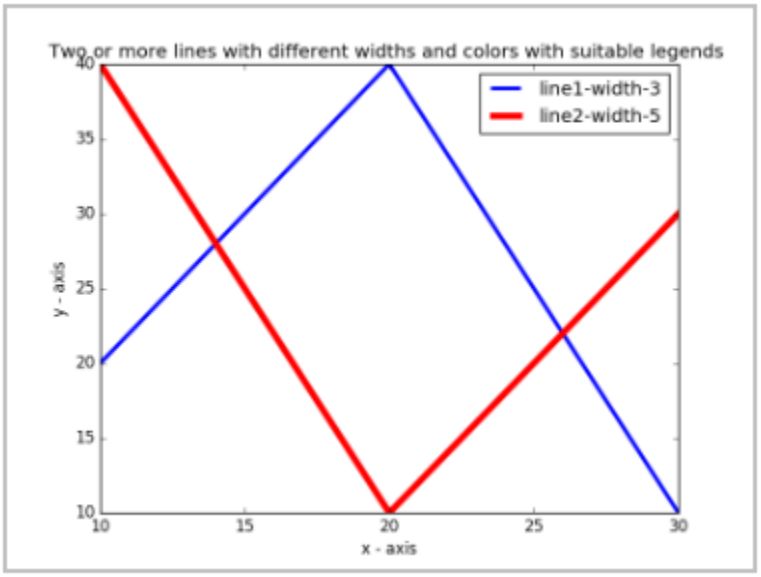
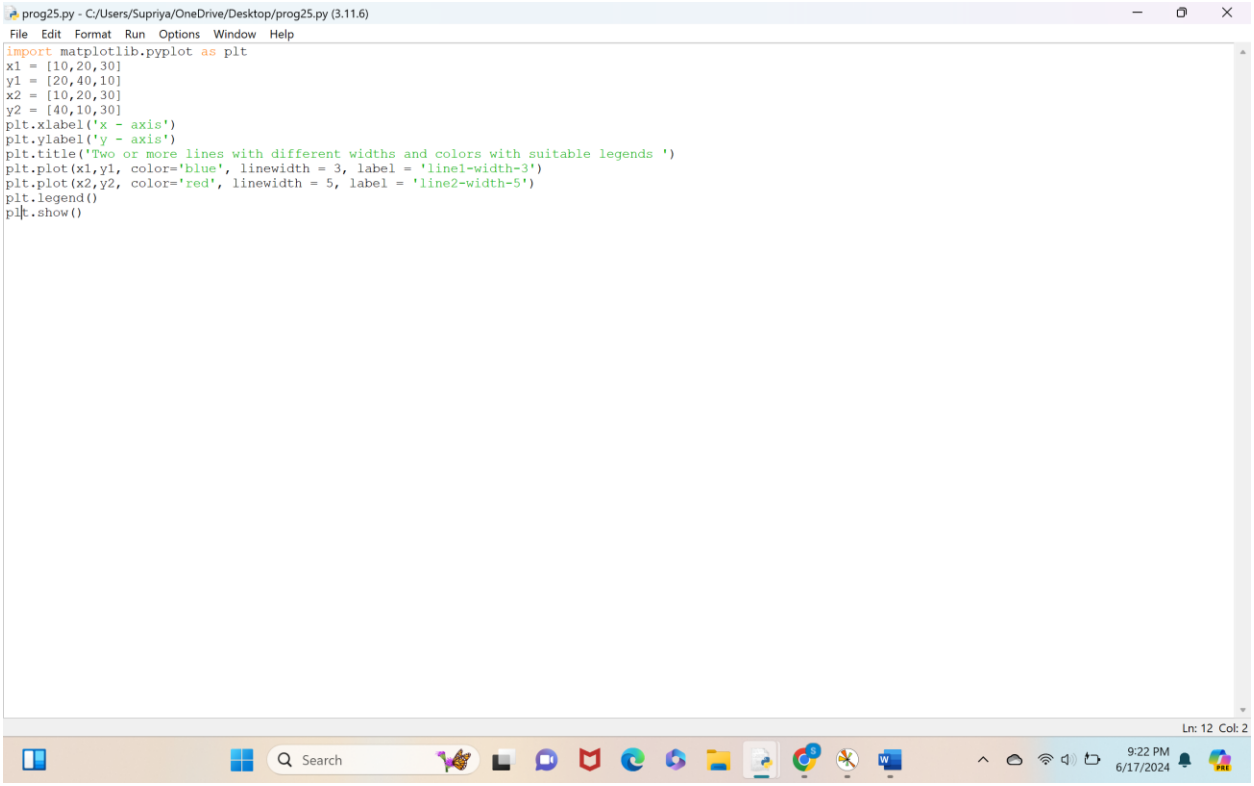
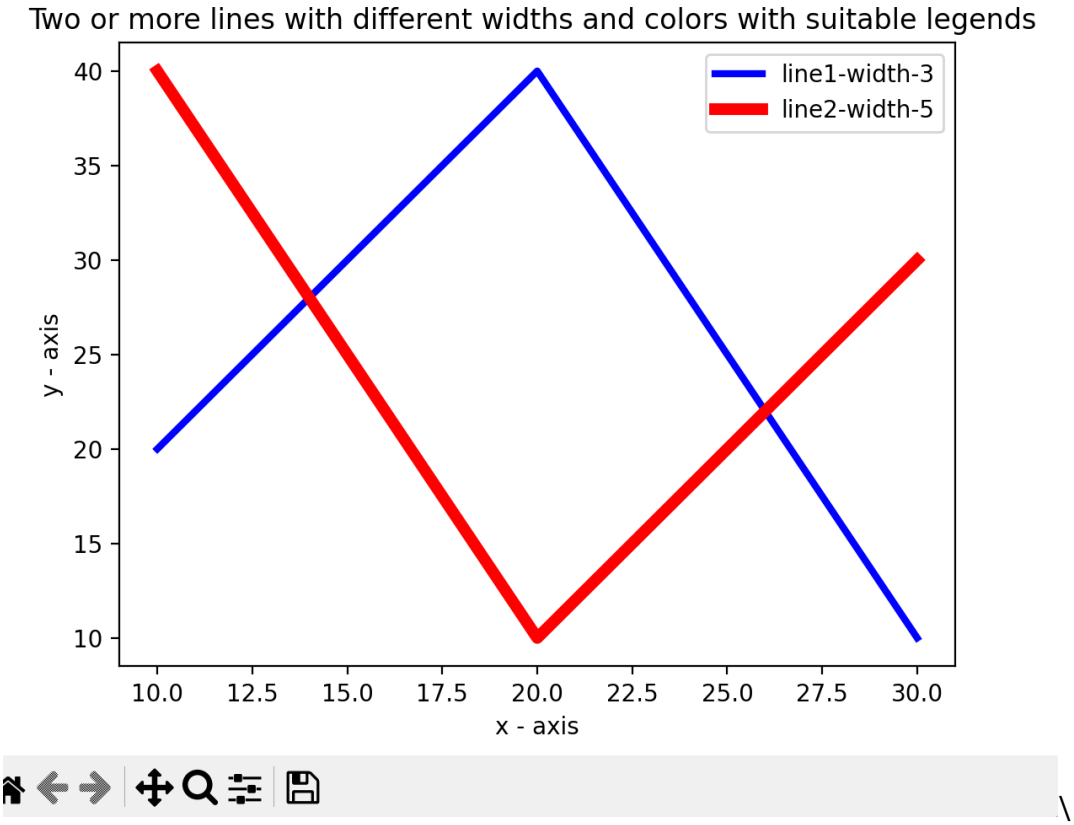
25.Write a Python program to plot two or more lines with legends, different widths and colors.



