PRESIDENCY UNIVERSITY

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB MANUAL

COURSE TITLE & CODE: Problem Solving Using Python & CSE 258

SEMESTER/YEAR: III /II

COURSE CREDIT STRUCTURE: 1- 0- 4-3

Data visualization

1. Read "company_sales_data.csv" file using Pandas or numpy and answer the following questions.

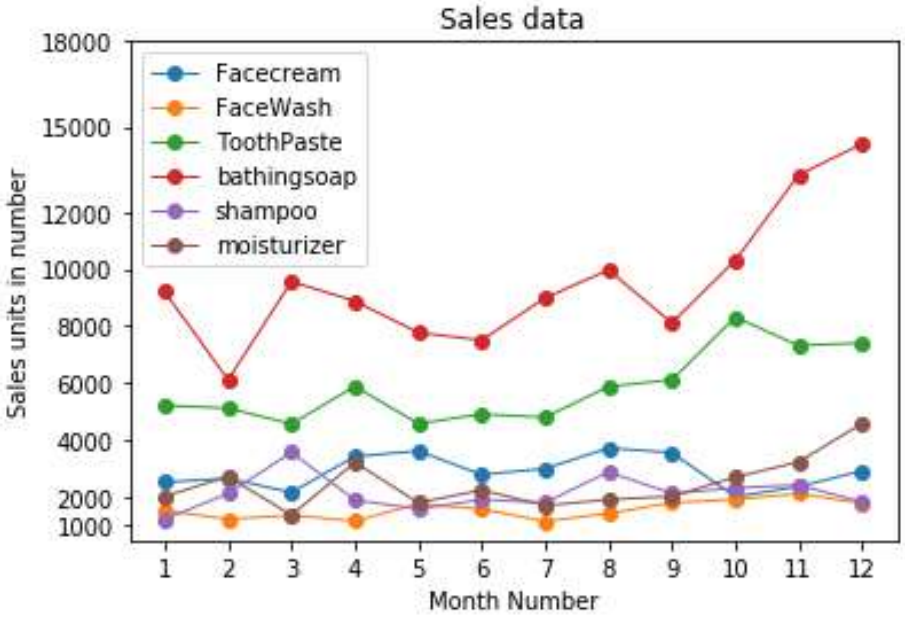
a. From given data set print first and last five rows.
b. Clean data and update the CSV file(Replace all column values which contain '?' and n.a with NaN)
c. Find the most expensive car company name
d. Print All Toyota Cars details
e. Count total cars per company
f. Find each company's Highest price car
g. Find the average mileage of each car making company
h. Sort all cars by Price column

2. Write a python program to read company_sales_data.csv file and perform the following operations.

a. Read Total profit of all months and show it using a line plot. Generated line plot must include the following properties: –
X label name = Month Number
Y label name = Total profit
The line plot graph should look like this.

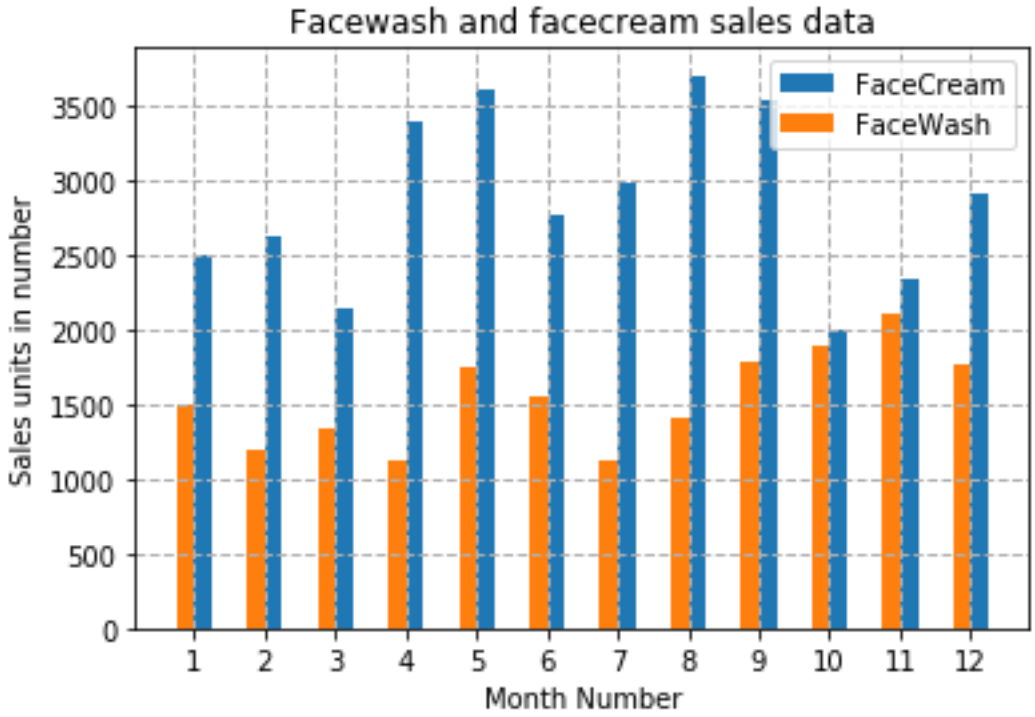
b. Read all product sales data and show it using a multiline plot
Display the number of units sold per month for each product using multiline plots. (i.e., separate Plotline for each product for each product).

