

Analytical Programming



Question 1.

Write a Python program to draw a line with suitable label in the x axis, y axis and a title.

(Hint: axis labels are specified by `plt.xlabel('x-label')`)

(Hint: plot title can be inserted by: `plt.title('Draw a line.')`) (See Figure 1)

Question 2.

Write a Python program to draw a line (See Figure 2) using given axis values with suitable label in the x axis, y axis and a title. (See Figure 2)

Question 3.

Write a Python program to draw 4 lines for the financial data between October 3, 2016 to October 7, 2016. (See Figure 3)

Sample Financial data (fdata.csv):

Date,	Open,	High,	Low,	Close
10-03-16,	774.25,	776.065002,	769.5, 7	72.559998
10-04-16,	776.030029,	778.710022,	772.890015,	776. 429993
10-05-16,	779.309998,	782.070007,	775.650024,	776.469971
10-06-16,	779,	780.47998,	775.539978,	776.859985
10-07-16,	779.659973,	779.659973,	770.75,	775.080017

Question 4.

Write a Python program to plot two or more lines with different styles. (See Figure 4)

Question 5.

Write a Python program to plot several lines with different format styles in one command using arrays. (See Figure 5)

Question 6.

Use a plot and show if there is any relationship between the number of survived passengers and their class ticket from the titanic file.

Question 7.

Write a Python programming to display a bar chart of the popularity of programming Languages. (See Figure 7)

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

Question 8.

Use the titanic data set and perform the following tasks:

- Create a bar graph to show the number of males and females who have died and survived.
- Create a bar graph and show the number of males and females in the age range [20, 40]
- Use a plot and show the relation between fare and class ticket.
- Use a pie chart and visualize the population among three different class ticket.

