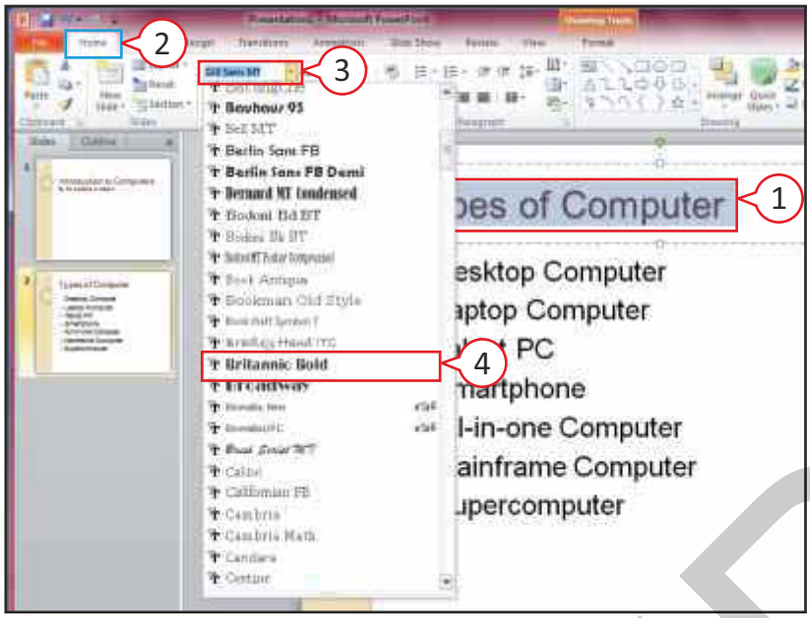
Text can be deleted from a slide to remove information that you no longer need in your presentation.

1. Select the text you want to delete.
2. Press the **Delete** key from the keyboard to remove the text from your presentation.

The text will disappear from the slide.

CHANGING THE FONT OF TEXT

You can change the font of the text to enhance the appearance of a slide.

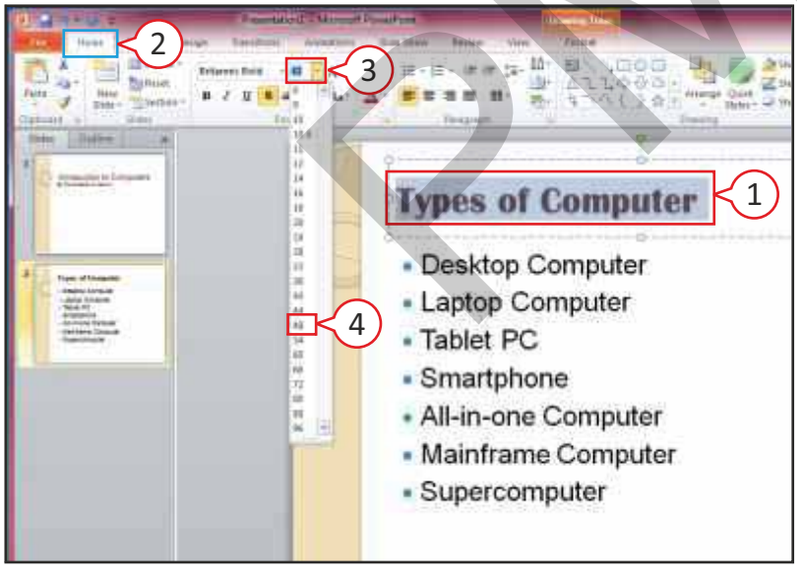


1. Select the text you want to change to a different font.
2. Click on **Home** tab.
3. Click on down arrow button of **Font** to display a list of the available fonts.
4. Click on the **font** you want to use.

PowerPoint applies new font to the text box.

CHANGING THE FONT SIZE OF TEXT

You can change the size of the text on a slide in PowerPoint.



1. Select the text you want to change to a different font size.
2. Click on **Home** tab.
3. Click on down arrow button of **Font Size** to display a list of the available sizes.
4. Click on the **font size** you want to use.

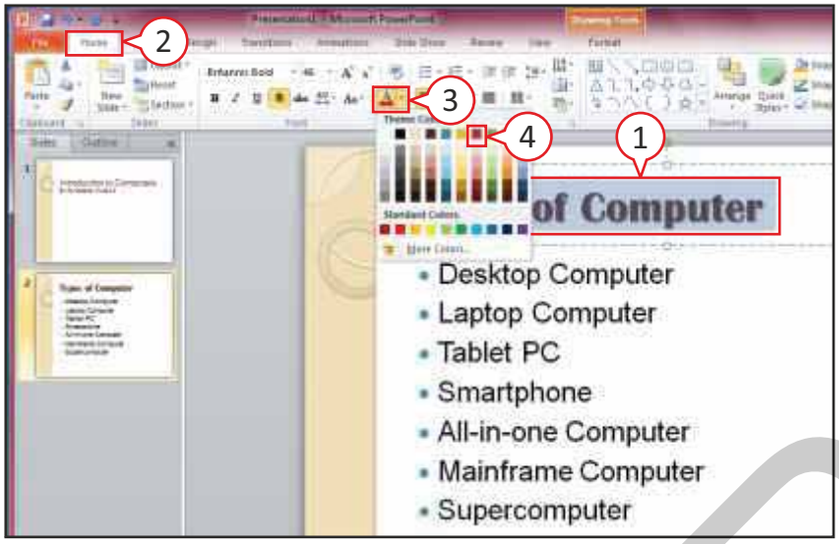
PowerPoint immediately applies the new font size to the text box.

Do You Know?

- PowerPoint remembers the last changes you made to your presentation. If you don't want these changes, you can cancel them using the Undo feature. You can click on **Undo** button from **Quick Access Toolbar** to undo the last changes you made to your presentation. To reverse the results of the Undo feature, click on **Redo** button from Quick Access toolbar.
- You can use CTRL + Z for **Undo** and CTRL + Y to **repeat** the previous action.

CHANGING THE COLOR OF TEXT

You can change the color of the text to make your slide more appealing. It will draw attention towards important information in presentation.

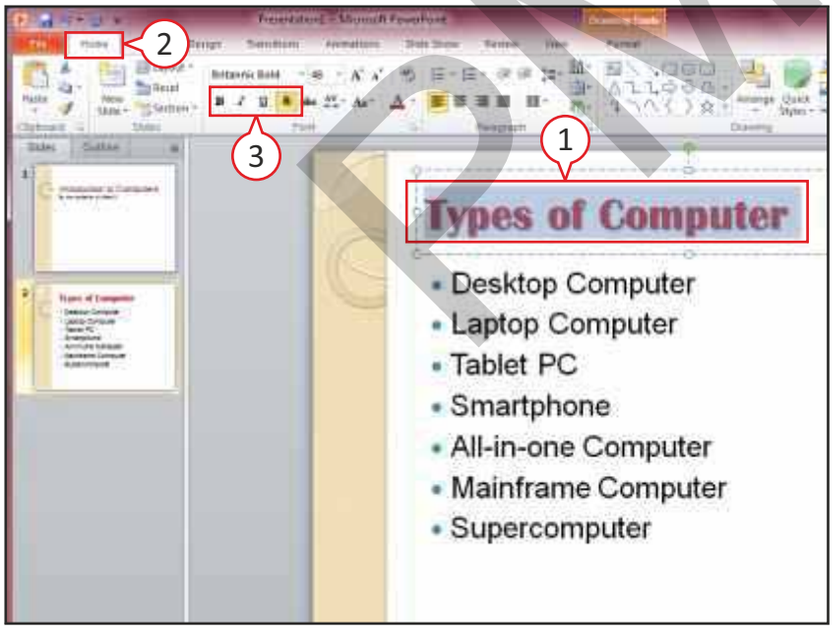


1. Select the text you want to change to a different color.
2. Click on **Home** tab.
3. Click on the down arrow of **Font Color** button.
4. Click on the desired color.

PowerPoint applies color to the text in the selected text box.

CHANGING THE TEXT STYLE

You can change the appearance of the text by changing the text style as per four different styles: bold, italic, underline, and shadow.



1. Select the text or text box that you want to change.
2. Click the **Home** tab.
3. Click a style button:

   Bold [B]

   Italic [I]

   Underline [U]

   Shadow [S]

PowerPoint assigns the desired formatting.

In this example, we have used **Shadow** style.

Do You Know?

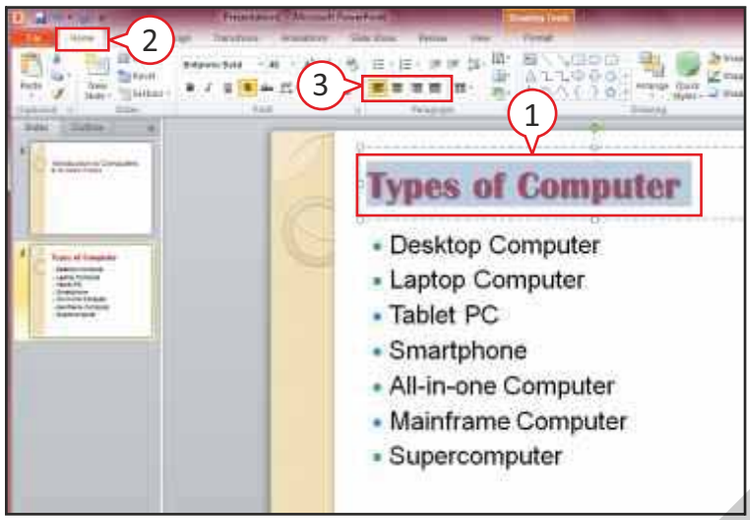
Fonts are divided into **four** main types: **serif fonts**, with cross strokes on the letter ends; **sans serif fonts**, which do not have cross strokes on the letter ends; **script fonts**, which look like handwriting; and **decorative fonts** such as Algerian, which are heavily stylized.

Do You Know?

You can type font sizes from 1 to 4000. But remember that the text should be readable for the viewer. A very small text size is difficult to see; a huge text size can make text look rough or pixelated.

CHANGING THE ALIGNMENT OF TEXT

You can change the positioning of text in a text box by assigning different alignment commands.



