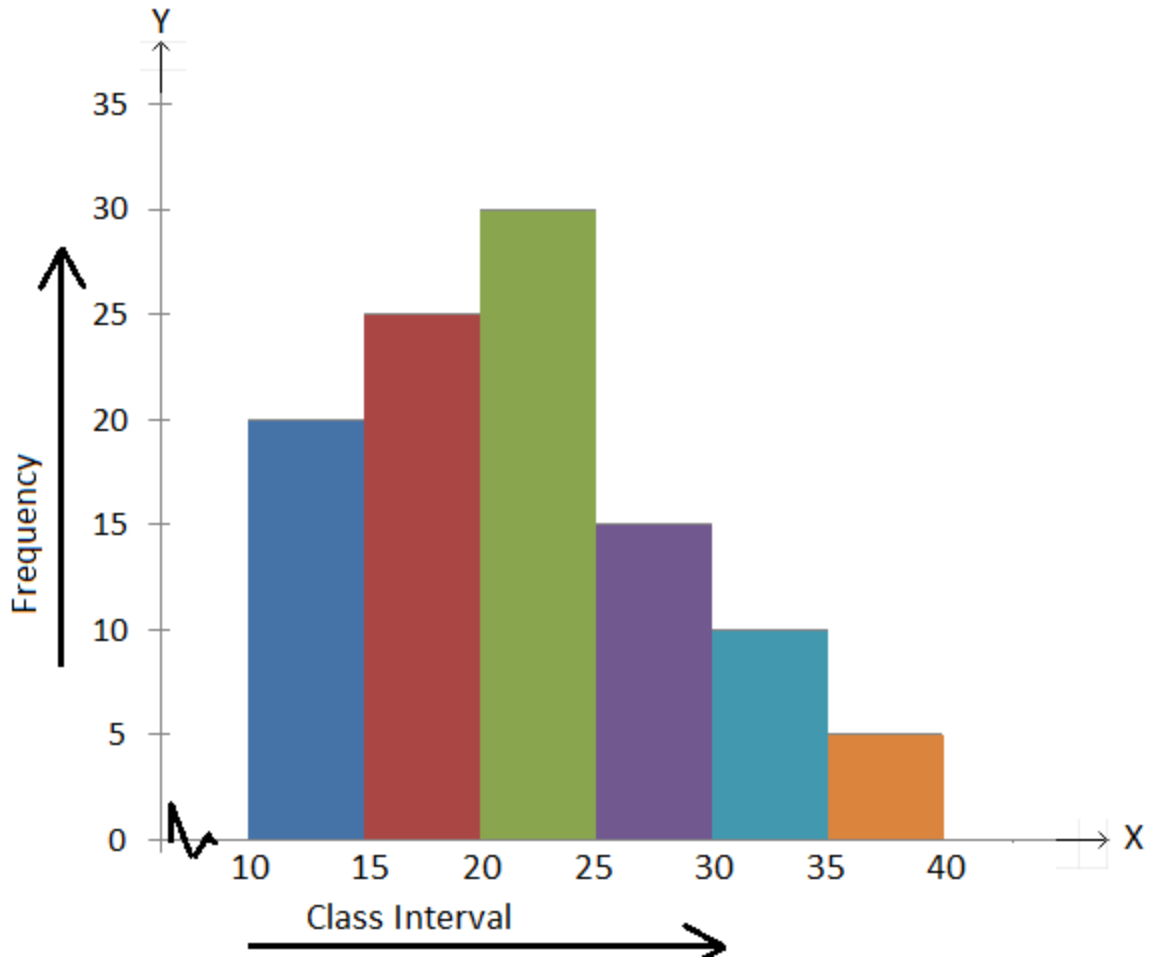# DATA VISUALIZATION

ASSIGNMENTS

Q.1 The histogram for a frequency distribution is given below.

