



INDIAN SCHOOL AL WADI AL KABIR
Holiday Homework 2024-25

Class: XII	SUB: INFORMATICS PRACTICES	Date of Completion: 11/08/2024
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Q.1 Prepare a presentation on any of the given topic below as a part of Art Integration Project. Your presentation should contain minimum of 8 slides.

- i) Cyber Security
- ii) Computer Network

Q.2 Write the below given programs in a Record Book

1. Write a program to create series from a list of numbers, numpy array with range() to generate numbers 0 to 5 and a dict with 4 subject names and marks
2. Write a Program in Pandas to create series using User-defined Dictionary that contains stock details like itemname and qty of different items.
3. Given a series that stores the marks of 10 students in a class. Write code to find out the biggest and the smallest 3 marks from the given series.
4. Create a Series that stores the salary of 10 employees. Write a program to display the salary of those employees who are getting more than 5000.
5. Create a Series **AirticketSer** that stores the 5 Airfare as values and Airways as index. Write a program to display the Airfare of those airways which are priced less than 5000.
6. Create a series **DataSeries** with the scalar value 50 for the indices S1, S2, S3, S4 and S5. Also write the coding to remove the element from the index S3.
7. Create two series **S2** and **S3** with the following elements:
S2
1 25
2 15
3 10
4 30
5 12
S3
2 5
3 2
4 3
5 3
6 8

Perform the following operations:

- i) Perform the division operation S2 // S3
- ii) Perform the multiplication operation by using mul() method.
- iii) Use fill_value property to add two series with the default value 100.
- iv) To display all the elements of series S2 more than 10.

8. Create the following series **COMPUTER** with the following elements and write the statements to perform the operations given below:

COMPUTER

DELL	1300
HP	4250
APPLE	3280
LENOVO	9375
ACER	7890

- i) Give a Name “Computer Devices” to the series COMPUTER.
- ii) Give a Name to the index as “BRAND”.
- iii) Display the no. elements of the series.
- iv) Display the data type of the given series.
- v) Display the dimension of the given series.

9. Create the following series **Mobile** with the following elements and write the statements to perform the operations given below:

MobilePhone

Mob1	Redmi Note 11Pro
Mob2	Apple 14
Mob3	Samsung Galaxy
Mob4	Realme 50A
Mob5	Nokia G10

- i) Display the values of the given indices Mob1 to Mob4 using loc.
- ii) Display the values of the given indices Mob1, Mob3, Mob5 using iloc.
- iii) Display the values of the series in reverse order .

10. Create the following series **TV** with the elements and write the statements to perform the operations given below:

TV

Ikon	47.900
Samsung	138.390
Sony	145.200
LG	124.300
PHILIPS	98.375

- i) Display the values of Samsung, Sony and LG using loc method.
- ii) Display the values of Ikon and Samsung using iloc method.

11. Write a program to create 2 series S1 and S2 , where S1 contains the name and mark of students and S2 contains name and age of students for 5 students. Create a dataframe from S1 and S2.

12. Write a program to create a dataframe containing empno, ename and salary of 5 employees. Change the index as [a,b,c,d,e] and display the first two and the last two records.

13. Write a Program to enter multiple values based data in multiple columns/rows to represent cityname highest temp and lowest temp as list of lists and create a dataframe from this list. Display the highest temperature of the second , third and fourth city using iloc.
14. Write a program to create a dataframe with the help of a dictionary of list that represents name , salary and commissison of 5 employees and sort the dataframe in descending order of their salary.
15. Write a program to create dataframe for 5 students including name and 3 subject marks using dictionary of series and add new columns Total that contains the total marks obtained by each student .
16. Write a Program to read CSV file that contains itemno,itemname, qty and price and show its data in python using dataFrames and pandas.