1. Select the text or text box that you want to change.
2. Click on **Home** tab.
3. Click on an alignment button:

   Align Left [ ]

   Center [ ]

   Align Right [ ]

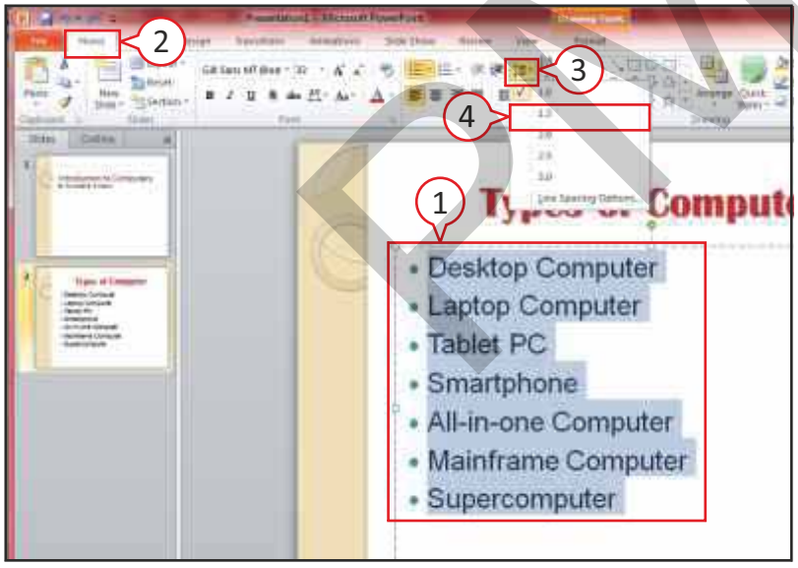
   Justify [ ]

PowerPoint assigns the formatting.

In this example, we have used **Center** alignment.

SETTING THE LINE SPACING

You can change the line spacing to create more or less space between lines of text.



1. Select the text or text box that you want to change.
2. Click on **Home** tab on the Ribbon.
3. Click on the down arrow of **Line Spacing** button.
4. Click on a line spacing option.

PowerPoint applies the line spacing.

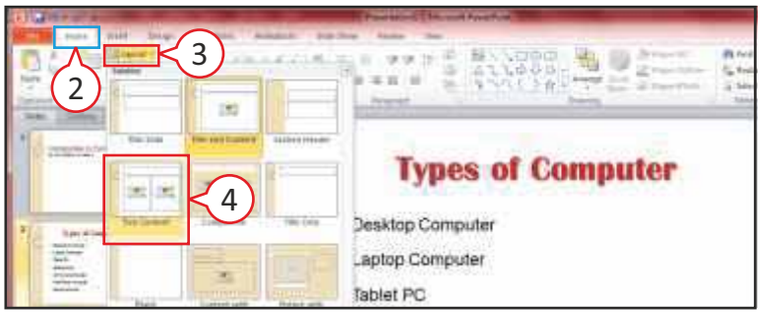
In this example, we have applied **1.5** spacing.

Changing Slide Layout

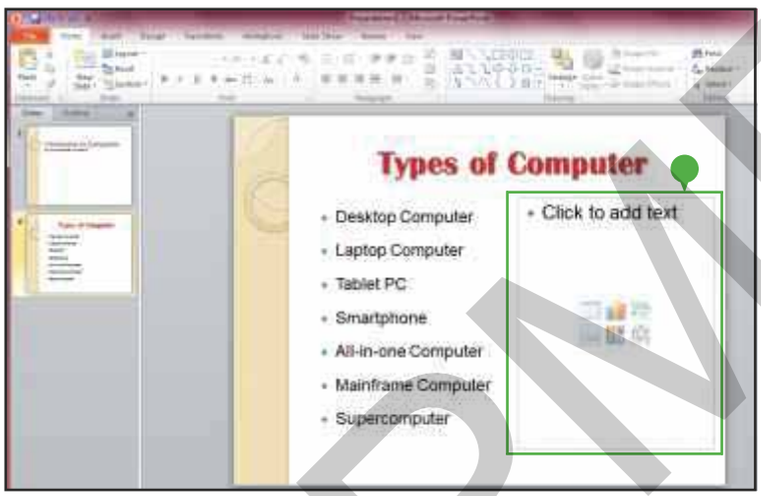
A **slide layout** determines the placement of all the items such as title, graphics or text boxes that make up your slide. You can change the layout of the slide any time. Most slide layouts contain the content placeholder. The **content placeholders** may be to the right or left of the text, above the text, or below the text. You can use content placeholders to build your presentation effectively and

efficiently. They enable you to insert **text** or one of **six graphical** objects so that you can make your presentation quickly.

You may need to make a few adjustments to the text position and size to fit the new layout if you assign a new slide layout to the slide with existing text. For best results, you should assign a new layout before adding content to your slides.



1. Display the slide that you want to change.
2. Click on **Home** tab.
3. Click on **Layout** button.
4. Click on any desired Layout.



- PowerPoint immediately assigns a layout to the slide.

The text in the slide will automatically adjust itself to the new layout.

CONTENT PLACEHOLDER

Content placeholders appear on most of the slide layouts. You can use **content placeholders** to build your presentation effectively and efficiently. They enable you to insert text or one of six graphical objects so that you can make your presentation fast.

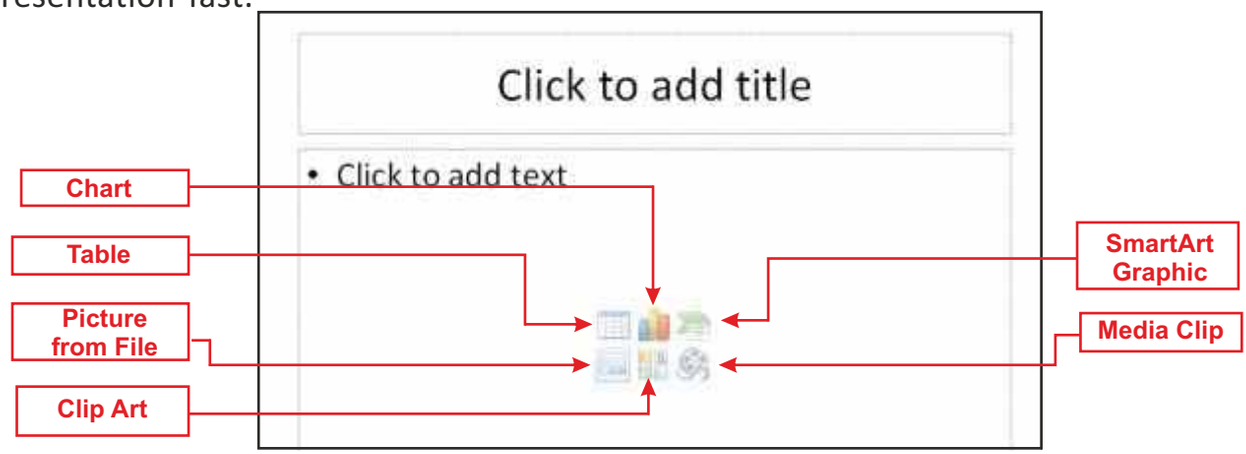


Table: Table icon ( ) is used to create a table. You can specify the number of columns and rows in the table.

Chart: Chart icon ( ) is used to generate a chart using a chart type that you specify and data that you type into an Excel worksheet.

SmartArt: SmartArt Graphic icon ( ) is used to insert a diagram using one of the many diagram styles provided by PowerPoint.

Picture from File: Picture icon ( ) is used to insert a picture file such as a bitmap or JPEG you have stored on your computer, or other storage media.

Clip Art: Clip Art icon ( ) is used to select an image from the built-in clip art collection, or import clip art from Bing Image Search.

Media Clip: Videos icon ( ) is used to insert a video file that plays on command during the slide show.

ADDING CLIP ART IMAGE

A Clip Art image can be added to a slide to make your presentation more interesting, entertaining, and attractive. Following are the steps:

1. Display the slide in which you want to add a Clip Art.
2. Change the **layout** of the slide to the one that includes a placeholder for Clip Art.
3. Click on **Clip Art [ ]**.

In this example, we are adding clip art using content placeholder. But you can also add clip art by clicking on the **Clip Art** option from the **Insert** tab.

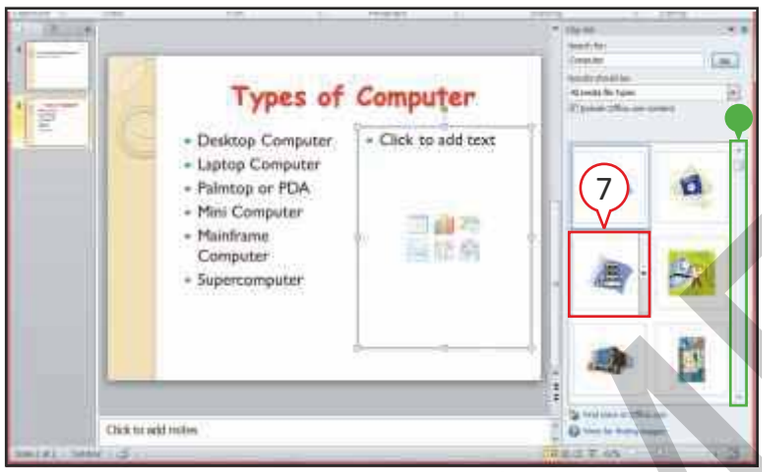
1. Display the slide in which you want to add a Clip Art.
2. Click on **Insert** tab.
3. Click on **Clip Art [ ]**.

Update Your Knowledge

Placeholders are rectangular objects on slides that you replace with your own text, graphics, charts, tables, SmartArt, and multimedia while maintaining the preset layout. Several types of placeholders can hold text: title, bulleted, subtitle, section header, caption, quote, and name card. You simply click the placeholder and then start typing. You can also go back and edit text you have already typed.

The **Clip Art** task pane appears.

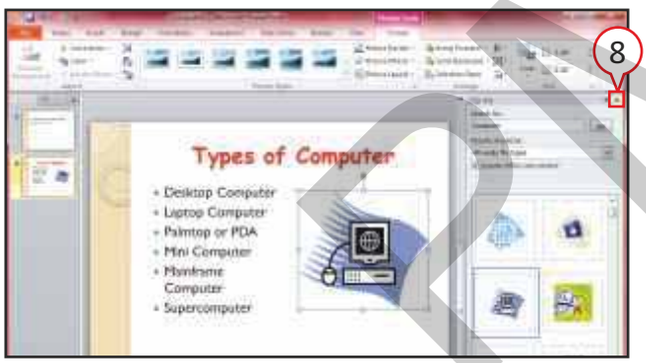
4. Type a keyword or phrase for the type of Clip Art that you want to insert.
5. Click on the down arrow of **Results should be** box and click on collection to search in a particular collection.
6. Click on **Go**.



The Clip Art task pane displays many matches for the keyword or phrase that you typed.

- You can use the **Scroll bar** to see all the displayed matches.

7. Click on the Clip Art image to add to the slide.



The Clip Art is inserted and the Picture Tools appear on the **Format** tab.