Input:



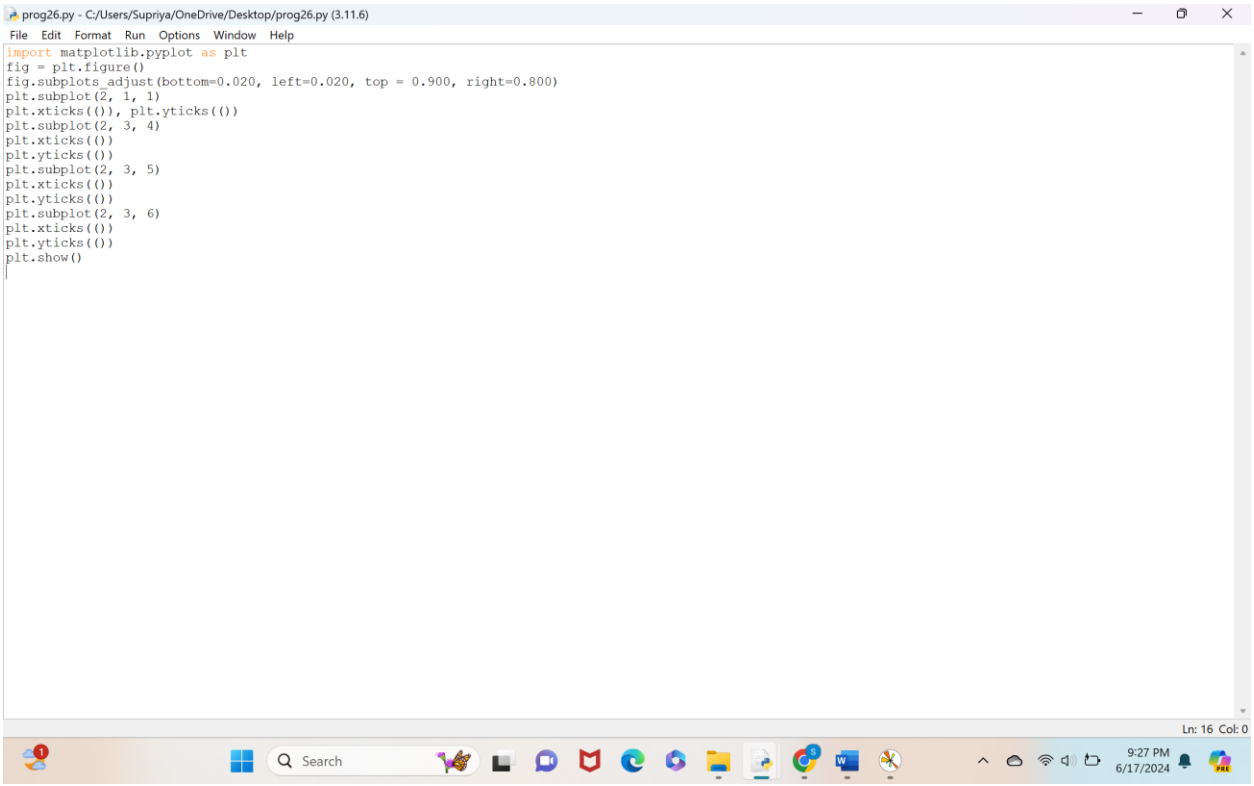
Output:



