

## Week-4 Homework Assignment

This assignment is to practice and learn data analysis and visualization in Python. Please fill out the cells below. Each cell can have multiple lines of coding.

For Part-1-2-3 (matplotlib), the dataset you will be working on is Company Sales Data, which is provided in the assignment. Place it in the same directory as your Notebook.

For Part-4 (pandas), the dataset you will be working on is Automobile Data. Place it in the same directory as your Notebook.

Part.5 is on numpy.

Please do not use other resources. Plagiarism will be applied.

**Part 1: Read Total profit for each month and demonstrate it using a line plot with the following Style properties:**

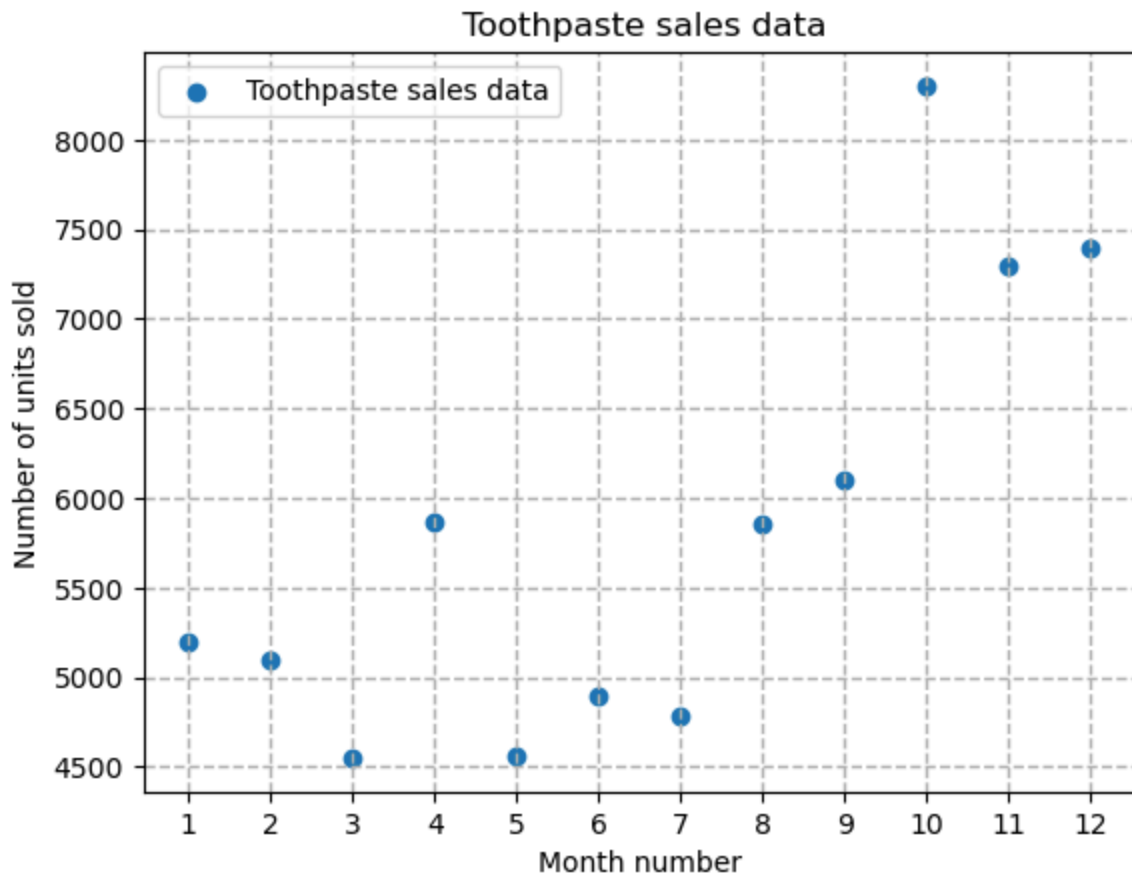
- Line Style dashed and Line-color should be red
- Show legend at the lower right location.
- X label name = Month Number
- Y label name = Profit in Dollars
- Add a circle marker
- Line width should be 3

In [1]:



Part.2: Read toothpaste sales data of each month and show it using a scatter plot, adding a grid in the plot. gridline style should be "--":

In [2]:



Part.3: Calculate total sale data for last year for each product and show it using a Pie chart:

In [3]:



**Part.4: Find the count of total car for each car making company:**

In [4]:

```
Out[4]:
toyota      7
bmw         6
mazda       5
nissan       5
audi        4
mercedes-benz 4
mitsubishi  4
volkswagen  4
alfa-romero 3
chevrolet   3
honda       3
isuzu       3
jaguar      3
porsche     3
dodge       2
volvo       2
Name: company, dtype: int64
```

**Part.5: Delete the second column from a given array and insert the following new column in its place:**

```
sampleArray = numpy.array([[34,43,73],[82,22,12],[53,94,66]])
```

```
newColumn = numpy.array([[10,10,10]])
```

In [5]:

```
Printing Original array
[[34 43 73]
 [82 22 12]
 [53 94 66]]
Array after deleting column 2 on axis 1
[[34 73]
 [82 12]
 [53 66]]
Array after inserting column 2 on axis 1
[[34 10 73]
 [82 10 12]
 [53 10 66]]
```