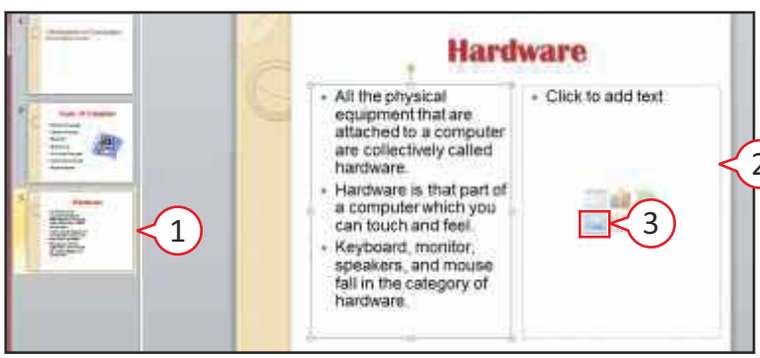
You can resize or move the Clip Art.

To deselect the Clip Art, click anywhere else in the work area.

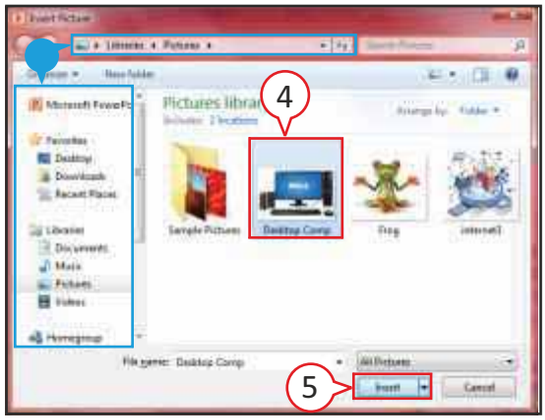
8. Click on **Close** button to close the pane.

ADDING A PICTURE FROM FILE

A picture stored on your computer can also be added to the slide in your presentation.



1. Create the **third** slide and add text in it.
2. Change the **layout** of the slide to the one that includes a placeholder for a picture.
3. Click on **Picture** icon ( ) to add a picture to the slide.



The **Insert Picture** dialog box appears.

- Navigate these areas to find folder or drive containing picture that you want to use.

4. Click on the **picture** you want to add to the slide.
5. Click on **Insert** to add the picture to the slide.

- The Picture is inserted and **Picture Tools** appear on the **Format** tab.

You can **resize** or **move** the picture.

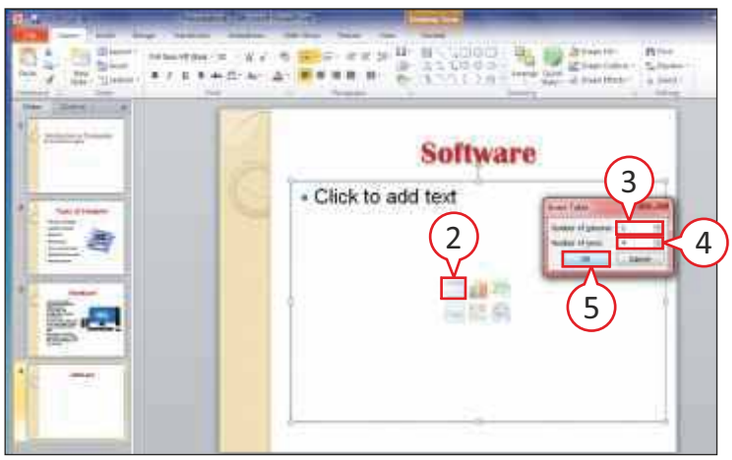
To deselect the picture, click anywhere else in the work area.

*Note: In this example, we have added pictures using content placeholder. But you can also add pictures by clicking on the **Picture** icon from the **Insert** tab.*

ADDING A TABLE

Table is used to organize data in rows and columns. You can add table to your slide. You can use a content placeholder to insert a table, and then type data into the table cells. By default, most of the table styles assume that you will enter **column headings** in the top row of the table. If you need **row headings**, add an extra column to hold them.

1. Create the **fourth** slide, add text and change the **layout** that includes a placeholder for a Table.

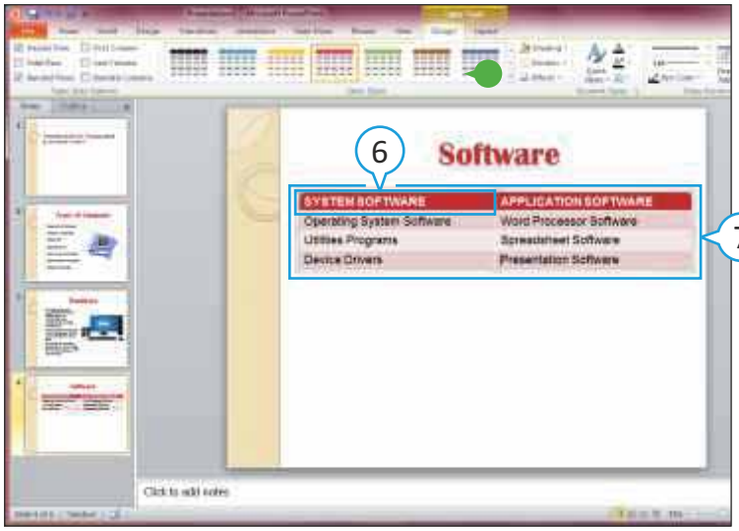


2. In the content placeholder, click on **Table** icon [ ].

The **Insert Table** dialog box appears.

3. Type the number of **columns** that you want to appear in the table.
4. Type the number of **rows** that you want to appear in the table.
5. Click on **OK**.

PowerPoint inserts table into the slide and displays **Table Tools** tab in the Ribbon.



- You can click here to change the **table style**.

6. Click inside the first table cell, and type your data.

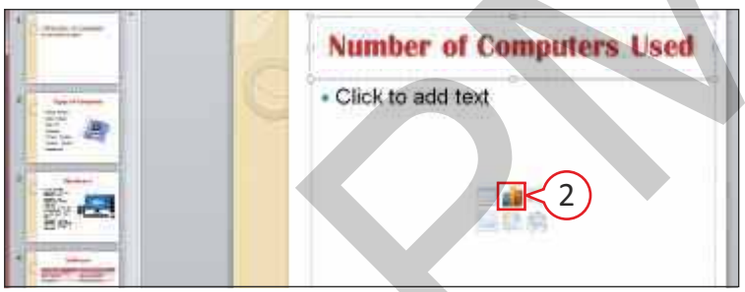
You can press **Tab** key to move from one table cell to the next.

7. Continue typing the table cell data to fill the table.
8. After you finish typing the table data, click anywhere outside the table area to deselect the table.

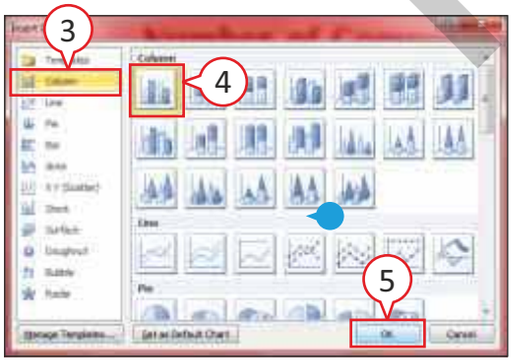
*Note: In this example, we have added table using content placeholder. But you can also add table by clicking on the **Table** icon from the **Insert** tab.*

ADDING A CHART

Charts tell a story with a brief viewing and can convey statistical information quickly. In PowerPoint, you can insert a chart using an Excel worksheet. You can type your own chart data and choose the type of chart that you want to display.



1. Create the **fifth** slide, add text and change the **layout** that includes a placeholder for a chart.
2. In the content placeholder, click on **Chart** icon [ ].



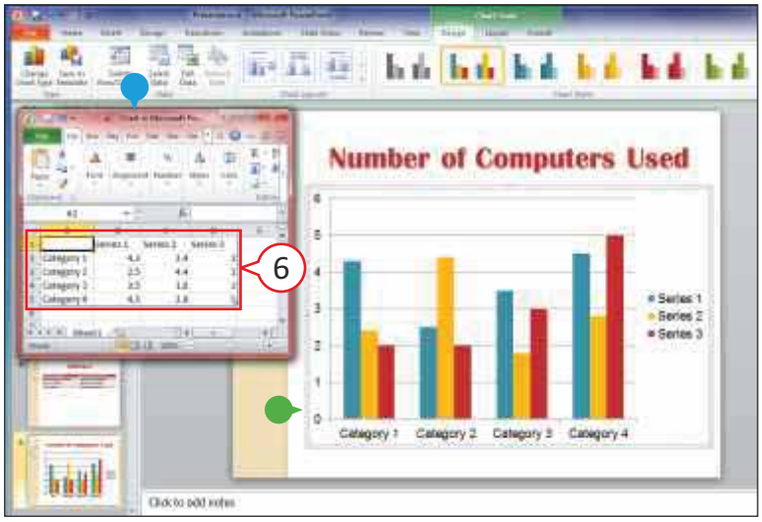
The **Insert Chart** dialog box appears.

3. Click on a **Chart category**.
4. Click on a **Chart type**.
5. Click on **OK**.

Excel is a spreadsheet software used to record and analyses numerical data. Its features are calculation, charts and pivot tables.

Update Your Knowledge

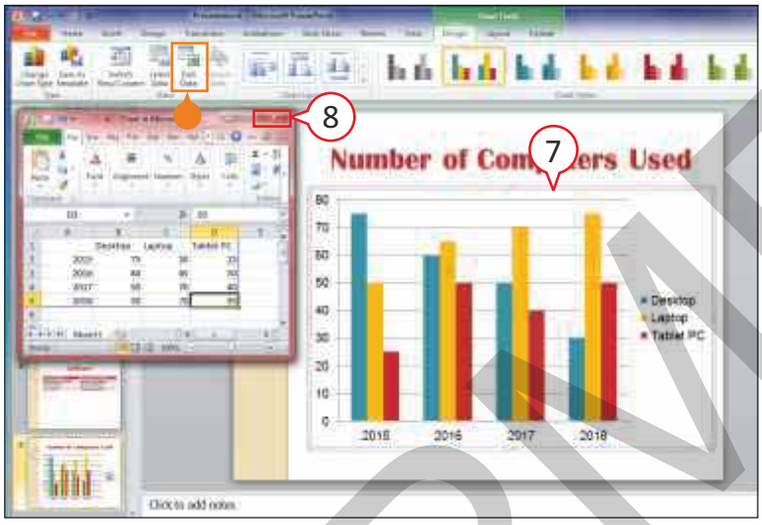
You can insert or delete rows and columns of table by clicking inside the table; then click on the **Table Tools Layout** tab. Now to insert, click on **Insert** option and to delete, click on **Delete**.



- PowerPoint immediately displays a sample of the chart type on the slide.
- **Excel** window opens with a **sample** of the chart data.

