

Data Visualization Assignment

Exercise 1:

Write a Python program to create a pie chart of the popularity of programming Languages.

Programming languages: Java, Python, PHP, JavaScript, C#, C++

Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

- i. Pull the "Python" wedge 0.3 from the center of the pie
- ii. Add a legend
- iii. Add a legend with a header
- iv. Specify a new color for each wedge
- v. Add a shadow to the pie chart
- vi. Start the first wedge at 90 degrees

Exercise 2:

Write a Python programming to create a pie chart of gold medal achievements of five most successful countries in 2016 Summer Olympics. Read the data from a csv file medal.csv

Sample data:

country	gold_medal
United States	46
Great Britain	27
China	26
Russia	19
Germany	17

Exercise 3:

- i. Write a Python program to plot two or more lines with legends, different widths and colors.
- ii. Write a Python program to plot two or more lines with different styles.
- iii. Write a Python program to plot two or more lines and set the line markers.

Exercise 4:

Write a Python programming to display a bar chart of the popularity of programming Languages. Use different color for each bar. Attach a text label above each bar displaying its popularity (float value).

Sample data:

Programming languages: Java, Python, PHP, JavaScript, C#, C++
Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

Exercise 5:

Write a Python program to draw a scatter plot comparing two subject marks of Mathematics and Science. Use marks of 10 students.

Sample data:

```
math_marks = [88, 92, 80, 89, 100, 80, 60, 100, 80, 34]
science_marks = [35, 79, 79, 48, 100, 88, 32, 45, 20, 30]
marks_range = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
```

Do the following questions using Company Sales Dataset

Exercise 1:

Read Total profit of all months and show it using a line plot

Exercise 2:

Get total profit of all months and show line plot with the following Style properties

Generated line plot must include following Style properties: –

Line Style dotted and Line-color should be red

Show legend at the lower right location.

X label name = Month Number

Y label name = Sold units number

Add a circle marker.

Line marker color as read

Line width should be 3

Exercise 3:

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).

Exercise 4:

Read toothpaste sales data of each month and show it using a scatter plot

Exercise 5:

Read face cream and facewash product sales data and show it using the bar chart

Exercise 6:

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

Exercise 7:

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

Exercise 8:

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

Exercise 9:

Read Bathing soap facewash of all months and display it using the Subplot

Exercise 10:

Read all product sales data and show it using the stack plot