Assignment 1

•   Install and Import Numpy Library. Use Numpy for the following tasks:

1.   Create an empty and a full array of size 3x3.

2.   Generate an array of 25 random numbers sampled from a standard normal distribution.

3.   Find Dot product of two arrays.

4.   Sort the below array along the row, along the column and as a whole.

              [3, 7, 1]

              [10, 3, 2]

              [5, 6, 7]

5.   Make a list of 3 numpy arrays and find the mean of all the numpy arrays and output them as a list.

6.   Make a numpy array containing the string 'PHP C# Python C Java C++' as the only element, then split it on the basis of spaces.

•   Install and Import Matplotlib Library

Use Matplotlib library and the csv file provided to generate plots with the given instruction below:

7.   Read Total profit of all months and show it using a line plot. Total profit data provided for each month. Generated line plot must include the following properties:

a)   X label name = Month Number

b)   Y label name = Total profit

8. Get total profit of all months and show line plot with the following Style properties. Total profit data provided for each month (same as 1st question). Generated line plot must include following Style properties:

c)   Line Style dotted and Line-color should be red

d)   Show legend at the lower right location.

e)   X label name = Month Number

f)   Y label name = Sold units number

g)   Add a circle marker.

h)   Line marker color as read

i)   Line width should be 3

2.   Display the number of units sold per month for each product using multiline plots. (i.e., Separate Plot line for each product).

9.Read toothpaste sales data of each month and show it using a scaler plot. Also, add a grid in the plot, gridline style should be "–".

10.Read face cream and face wash product sales data and show it using the bar chart. The 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.

company_sales_data.csv