6. Replace the data with your chart data that you want to illustrate.

You can press **Tab** key from keyboard to move from cell to cell.



7. When finished entering chart data, click anywhere in the chart area to update the data.
- You can click on **Edit Data** button to edit the chart any time.

8. Click on **Close** button to close the Excel window.

*Note: In this example, we have added chart using content placeholder. But you can also add chart by clicking on the **Chart** icon from the **Insert** tab.*

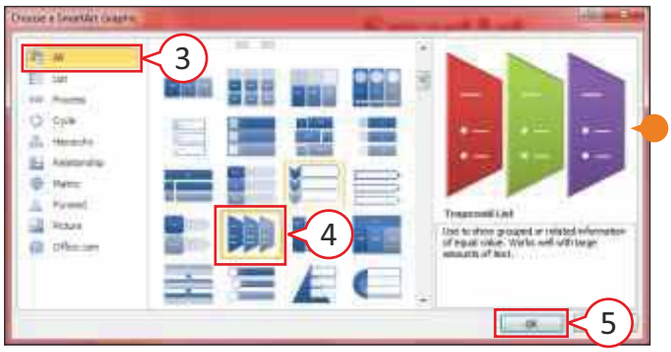
ADDING A SMARTART

You can use SmartArt Graphics to illustrate a process or structure. PowerPoint offers many SmartArt layouts to help you communicate with your audience graphically. It shows you some shapes to which you can add your own text.

1. Create the **sixth** slide, add text and change the **layout** that includes a placeholder for a SmartArt.
2. In the content placeholder, click on **SmartArt** icon [ ].

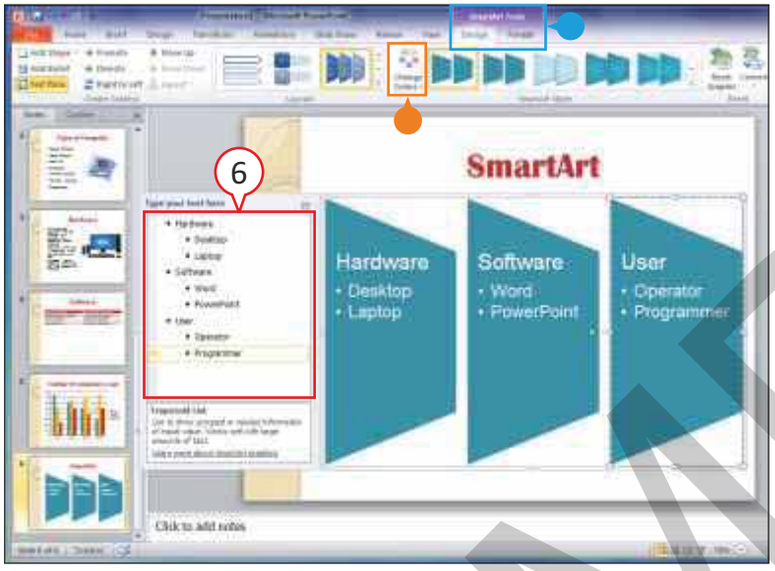
Update Your Knowledge

When you insert a chart, PowerPoint automatically applies a style to the chart, based on the theme of the slide. But you can change the formatting of charts. To format any object on a chart, click it; then use the formatting tools on the Chart Tools Design to change it to your liking.



Choose a SmartArt Graphic dialog box appears.

3. Click on any **SmartArt category**.
4. Click on any **SmartArt type**.
   - You can see the **preview** of selected type in this area.
5. Click on **OK**.

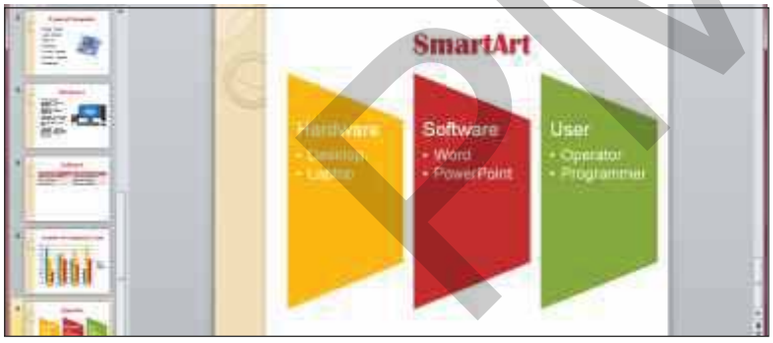


PowerPoint adds the graphic in your slide, and displays the **Type Your Text Here** dialog box.

6. Type text into the dialog box.

As you type the text will be implemented in the SmartArt.

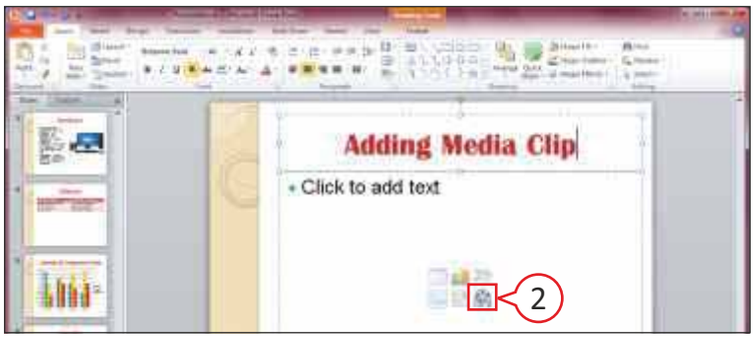
7. Click outside the SmartArt to view it.
   - You can format the SmartArt by using **SmartArt Tools**.
   - You can change the color of SmartArt by clicking on **Change Colors** button and the select the appropriate color.



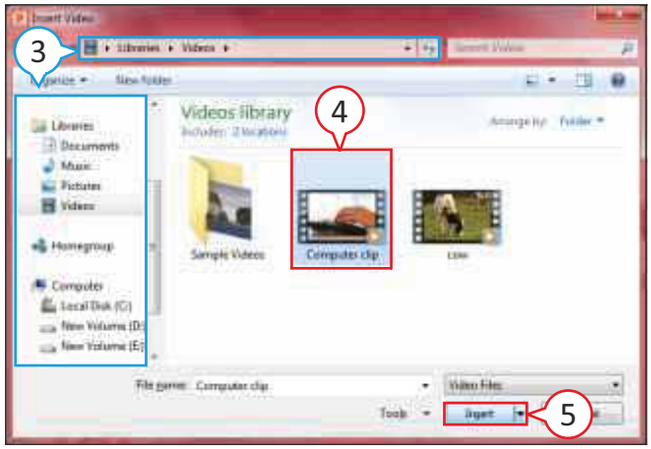
*Note: In this example, we have added SmartArt using content placeholder. But you can also add SmartArt by clicking on the **SmartArt** icon from the **Insert** tab.*

ADDING MEDIA CLIPS

Media clips can be inserted into your PowerPoint slides to add visual effect and played during a slide show.

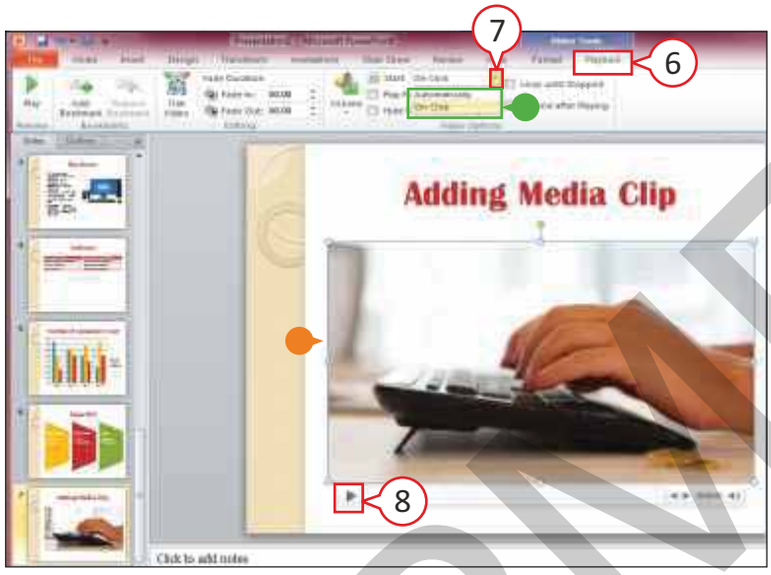


1. Create the **seventh** slide, add text and change the **layout** that includes a placeholder for **media clips**.
2. In the content placeholder, click on **Media Clips** icon [ ].



The **Insert Video** dialog box appears.

3. Navigate these areas to find folder or drive containing media clip that you want to use.
4. Click on the file name.
5. Click on **Insert**.



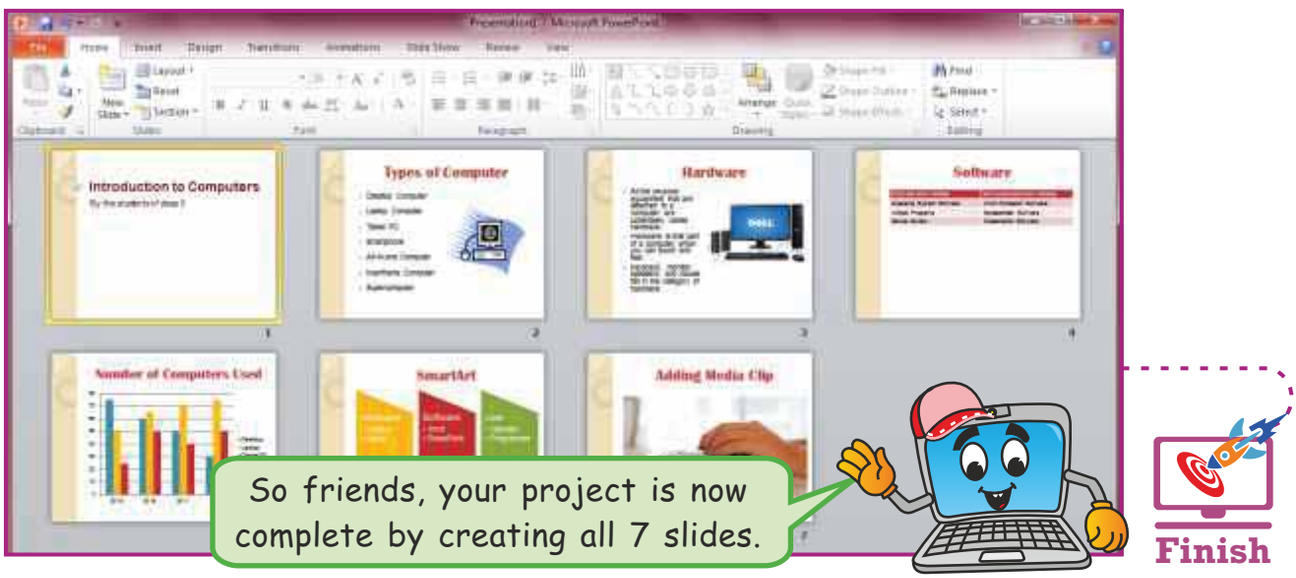
PowerPoint displays the clip to play in the slide.