Answer the following.
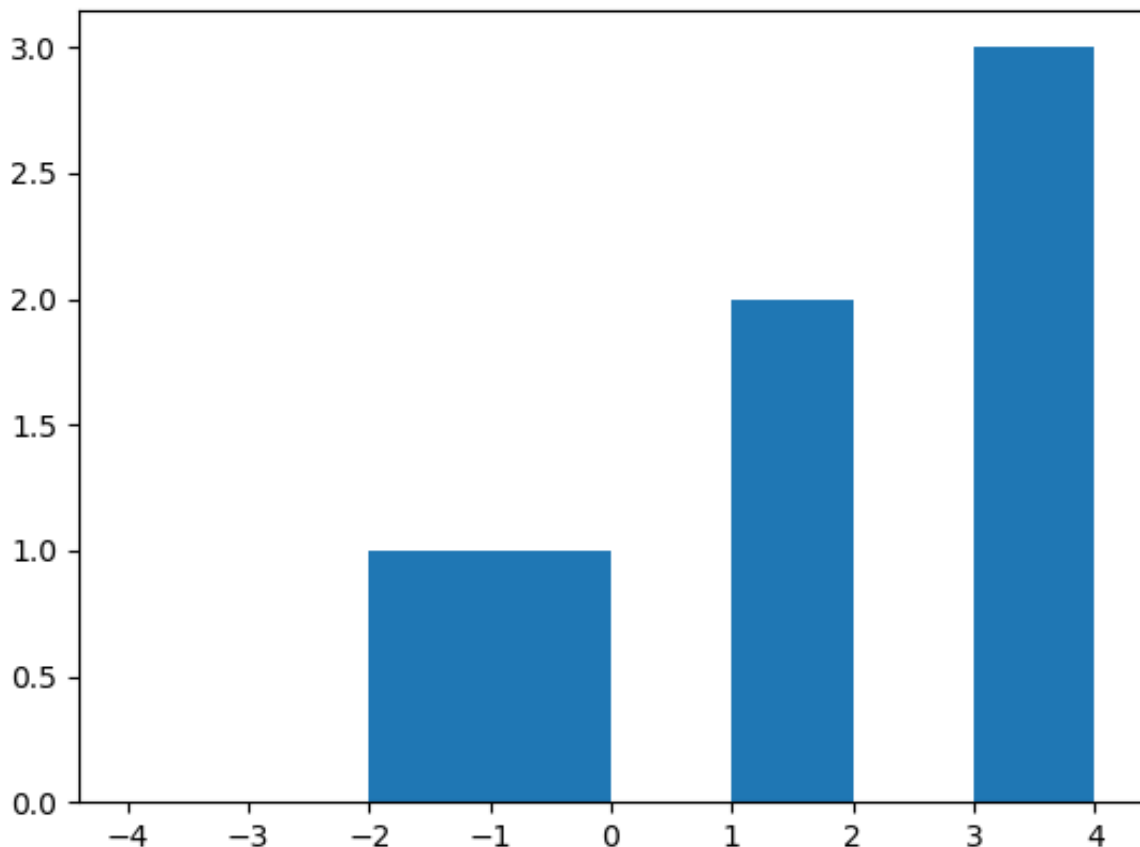
(i) What is the frequency of the class interval 15 – 20?

(ii) What is the class intervals having the greatest frequenciey?

(iii) What is the cumulative frequency of the class interval 25 – 30?

(iv) Construct a short frequency table of the distribution.

(v) Construct a cumulative frequency table of the distribution.

Q.2 Draw histogram programmatically in python with following frequency of scores 1,1,2,2,2,2,2,3,3,3,3,4,4,5 with range (bins) starting from 1 to 5.

Q.3 Below is a grouped frequency table of the heights of plants growing in a garden. Construct a histogram of the data.

Height,h (cm)	Frequency
0<h<=10	3
10<h<=20	2
20<h<=24	4
24<h<=30	5
30<h<=50	1

Q.4 Draw the following histogram using python program.

Q.5 Draw the histogram for population_ages = [22, 55, 62, 45, 21, 22,34,42,42,4,99,102,110,120,121,122,130,111,115,112,80,75,65,54 ,44,43,42,48] and bins = [0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110,120,130] through python program with suitable title and label.

Q.6 How to choose bins in Matplotlib histogram?
Q.7 Write a Program in python to find 0.75 quantile of series[1, 10, 20,40,60,70,80,90,100]
Q.8 Solve the question no 7 using solution steps.

Q.9 Write a Python programming to display a bar chart of the popularity of programming Languages. Sample data:
Programming languages: Python, Java, PHP, JavaScript
Popularity: 8.6, 8, 7.8, 6.4

Q.10 Write a Python programming to display a Horizontal bar chart of the popularity of programming Languages. Sample data:
Programming languages: Python, Java, PHP, JavaScript
Popularity: 8.6, 8, 7.8, 6.4

Q.10 Write a Python program to create bar plot from a DataFrame.
Sample Data Frame:
a b c d e
2 4,8,5,7,6
4 2,3,4,2,6
6 4,7,4,7,8
8 2,6,4,8,6
10 2,4,3,3,2

Q.11 The following are the runs scored by a team in the first 5 overs:

Match	1	2	3	4	5	6	7	8	9	10
Runs Scored	6	0	2	5	10	20	15	6	18	12

Draw the line graph for the above data using matplotlib.

Q.12 The following tables give the information about a patient's body temperature recorded in the hospital every hour.

Time	9 am	10 am	11 am	12 noon	1 pm
Temperature	34° C	37° C	39° C	38°C	36.5°

Draw the line graph for the above data using matplotlib.

Q.13 Draw the line chart using matplotlib for Ice Cream Sales of an ice cream parlour.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
410/-	460/-	530/-	420/-	690/-	790/-	770/-

Q.14 The height of a plant was measured regularly after it had been transplanted, and the results are given below:

Day	4	8	12	16	20	24
Height (cm)	2	3	6	10	12	14

Draw a line graph using matplotlib to show how the height of the plant increased.

Q.15 Edit program developed for question no 14 to show height of one another plant also