The graph should look like this.

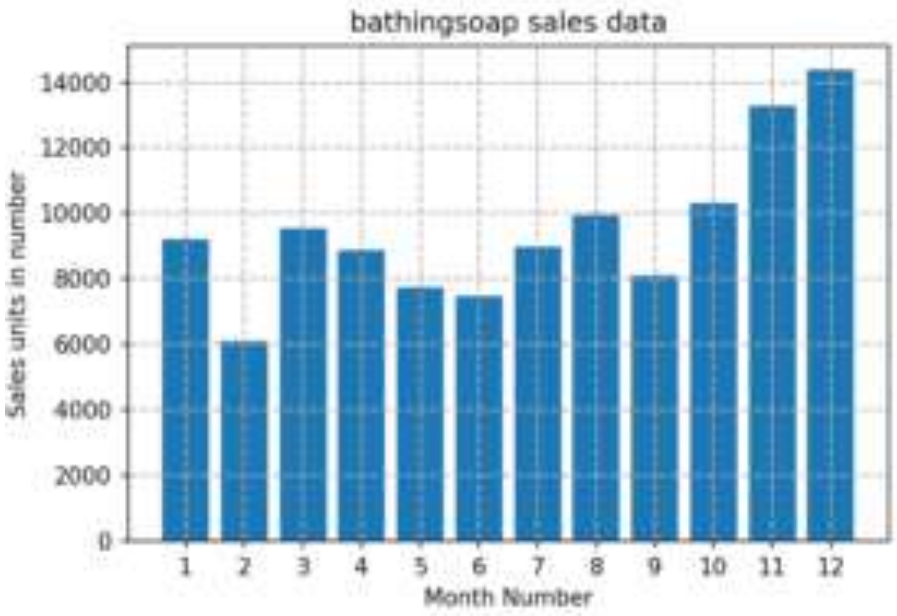


c. Read face cream and face wash product sales data and show it using the bar chart Bar chart should display the number of units sold per month for each product. Add a separate bar for each product in the same chart.

The bar chart should look like this.

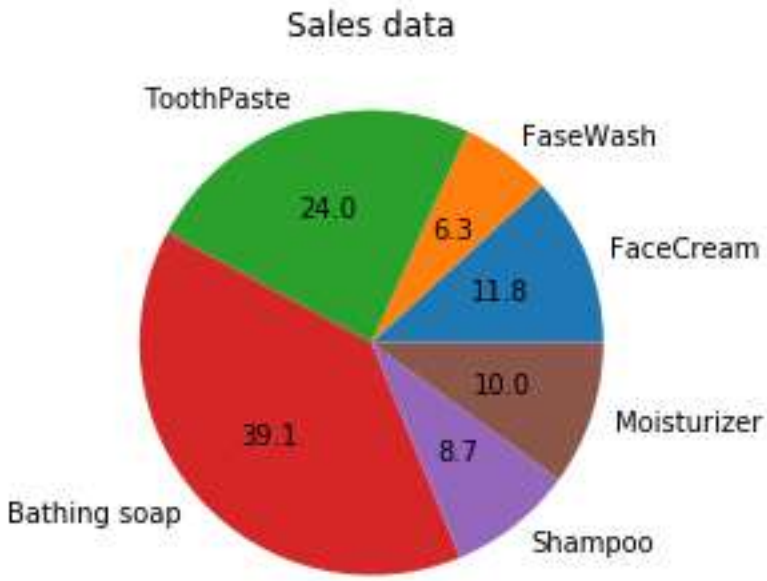


d. Read sales data of bathing soap of all months and show it using a bar chart. Save this plot to your hard disk
The bar chart should look like this.



e. Calculate total sale data for last year for each product and show it using a Pie chart
Note: In Pie chart display Number of units sold per year for each product in percentage.

The Pie chart should look like this.



f.

Read the total profit of each month and show it using the histogram to see most common profit ranges.