6. Click on **Playback** tab.
7. Click on the down arrow of **Start** and choose an option:
   - Click on **Automatically** to make the clip play automatically.
   - Click on **On Click** to play the clip only when it is clicked.
8. Click on **Play/Pause** button in the toolbar beneath the media icon to play the file.

- You can resize the media clip to adjust it in your slide.

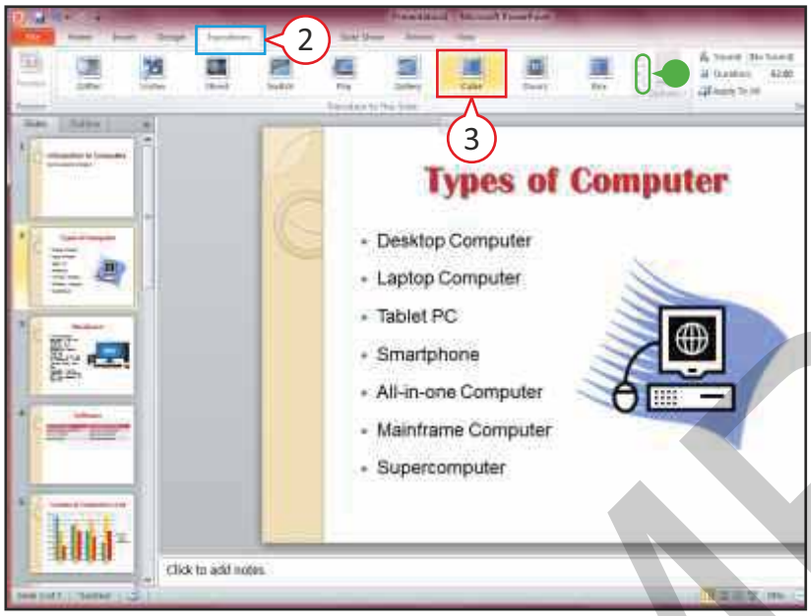
*Note: In this example, we have added video clip using content placeholder. But you can also add video by clicking on the **Video** icon from the **Insert** tab.*

*You can also add sound to the presentation by clicking on the **Audio** icon [ ] from the **Insert** tab.*



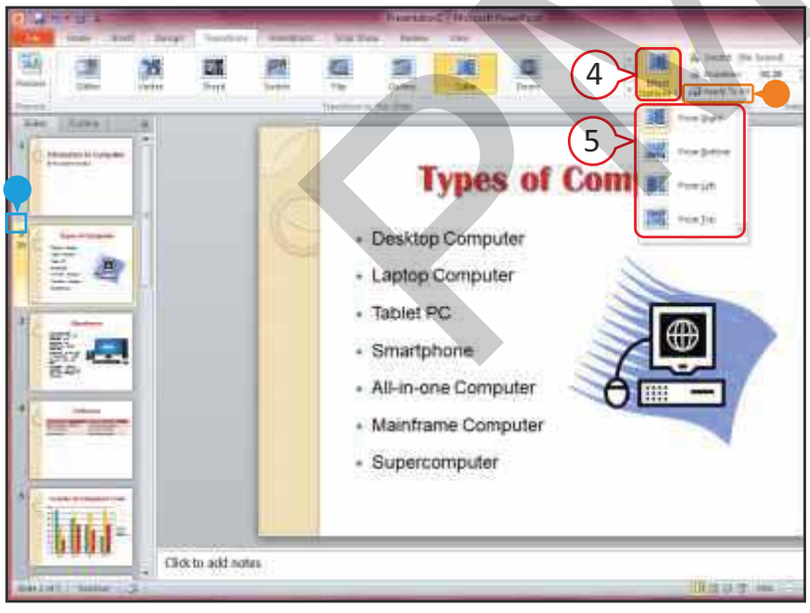
Adding Slide Transition

You can add transitions to slides in your presentation. A **transition** is a visual effect that appears when you move from one slide to another. You can apply a transition in Normal or Slide Sorter view to a single slide, multiple slides, or all slides.



1. Bring the slide to which you want to add a transition.
2. Click on **Transitions** tab on the Ribbon.
   - You can scroll through the available transition effects.
3. Click on any transition effect.

PowerPoint immediately displays a preview of the transition effect.



- PowerPoint adds an **animation icon** below the slide number.

4. Click on the down arrow of **Effect Options** button.
5. Click on the effects setting for transition.

PowerPoint displays a preview of the transition effect.

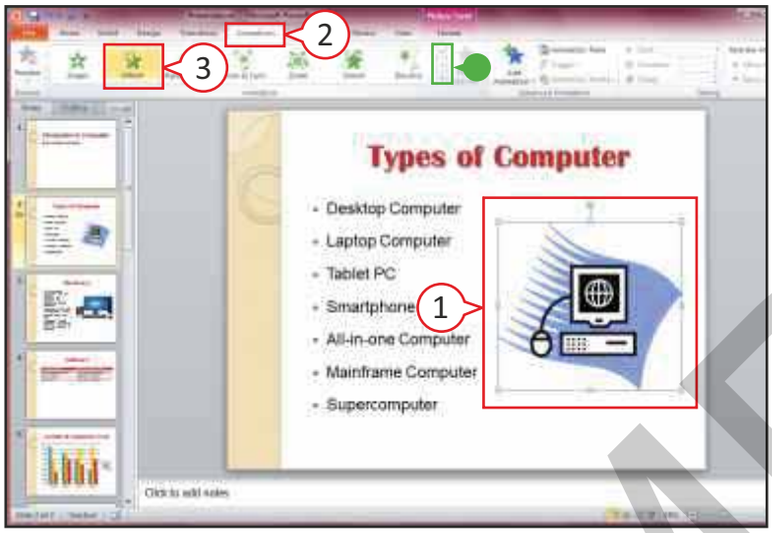
- You can click on **Apply to All** if you want to apply the same transition effect to the entire slide show.

REMOVE TRANSITION EFFECTS

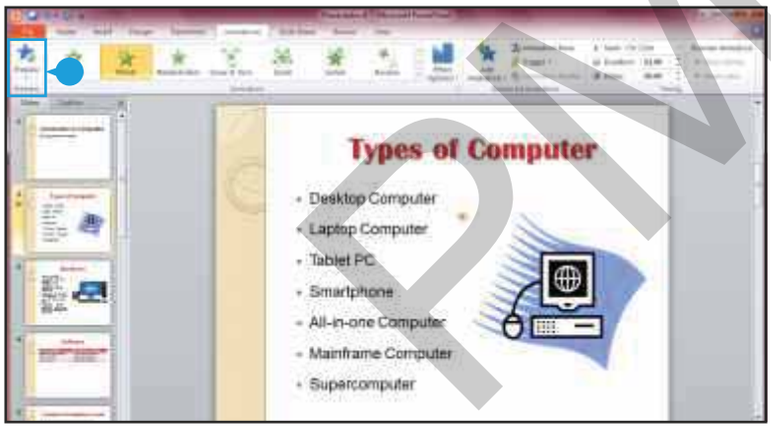
Sometimes after applying a transition you decide that it just does not work, and you want to remove it then repeat steps **1** to **3** while selecting **None** in step **3**. PowerPoint removes the transition, and transition icon disappears from the slide.

Adding Animation Effects

Animation is the illusion of movement by showing a series of still pictures in rapid succession. Animation effects make the PowerPoint slide show interesting and give it a professional look. Special visual and sound effects applied to the text or content are included in Animation. For example, each line on the slide can swivel as it is displayed on the screen.



1. Click on any **slide element** (such as text boxes, shapes, and pictures) to which you want to add animation in Normal view.
2. Click on **Animations** tab on the Ribbon.
   - You can scroll through the available animation effects.
3. Click on an animation effect.



PowerPoint immediately previews the effect on the slide and assigns a sequence number to the object or element.

- You can click on **Preview** button to preview the effect.

PowerPoint adds an animation icon below the slide number.

PowerPoint allows you to apply animation effects not only on one element or object, but on the other elements on a slide too. The animation effects will be displayed in the order they are applied.

ANIMATION PANE

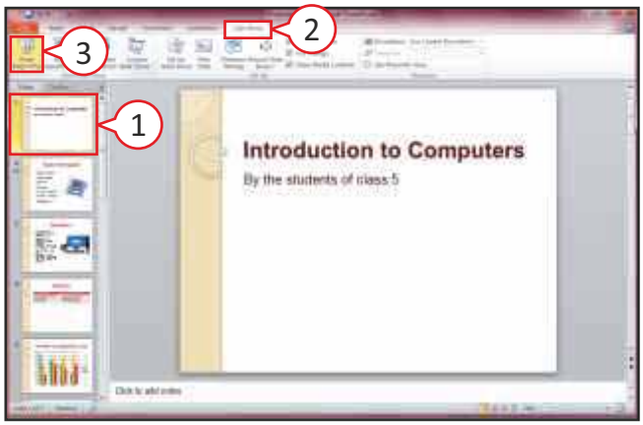
You can view a list of all the animations applied to a slide in the Animation Pane.

1. Click on **Animations** tab on the Ribbon.
2. Click on **Animation Pane** ( )button. Animation Pane appears on the right.

You'll see that each animation effect in the animation pane has an assigned number to the left. By clicking the down arrow of the effect, you can change the animation effects and change the sequence of elements or objects.

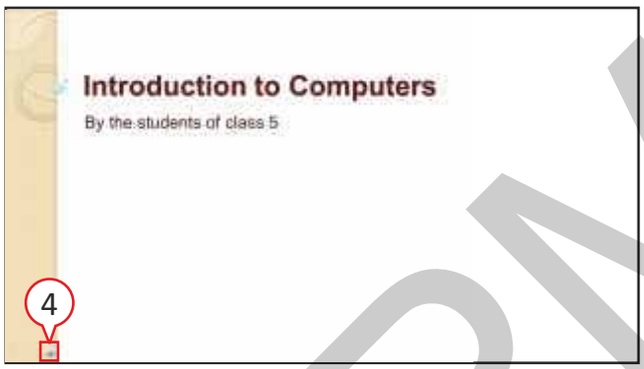
Running a Presentation

Slide Show view is used to give the presentation to a group of people. You can run a slide show of your presentation on the computer screen. A slide show displays one slide at a time, using the entire screen.



