**This assignment is for visualization using Python Matplotlib Library**

1. Load the necessary package for plotting using pyplot from matplotlib. Example - Days(x-axis) represents 8 days and Speed represents a car’s speed. Plot a Basic line plot between days and car speed, put x axis label as days and y axis label as car speed and put title Car Speed Measurement.

         Days=[1,2,3,4,5,6,7,8]

         Speed=[60,62,61,58,56,57,46,63]​​​​​

     2. Now to above car data apply some string formats  like line style example green dotted line, marker shape like +, change markersize, markerface color etc.

   3. Plot Axes Labels, Chart title, Legend, Grid in Car minimum, Maximum and average speed in 8 days.

days=[1,2,3,4,5,6,7,8]

max\_speed=[80,91,92,88,77,79,76,75]

min\_speed=[42,43,40,42,33,36,34,35]

avg\_speed=[46,58,57,56,40,42,41,36]

4. Plotting a basic sine graph by adding more features. Adding Multiple plots by Superimposition like cosine wave.

5. Plot Simple bar chart showing popularity of Programming Languages.

Languages =['Python', 'SQL', 'Java', 'C++', 'JavaScript']

Popularity = [56, 39, 34, 34, 29]

Security = [44 ,36 ,55, 50, 42]

Plot Multiple Bars showing Popularity and Security of major Programming Languages. Also Create Horizontal bar chart using barh function.

6. Plot Histogram, We have a sample data of Students marks of various Students, we will try to plot number of Students by marks range and try to figure out how many Students are average, below-average and Excellent.

Marks = [ 61,86,42,46,73,95,65,78,53,92,55,69,70,49,72,86,64]

Histogram showing Below Average, Average and Execellent distribution

40-60: Below Average

60-80: Average

80-100: Excellent

7.  Titanic Data Set [Download Data](https://drive.google.com/file/d/1Xu7l9SCXznSPyZF9JJD4WTXwxAMNAog0/view?usp=sharing)

 Load the data file

 (i) Create a pie chart presenting the male/female proportion

 (ii) Create a scatterplot with the Fare paid and the Age, differ the plot color by gender