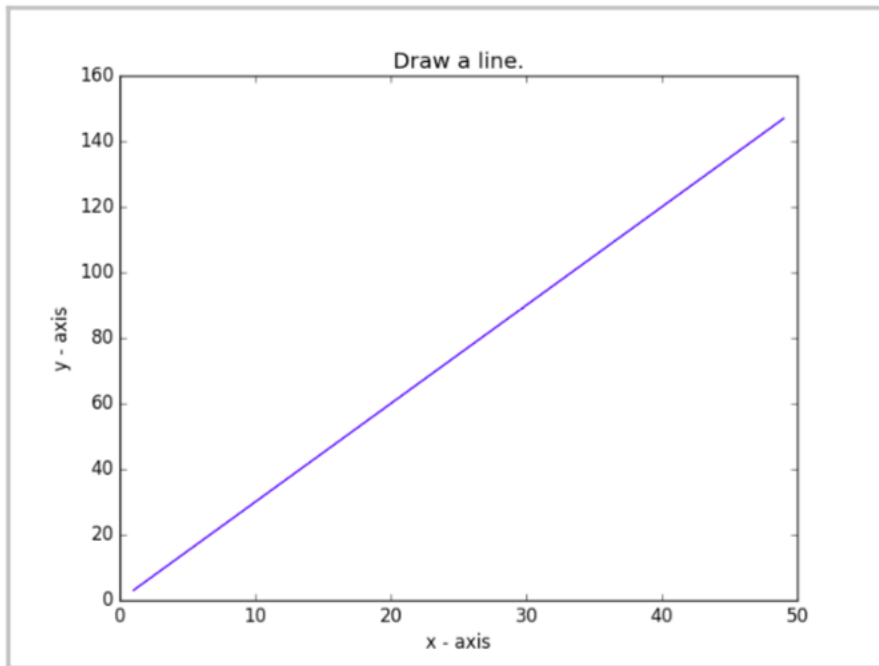


Figure 1: Example

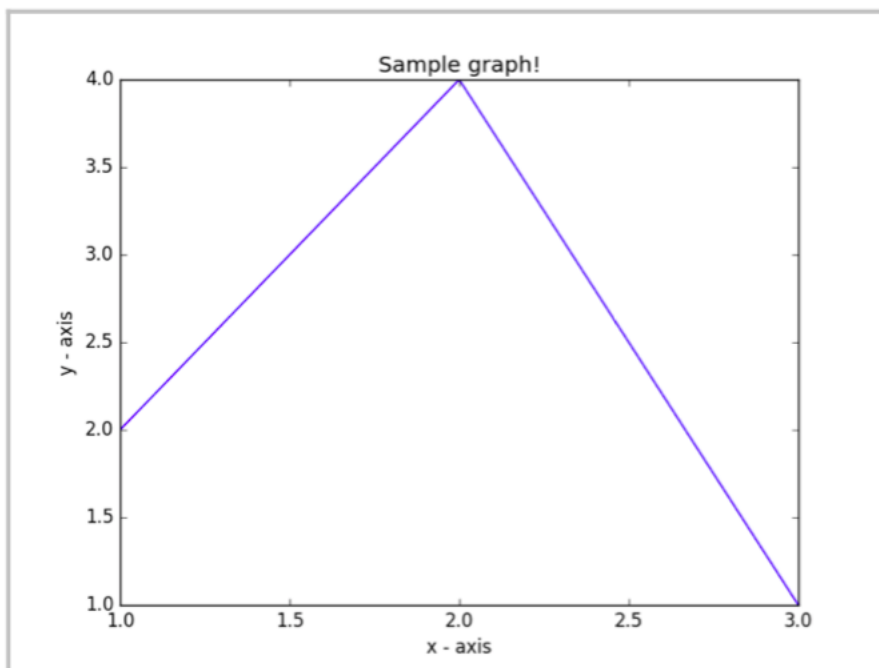


Figure 2: Example

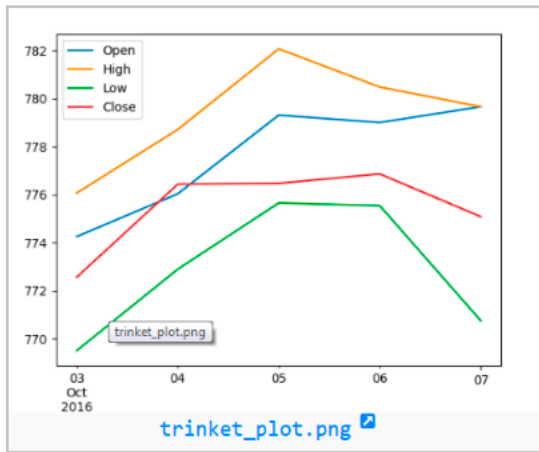


Figure 3: Example

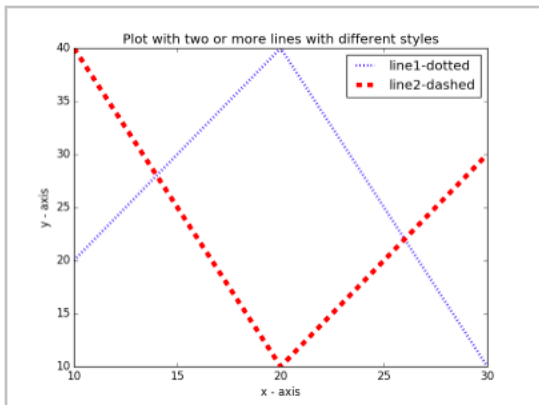


Figure 4: Example

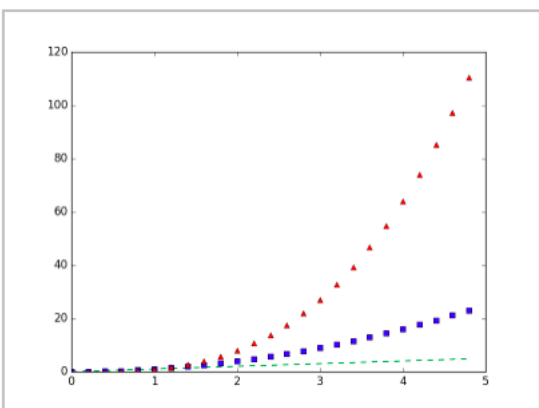


Figure 5: Example

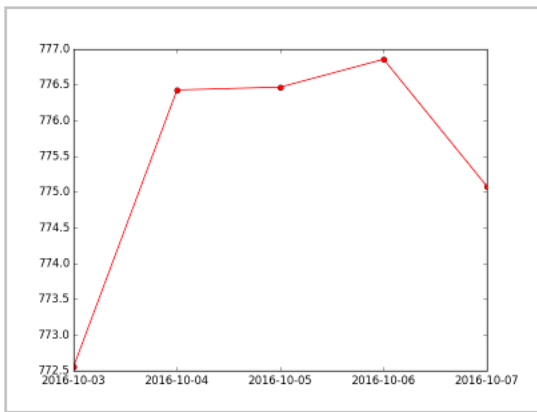


Figure 6: Example

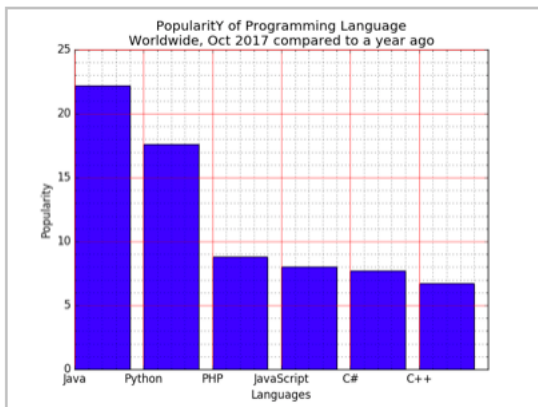


Figure 7: Example