**INDEX**

1. **PYTHON PROGRAMMES:**
   1. To find average and for given marks
   2. To find cost for given cost qty discount:
   3. To calculate cost perimeter wise & area wise
   4. To calculate interest (Simple and Compound):
   5. To calculate profit & loss for given Cost & selling price:
   6. To calculate EMI for Amount, Period, & Interest:
   7. To calculate tax (example GST/Income Tax)
   8. To Find the largest and the smallest number in a list:
   9. To find the THIRD largest Number in a list:
   10. To find the sum of square of the first 100 natural numbers
   11. To find whether a string is plaindrome or not
   12. To compute for a given two integer x and n
   13. To determine the greatest common divisor and the least common factor of two integer
   14. To test if a number is equal to the sum of the cubes of its digits:
2. **SERIES PROGRAMMES:**

## To combine many series to form a dataframe.

## To get the items of series A not present in series B.

1. To get the day of month, week number, and day of year from a series of date strings
2. Write a program to create a series S to store a range of values where the user gives the upper and the lower limits. Let the indexes be default values
3. Create two series S1 and S2 (the way done in Q1). Perform various mathematical operations (+, - , \*, /) on both the series..
4. **DATAFRAME PROGRAMMES :**
5. a Program to enter data and show data in python using dataFrames and pandas.
6. a Program to enter multiple values based data in multiple columns/rows and show that data in python using dataFrames and pandas
7. Write a program to consider the dataframe created in above question and display a menu to show the following information regarding the dataframe. Transpose, Column names, indexes, datatypes of individual columns, size and shape of the dataframe. Your program must keep on displaying as per the menu till the user’s choice
8. Considering the above given dataframe write code to insert more records as per the choice of the user
9. Write a program to write a menu driven program to do the following based on user inputs: (a) Display a particular row of a dataframe (b)Display a column of a dataframe (c) Display a combination of rows and columns from a dataframe
10. **CSV PROGRAMMES:**
11. A Program to read CSV file and show its data in python using dataFrames and pandas
12. Consider a csv file named “item” from g:\ and write a menu driven program to create dataframes from the given csv with the following specifications: (a) Accept a column number from the user and make it the index of the data frame. (b)Accept the column names which the user wants to include in the dataframe (c) Accept the number of rows user wants to skip from the csv while creating the dataframe.
13. Convert the CSV file “Productdet\_2” into Data Frame 2 . Concat the dataframe 1 and dataframe 2
14. Read the CSV file and add month 12 record/row in it (Use loc method to add row in this dataframe)
15. Create DataFrames from both CSV files and merge into one DATAFRAME Output of the final DataFrame should be this:
16. **MATPLOTLIB PROGRAMS**
17. A python program to plot a graph with the axes labeling and rotating it at 30 degree
18. A python program to plot a graph with title of the graph
19. A python program to plot a horizontal

bar graph

1. Write a program in Python Pandas to create the following DataFrame “batsman” from a Dictionary. Draw line charts to show the plotting of score1 and score 2 for all batsman. Put legends and titles. Specify different colours and line styles of your choice for both the plotted lines. Change font size of the titles to 15 and color to green.
2. Number of mistakes done by 20 students in a maths objective test are as follows: [7,10,2,1,15,4,0,3,0,8,3,4,12,12,0,0,18, 9,10,11] To know the class performance in terms of how many students have done a particular number of mistakes, draw a histogram with default number of bins.
3. **Data Management using My SQL**
4. To Create Database:
5. To create student table with the student id, class, section, gender, name, dob, and marks as attributes where the student id is the primary key
6. To insert the details of at least 10 students in the above table:
7. To delete the details of a particular student in a table:
8. To increase marks by 5% who have student id more the 7 and display the entire content:
9. To find the average of the marks from the student table :
10. To find the number of student who are from section “A” :
11. To add a new column of email of appropriate data type :
12. To find the minimum and maximum marks obtain by students :
13. To modify Email for each student :
14. To display the information all the students whose name starts with “AN” :
15. To display student\_id name DOB of those students who are born between ‘2005.01.01’-‘2005.12.31’ :
16. To display student id, name, DOB marks email of Male students in ascending order of their names :
17. To display student id, name, Gender, DOB marks email of Male students in ascending order of their names :
18. To display student id, name, Gender, DOB marks email of Male students in descending order of their names :
19. Create table of defined and given structure :
20. Display the teacher’s name along with their salary truncated to zero decimal places.
21. Display the teacher number along with their names who have not yet been given any department
22. Display a report showing the average bonus given to every department.
23. Display the highest and lowest salary value for each department
24. **NUMPY PROGRAMS :**
25. Imort NumPy as np and print the version number
26. . To create an array of 1D containing numeric values from 0 to 9
27. To create a NumPy array with all values as true
28. To extract all odd numbers from an array
29. To extract all even numbers from an array
30. To copy the contents of an array A to an array B,replacing all odd numbers with -1
31. To replace all the odd numbers in a NumPy array with -1
32. To copy the contents of a 1D array into a 2D array with 2 rows
33. To perform basic arithemetic operations on 1D array
34. To perform basic arithemetic operations on a 2D arra.
35. To create a series from a list , numpy and dictionary
36. To get the minimum, 25th percentile, median, 75th, and max of a numeric series
37. To convert a numpy array to a dataframe of given shape
38. to extract all numbers between a given range from a numpy array