1. Click on the first slide you want to view in the slide show.
2. Click on **Slide Show** tab**.**
3. Click on **From Beginning**.

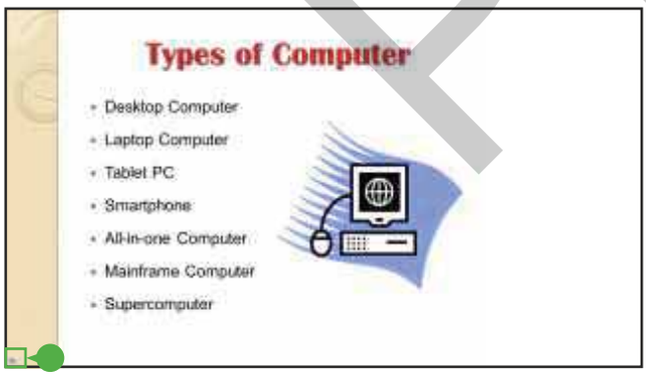
*You can also press **F5** key for Slide Show view.*



The slide you selected fills your screen.

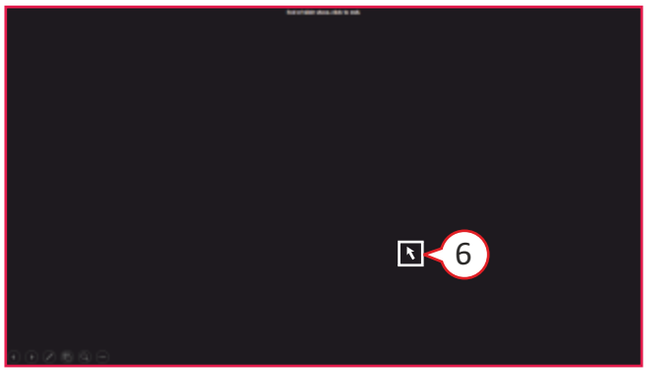
You can press **Esc** key to end the slide show any time.

4. To display the next slide, click on **Next** button or click anywhere on the current slide.



The next slide appears.

- To return to the **previous** slide, click on **Back** button or press **Backspace** key from the keyboard.



5. Repeat step **4** until this screen appears, indicating that you have reached at the end of the slide show.
6. Click on the screen to exit the slide show.

Saving a Presentation

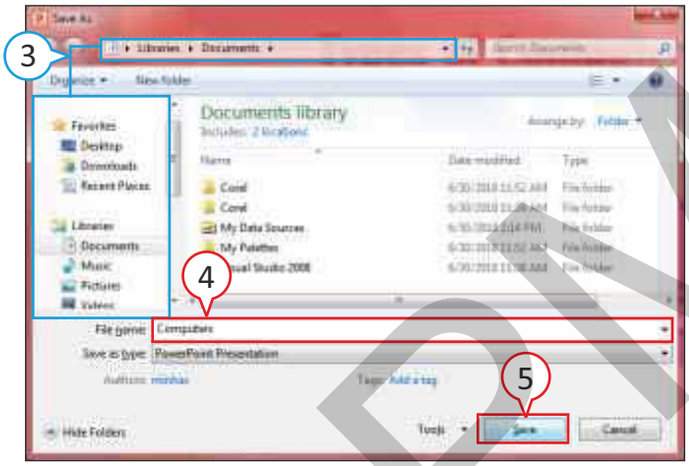
After creating the presentation, it must be saved for its future use. You can review and edit the presentation any time in future once it is saved. The default extension of PowerPoint 2010 file is **.pptx**.

1. Click on **File** tab.

Backstage View will appear.

2. Click on the **Save** or **Save As** button.

The **Save As** dialog box appears.



3. Click on these areas to navigate to the folder in which you want to save the file.
4. Click in the **File name** text box and type a name for the file.
5. Click on **Save**.

The PowerPoint saves the presentation, and the new filename appears on the Title bar.

Note: The keyboard shortcut to save a presentation is **Ctrl + S**.

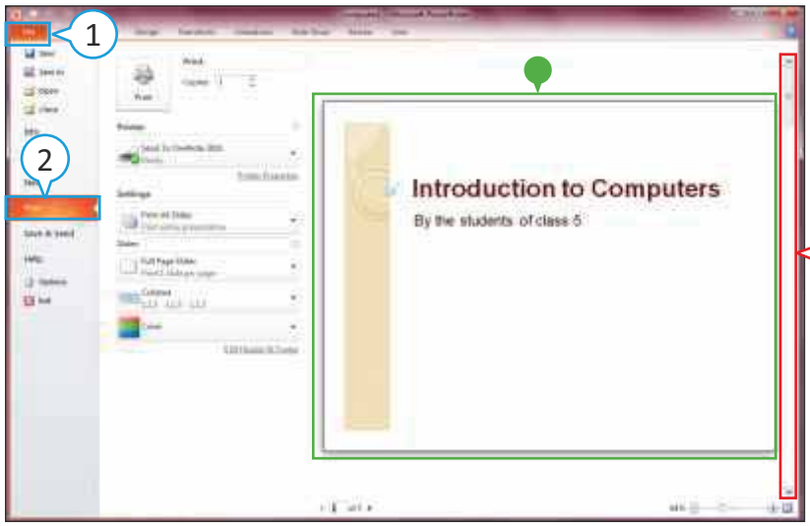
Printing a Presentation

There are several reasons to print a presentation. You can print the slides on the paper to review it separately from your computer, or you might want to print **handouts** for your audience to follow during your live presentation, or you might print your presentation **outline** to preserve a hard copy of the presentation text. If you want to see how your printout will look, you can see the **Preview** of the slides.

USING PRINT PREVIEW

You can use the **Print Preview** feature to see what your printout looks like before printing so that you do not waste paper for printing.

Display Print Preview



1. Click on **File**.

Backstage view appears.

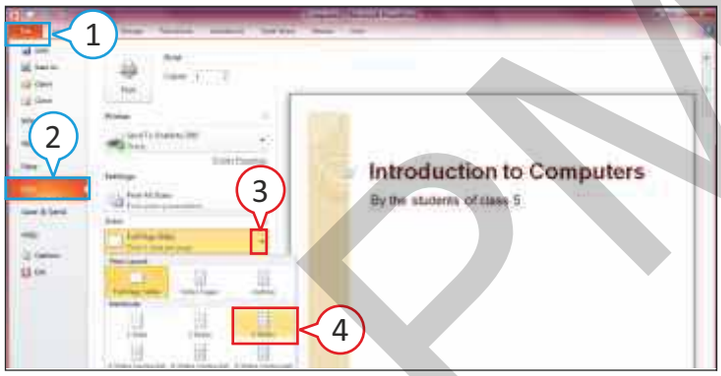
2. Click on **Print**.

- The **Print Preview** appears on the right side of the Print option.

3. Drag the **scroll bar** to move to any other slide in the presentation.

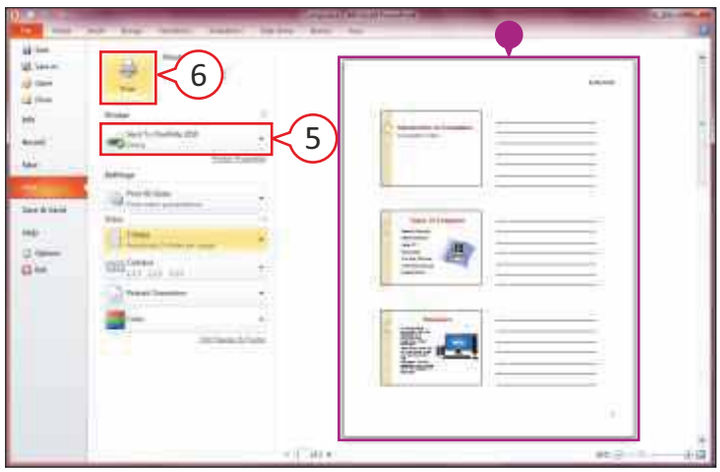
PRINT HANDOUTS

You can use the handouts feature to help audience follow along with your live presentation and give them a place where they can write notes for future reference. You can print from one to nine slides on a handout page.



1. Click on **File**. Backstage view appears.
2. Click on **Print**.
3. Under the **Settings** option, click on the down arrow.
4. Click a layout under the **Handouts** section.

*You can choose the **horizontal option** in the Handouts area to print pages with multiple slides progressing from left to right across the page. Click on **vertical option** to have slides progress down the page along the left margin and then move to the top of the right side of the page in second column.*



- The slide layout changes to Print Preview.

*In this example, we have chosen **3 slides**.*

5. Select the printer from here if you have multiple printers installed.
6. Click on **Print**.

PowerPoint prints the presentation in the layout you specified.

Self-Evaluation

CHECKLIST

After reading the chapter, I know these points:

	Agree	Disagree
I know that we can add text, graphics, and charts to a slide.	☐	☐
I know that the selected text appears highlighted on our screen.	☐	☐
I know that a particular design theme is selected using Design tab.	☐	☐
I fully know that layout of a slide can be changed any time.	☐	☐
I fully know that Clip arts and images can be inserted into a slide to make the presentation more interesting.	☐	☐
I know that Transition is a visual effect that appears while moving from one slide to another.	☐	☐
I know that Animation is a special sound and visual effect that is added to a slide to make a slide show exciting and attractive.	☐	☐

Exercises

A. Tick [✓] the correct answer.

1. ..... is built-in design for creating a presentation.
   a. Design Theme ☐ b. Blank Theme ☐ c. Background ☐
2. The selected text appears ..... on the screen.
   a. Underlined ☐ b. Highlighted ☐ c. Bold ☐
3. Most slide layouts contain ..... placeholder.
   a. Object ☐ b. Graphic ☐ c. Content ☐
4. The visual effect that appears while moving from one slide to another is ..... .
   a. Animation ☐ b. Transition ☐ c. Slide Show ☐
5. ..... is used to organize data in rows and columns.
   a. Table ☐ b. Chart ☐ c. SmartArt ☐

B. Write 'T' for True and 'F' for False statements.

1. To select a word, double-click on the word. ☐
2. Layout of the slide cannot be changed. ☐
3. You can only insert image using the content placeholder. ☐
4. Multiple animations can be applied to one slide. ☐
5. Transition effect cannot be removed from a slide. ☐
6. Sound file and video file can be added to your presentation. ☐

C. Fill in the blanks.

1. PowerPoint assumes that every new slide has a ..... slide.
2. The default extension of PowerPoint 2010 file is ..... .
3. ..... are used to convey statistical information quickly in presentation.
4. A ..... displays one slide at a time, using the entire screen.

D. Differentiate between the following.

1. Slide Transition

   .....

   .....

   .....

   Animation Effect

   .....

   .....

   .....

2. Print Preview

   .....

   .....

   .....

   Print Handouts

   .....

   .....

   .....

E. Answer the following questions.

1. What do you mean by Slide Layout?

   .....

   .....

2. What is content placeholder?

   .....

   .....

3. What is the benefit of inserting a SmartArt in presentation?

   .....

   .....

4. What is the use of Animation Pane?

   .....

   .....

5. What is the use of slide show?

   .....

   .....

F. Application Based Question.

Rahul saw a presentation in his brother's laptop in which there was visual effect applied on every object, which appeared when he moved from one slide to another. Tell him, which effect was used to make that presentation?

.....

Activity Section

Lab Activity

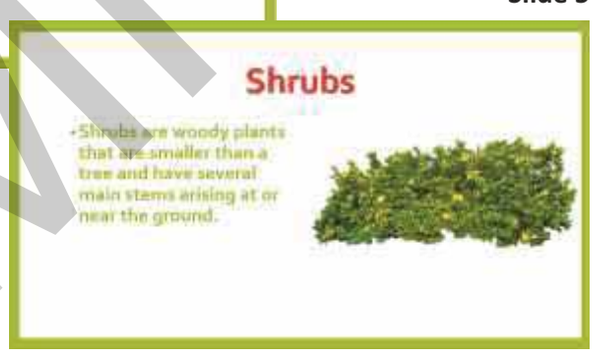
Create a PowerPoint presentation on Plants.

Slide 1

Slide 2

Slide 3

Slide 4



Slide 5

Instructions:

1. Start PowerPoint program and create **Blank Presentation**.
2. Click on **Design** tab and choose a **Basis theme**. The theme is applied to **Slide 1**.
3. Create a Title Slide as shown in **Slide 1**.
4. Add second slide and change the **layout** of the slide to the one that includes a placeholder for text and images.
5. Create the second Slide as shown in **Slide 2**.
6. Repeat steps 4 and 5 to create the slide 3, 4 and 5.
7. In slides 2, 3, 4 and 5, change the title text in red color, add shading, make it center-aligned and change the font size to 60.
8. In slides 2, 3, 4 and 5, change the sub-title text in bold and in 32 font size.
9. Add **Cube** Transition effects on the presentation.
10. Add **Wheel** Animation to the title text of all the slides.
11. Run the slide show and save it on the desktop with file name 'Plants'.

Note: The pictures shown in above slides may vary in your presentation.

Worksheet-1

Chapters 1 - 4

A. Tick [✓] the correct answer.

1. The first electro-mechanical computer was ..... .
   a. Mark I ☐ b. UNIVAC ☐ c. ENIAC ☐
2. The step-by-step procedure to solve any particular task is called ..... .
   a. Flowchart ☐ b. Algorithm ☐ c. Instructions ☐
3. Set of instructions given to a ..... to perform a task is called computer language.
   a. Mnemonic Codes ☐ b. Program ☐ c. Computer ☐
4. A ..... is a route the user must follow to reach a particular folder or file in the drives.
   a. Path ☐ b. Line ☐ c. Drive ☐
5. ..... is a simple fun-based programming language designed at MIT.
   a. Basic ☐ b. Java ☐ c. Scratch ☐
6. The default sprite present in the Scratch is ..... .
   a. Cat ☐ b. Dog ☐ c. Mouse ☐

B. Write 'T' for True and 'F' for False statements.

1. Abacus was invented by the Indians. ☐
2. The Second generation of computers used Assembly language. ☐
3. Flowchart is written in simple English language. ☐
4. High-level language is machine dependent. ☐
5. Deleted files move to Recycle Bin automatically. ☐
6. The Forever block runs the script continuously. ☐

C. Fill in the blanks.

1. Napier's Bones was developed in ..... year.
2. The second generation computers used ..... .
3. The ..... shape is used to mark beginning and end of the flowchart.
4. ..... language is also known as the low-level language.
5. You can ..... a file to describe the content of the file in a better way.
6. Stop button is located on the top ..... corner of the Scratch window.
7. ..... block is used to change the sprite and background appearance.

D. Define the following.

1. Abacus
2. Microprocessor
3. Flowchart
4. Language Processor
5. Navigation Pane
6. OneDrive
7. Costume
8. Stage Backdrop

E. Differentiate between the following.

1. Difference Engine and Analytical Engine
2. Restoring a file and Emptying the Recycle Bin
3. Motion Blocks and Pen Blocks

F. Answer the following questions.

1. How did the early man count?
2. How many generations of computer are there? Write the time period of each.
3. What are the features of Fourth generation computers?
4. Write any three rules for making flowchart.
5. What do you mean by Source program?
6. What do you mean by dividing Hard disk into logical drives?
7. Explain the ways of selecting files and folders.
8. Why do we need to change the name of a file/folder?
9. What is the role of sprite in Scratch?
10. What do you mean by generating a new sprite?

Worksheet-2

Chapters 5 - 8

A. Tick [✓] the correct answer.

1. The most popular service of Internet is ..... .
   a. Browsing ☐ b. Surfing ☐ c. E-mail ☐
2. The section where e-mail receiver's address is written is known as ..... .
   a. Cc ☐ b. To ☐ c. From ☐
3. The ..... feature automatically applies formatting to your text while typing.
   a. AutoFormat ☐ b. AutoCorrect ☐ c. Macro ☐
4. ..... provides a quick way to create a new PowerPoint presentation.
   a. Default ☐ b. Template ☐ c. Color Scheme ☐
5. One page of a presentation is called ..... .
   a. Document ☐ b. Theme ☐ c. Slide ☐
6. In handout page, you can print from one to ..... slides at once.
   a. Eight ☐ b. Nine ☐ c. Three ☐

B. Write 'T' for True and 'F' for False statements.

1. A Domain name is separated into two parts by the period (.). ☐
2. An e-mail message should be written in capital letters. ☐
3. You can press Shift + Tab keys to move to the next cell. ☐
4. You can communicate ideas to a group of people through presentations. ☐
5. Chart can be added by content placeholder and by chart icon from the Insert tab. ☐
6. An animation is a visual effect that appears when you move from one slide to another. ☐

C. Fill in the blanks.

1. ..... section is the very short description of your E-mail message.
2. ..... can be used in e-mail messages that can save time while typing the message.
3. ..... feature is used to divide one cell into two cells.
4. ..... view shows the document without graphics.
5. PowerPoint gives flexibility to make presentations using the ..... device.
6. ..... pane displays the notes for the current slide.
7. ..... is a frame for the slide which is similar to a frame around a painting.
8. A ..... determines the placement of all the items that make up your slide.

D. Write the e-mail abbreviations for the following.

1. As soon as possible .....
2. By the way .....
3. See you .....
4. Don't know .....

E. Define the following.

1. Domain Name
2. Attachment
3. Bounced Message
4. Data Source
5. Track Changes
6. Cell

F. Differentiate between the following.

1. Signature and Subject in the e-mail
2. Line Spacing and Paragraph Spacing
3. Title and Subtitle of slide
4. Theme and Background color
5. Chart and SmartArt in PowerPoint

G. Answer the following questions.

1. Name the different programs that are used to create and manage an e-mail.
2. What is the purpose of router?
3. Explain the different parts of an e-mail message.
4. Why do we align the text in a cell?
5. What are the advantages of Mail Merge?
6. Define the basic elements of slide.
7. What does Status bar contain in PowerPoint?
8. What is the need of adding new slide in the Presentation?
9. Why do we add animation effects in our Presentation?
10. What is the purpose of Placeholders in a slide?

Project Work

Project Scratch

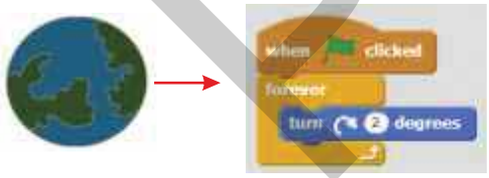
Animating a Space Scene

1. Choose a backdrop of **Stars** in Space Theme.
2. Delete the default sprite (cat).
3. Add **Earth**, **Spaceship**, **Star1** and **Pico** sprites to your stage.

This is how your stage should look:

4. Add the following code to:

Earth



Spaceship

Star1

Pico

5. Click on **Green Flag** button [ ] above the stage to start animation.

You will observe that **Earth** is rotating; **Spaceship** is moving towards Earth and bounces back when touches the edge. **Star** is shining. **Pico** is lost in the space and moving non-stop; it bounces back when touches the edge.

Project Word

A. Open Word and create multiple letters using Mail Merge feature.

1. Create the following document in Word.

<<FIRST NAME>>
<<LAST NAME>>
<<ADDRESS>>
<<CITY>>
<<PHONE>>
Dear <<NAME>>

We are pleased to inform you that a program named, 'Swachh Bharat Abhiyan' has been launched in our society. Under this program, you, as a resident of the society, are requested to observe cleanliness at your home and in your surroundings. You are supposed to keep 2 different dustbins outside your home. One dustbin should be of green color and other should be of red color. All kinds of biodegradable wastes should be thrown in green dustbin. All kinds of non-biodegradable wastes should be thrown in red dustbin. The segregated waste will be disposed of accordingly. Let's join hands and make this initiative of RWA a success.

With regards,
Authorized Signatory
Residents' Welfare Association
Model Town,
Delhi

2. Create a data source of 11 residents of the society, containing their **FIRST NAME, LAST NAME, ADDRESS, CITY and PHONE.**
3. Merge the above document with the created data source.
4. Format the documents and take printouts.

B. Open Word, create a Time-Table for your class in the following manner.

	1	2	3	4		5	6	7	8
Mon					R				
Tue					E				
Wed					C				
Thu					E				
Fri					S				
Sat					S				

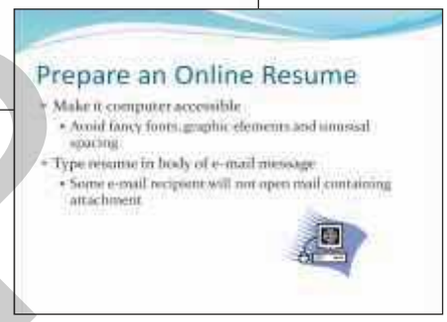
Project PowerPoint

A. Suppose you are working part time in Planet Multimedia placement office. Since you have the knowledge of making presentations in PowerPoint, your boss has asked you to make a presentation for their placement office. Make presentation by using the concept and techniques you have learned in the chapter on PowerPoint and include the 4 slides shown below.

Slide 1

Slide 3

Slide 2



Slide 4

B. Make a presentation on Diwali Mela celebrated in your school and apply animation and transition effects. Save the presentation as Diwali Mela.

SLIDES	LAYOUT
1. **COME ONE, COME ALL**	
Diwali Mela Function in School ground	Introductory Slide with heading
2. **FUN & MASTI**	
You'll never forget this, that's our promise!	Clip Art and text
Come with your near and dear ones!	
3. **VENUE**	
October 15, 2019, 9 am to 5 pm in playground	Text and Clip Art
4. **EVENTS**	
Competition and Quiz	Text
Indoor games	
5. **DANCE & MASTI**	
Oval Dance party	Text and Clip Art
Global DJ Group	
6. **WANT TO PARTICIPATE?**	
Meet the Vice Principal before October 10	Text
7. **WANT TO BE A PART OF IT?**	
Buy your tickets fast.	Text
Only a few tickets are left.	

Additional Information

The Intelligent Computers (5th Generation)

Till now, we have been learning that computer is a machine which cannot work on its own. It takes our command and instructions, and performs the task accordingly.

What if your computer starts **thinking** and **doing work** itself?

Imagine a **car** which doesn't need a driver, the car without driver which can drop you to school, say you, "Good bye" and come back in the afternoon to pick you up from school. Wouldn't that be great! All this is possible by new computers, called **Artificial Intelligence (AI)** computers.

Artificial Intelligence

John McCarthy

John McCarthy, an American computer scientist pioneer and inventor, was known as the **father of Artificial Intelligence (AI)**.

Artificial Intelligence is a way of making a computer, a robot, or software think intelligently, in the similar manner as the intelligent humans think.

INTELLIGENCE

You become **intelligent** when you start doing correct things by yourself.

Suppose, you **touch** a **hot metal object**, you will yank your hand away immediately. When this happens to you the first time, the sequence of events and the result (the burning of your hand) gets stored in your brain. This is called an **experience**.

When you see a hot metal object next time, you will not touch it. You will use the **knowledge** of your previous **experience** and decide not to repeat it again.

This process of learning, comparing a previous experience, making a decision and acting upon it is the key to **human intelligence**. We can make more and more complicated decisions by learning from our past experiences.

In the same way, when your computer starts thinking and using its experience for doing things correctly, we call it **Artificial Intelligence (AI)**.

Some machines work **automatically** but they are not truly intelligent. For example, the **automatic washing machine** understands its timing for washing, rinsing and drying the clothes. After drying the clothes, it automatically switches itself off.

We could say that the automatic washing machine is **intelligent** as it can react to a particular state, make a decision based on it and switch itself off. However, since the automatic washing machine has not learned this through experience, it is not a **truly** intelligent machine.

To make an **intelligent machine**, all you need is a memory or a space where **experiences** can be stored, a method of applying these experiences to new ones and comparing experiences to come to logical conclusions, like holding the hot object with a **glove on**. That would be an **intelligent machine**.

Scientists and researchers are creating new software programs which try to recreate the process of human learning in a computer, in an attempt to make them 'think'. These programs try to copy the functioning of the brain. Hence through **Artificial Intelligence (AI)**, we can have those robots that can play with us, talk to us and even guide us to do things in a better way.

UNDERSTAND AI ENVIRONMENT

Imagine you have lost your **bag**, and you are trying to search for it in your bedroom. You walk around the room and look at everything in it, until you find your bag.

All this happens because from the day you are born, your **eyes** are sending **signals** to your **brain**. You have tiny little friends in your brain called **'Neurons'**. The neurons take these signals as their food. You've seen so many bags in your life that means you have lots of neurons in your brain that know what bag looks like and feels like.

Now, if your father says, “Go to bedroom I think I have seen your bag in bedroom.”

You have many groups of neurons in your brain which know how your bedroom looks like and how your bag looks like; you never get confused between your Bedroom and Fridge. Why? This smart work that these neurons do is referred as **intelligence**. The neurons in your brain help you understand all those things, and they get happy when they do their job right and help you find your bag.

Since you're tired of losing your things all the time, why don't you teach a computer (and build a robot) to find them for you?

We can make computers intelligent if they have neurons, like those in our brain; we could tell them how a neuron works and give them lots of computer neurons.

If the computer has a **camera** and **wheels** to move around, it could take a video of everything around it and give the video to its neurons. To help find your bag, you need to teach the neurons to **like** finding your things. They need to be happy while finding the right things and avoid the wrong things. So, you can give neurons a reward every time they find the right bag. Also, don't give them the reward if they find the wrong things. More importantly, you can teach them to find the right things by giving lots of examples.

After a while, the computer would have enough groups of neurons that know how your different bags look like and where to find them. This is one type of **AI**.

COMPONENTS OF INTELLIGENT COMPUTER

1. **Machine Learning:** Machine learning is an application of Artificial Intelligence that provides capability to computers to automatically learn and improve from experience without being explicitly programmed. It focuses on the development of computer programs that can access data and use it to learn by themselves.
2. **Deep Learning:** Deep learning is the sunset of machine learning. It is an artificial intelligence function that imitates the workings of the human brain in processing data and creating patterns for use in decision-making. Deep learning programs are able to do it using network of our same tiny friends, called neurons.
3. **Neural Networks:** These are those intelligent friends which were helping you in finding your bag. Many groups of these neurons create a network to transfer information. This network is referred as neural network.

All these components get together and form the smartest generation of computers, called AI computers.

APPLICATIONS OF AI

Gaming: The modern-day gaming is highly influenced by **AI**. Now kids don't need another kid to be their opponent; AI computer can play much better than their friends. AI plays a crucial role in strategic games such as chess, poker, etc., where machine can think of large number of possible positions.

Handwriting Recognition: The handwriting recognition software reads the text written on screen by a stylus or by a finger. It can recognize the shapes of the letters and convert it into editable text.

Speech Recognition: Some intelligent systems are capable of hearing and comprehending the language in terms of sentences and their meanings while a human talks to them. They can handle different accents, slang words, noise in the background, and convert them into editable text.

Intelligent Robots: Robots are able to perform the tasks given by a human. They have sensors to detect physical data from the real world such as light, heat, temperature, movement, sound, bump, and pressure.

We must say, "The latest generation of computer is really smart and intelligent like new generation kids i.e. YOU".

NATIONAL CYBER OLYMPIAD

SAMPLE PAPER SYLLABUS 2018-19

CLASS 5

The National Cyber Olympiad is organized by the Science Olympiad Foundation (SOF) which is a registered not-for-profit organization popularizing science, mathematics and computer education among school children. Visit www.sofworld.org for further information.

The National Cyber Olympiad focuses on logical reasoning, computers and IT, and achievers section. Given below is a sample paper of NCO for class-5 students.

SAMPLE PAPER

The actual test paper has 35 questions. **Time: 60 minutes**

There are three sections: Section - I (5 Questions); Section - II (25 Questions); Section - III (5 Questions)

Syllabus

Section - I (Logical Reasoning) : Patterns, Analogy and Classification, Coding-Decoding, Geometrical Shapes, Mirror Images, Water Images, Embedded Figures, Direction Sense Test, Ranking Test, Alphabet Test and Logical Sequence of Words, Puzzle Test.

Section - II (Computers and Information Technology) : Input and Output Devices, Hardware, Software, Storage Devices, Memory –Primary & Secondary Memory, MS-Paint, Introduction to Multimedia, Word (Paragraph formatting Using Paragraph group, Drop Cap, Document Views, Inserting Graphics-Pictures and Shapes, Clip Arts, Symbols, SmartArt, Multimedia Objects, Text Box, Inserting Header and Footer in a document and exploring its features), Introduction to MS-PowerPoint(Component of MS-PowerPoint window and its features, Inserting Graphics-Pictures and Shapes, Clip Arts, Symbols, SmartArt, Multimedia Objects, Text Box, Inserting Header & Footer and exploring its features, Running slide shows, Presentation Views), Internet, Computer Networks, Using Windows 7, Latest Developments in the field of IT.

Section - III (Archievers Section) : Higher Order Thinking Questions - Syllabus as per Section – 2.

SAMPLE QUESTIONS (15 Only)

LOGICAL REASONING

1. How many times exactly two X's occur together?

X Y X X Y X Y Y X Y X Y Y X X Y X Y X X

(A) 5 (B) 4 (C) 2 (D) 3

2. Which of the following options replaces the question mark (?) in Fig. X?

(A) 
(B) 
(C) 
(D) 

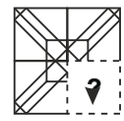
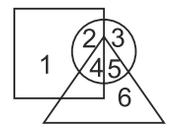


Fig. (X)

3. If 'MATHEMATICS' is coded as 'SCITAMEHTAM' then how will 'OLYMPIAD' be coded?

(A) DAMPOMYL (B) OLYMDIAP (C) DAIPMYLO (D) IADYMPLO

4. Which number lies in the circle and square, but not in the triangle?



(A) 1 (B) 2

(C) 3 (D) 6

5. Which of the following is NOT a Windows 7 Aero feature?
(A) Snap (B) Peek (C) Bump (D) Shake

6. What is a firewall in a network?
(A) It is the memory unit of a network. (B) A network operating system.
(C) A system preventing unauthorized access to a network.
(D) It is a web browsing software.

7. Multimedia is used for many purposes like _____.
(A) Education (B) Advertising (C) Playing games (D) All of these

8. Find the odd term out.
(A) Scanner (B) Mouse (C) OMR (D) Printer

9. What is the significance of star icon placed adjacent to the sender name in inbox of Gmail?
(A) To mark them as spam message.
(B) To easily mark certain messages as important or to indicate that you need to reply to them later.

(C) Star marked mail will be deleted after some time automatically.
(D) Star marked mail will move to trash folder after 30 days.

10. Which of the following devices emits computer audio as audible audio?
(A) Trackball (B) Cursor (C) Webcam (D) Speaker

11. Which of the following icons of MS-Power Point 2010 is used to insert the characters like □, ©, etc. that are not present on the keyboard?
(A) π (B) A (C)  (D) Ω

12. The small picture representing a program in Windows 7 is called _____.
(A) Icon (B) Pictures (C) Images (D) Drive

13. While working in MS-Paint, the option which is used to show the drawing in a small reference window is _____.
(A) Grid (B) Zoom in (C) Bitmap (D) Thumbnail

ACHIEVERS SECTION

14. Mr. Kumar is making a presentation for his company in which he is required to include some graphics, audio, and video clips. Which of the following options will help him to insert a video clip in MS-PowerPoint 2010?
(A)  (B)  (C) π (D) 

15. Which of the following type of expansion cards can be inserted into a computer motherboard via expansion slot, to allow television signals to be received by a computer system?
(A)  (B)  (C)  (D) 

ANSWERS

1. (D)	2. (C)	3. (C)	4. (B)	5. (C)	6. (C)	7. (D)	8. (D)	9. (B)
10. (D)	11. (D)	12. (A)	13. (D)	14. (D)	15. (A)			