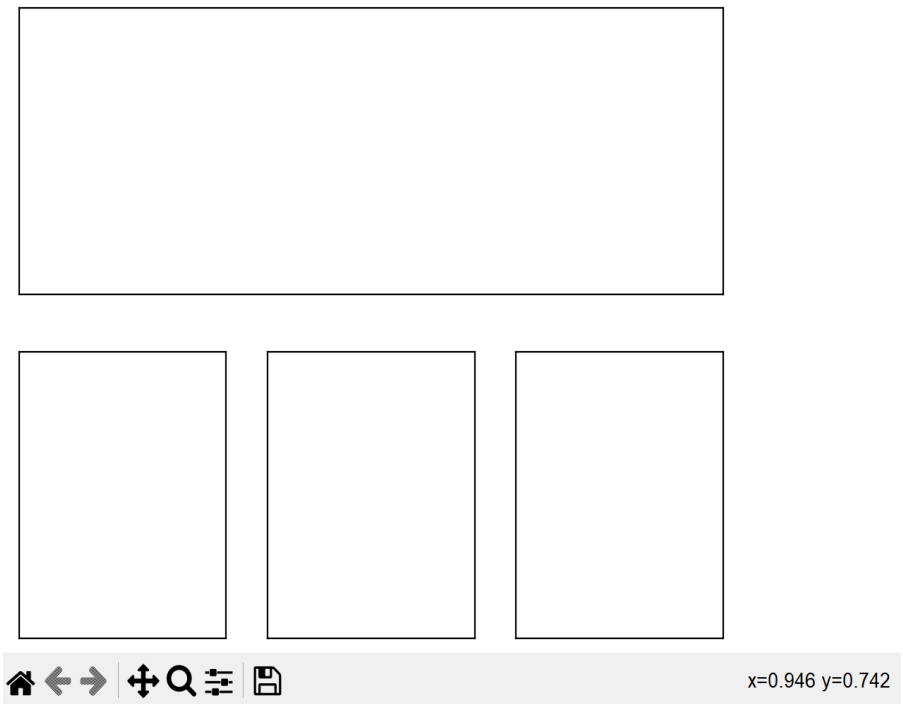
\

26.Write a Python program to create multiple plots.

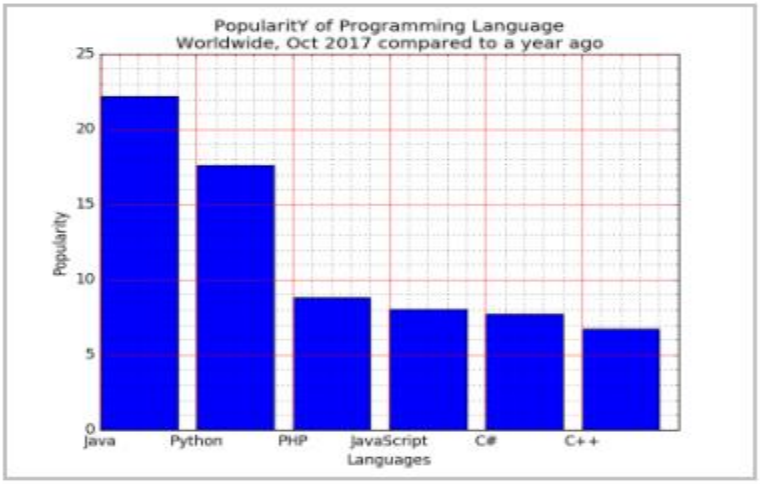
Input:



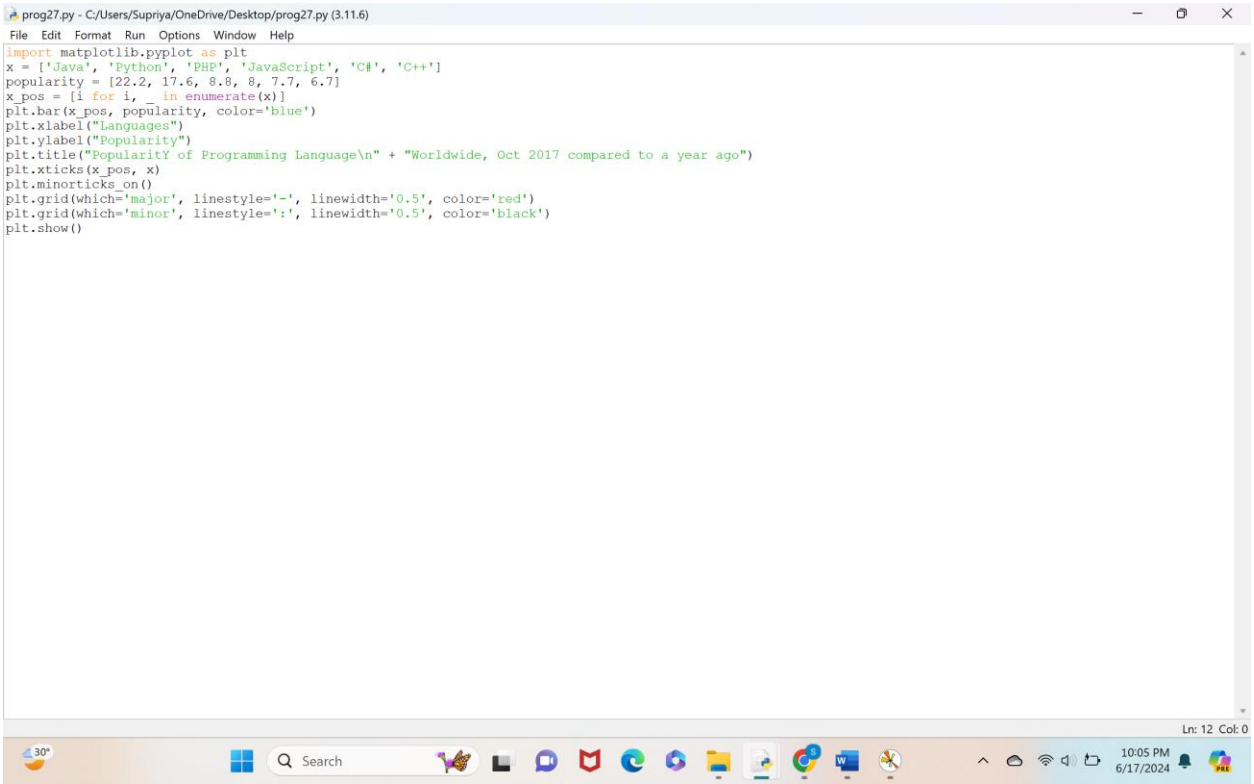
Output:



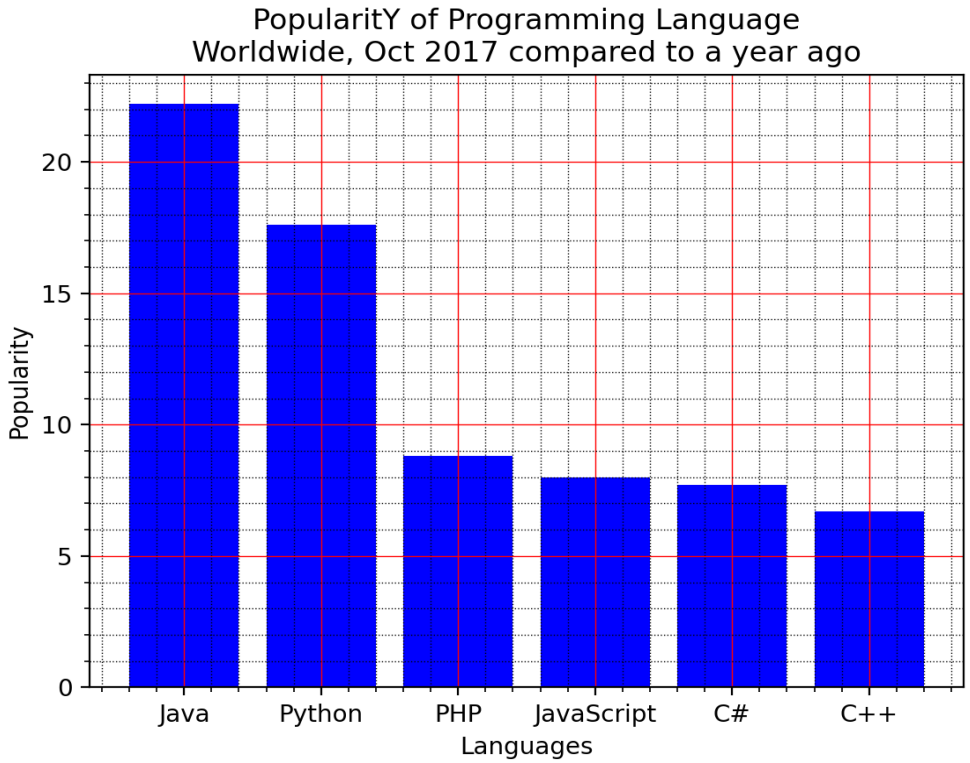
27.Write a Python programming to display a bar chart of the popularity of programming Languages.
Sample data:
Programming languages: Java, Python, PHP, JavaScript, C#, C++
Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7



Input:



Output:

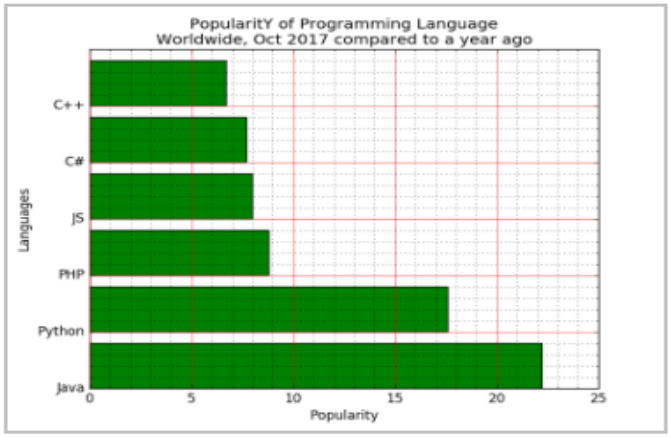


28.Write a Python programming to display a horizontal bar chart of the popularity of programming Languages.

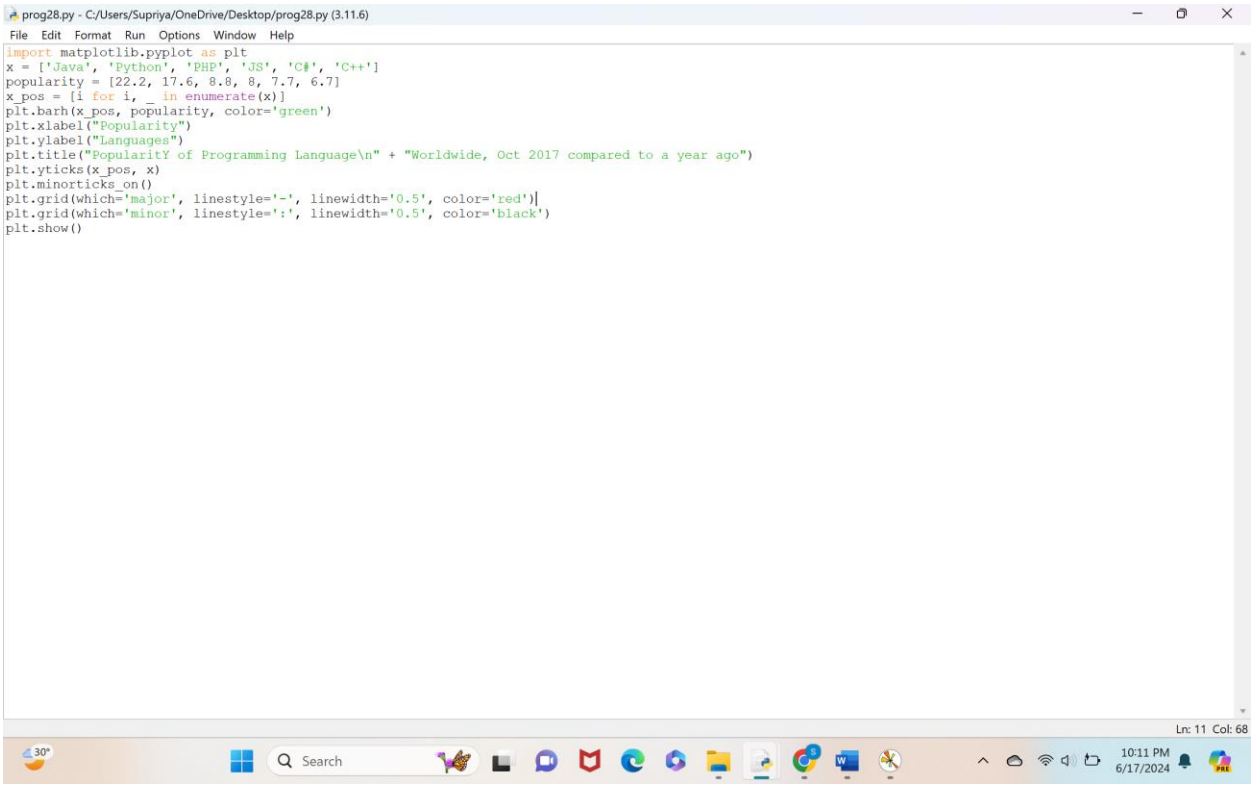
Sample data:

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

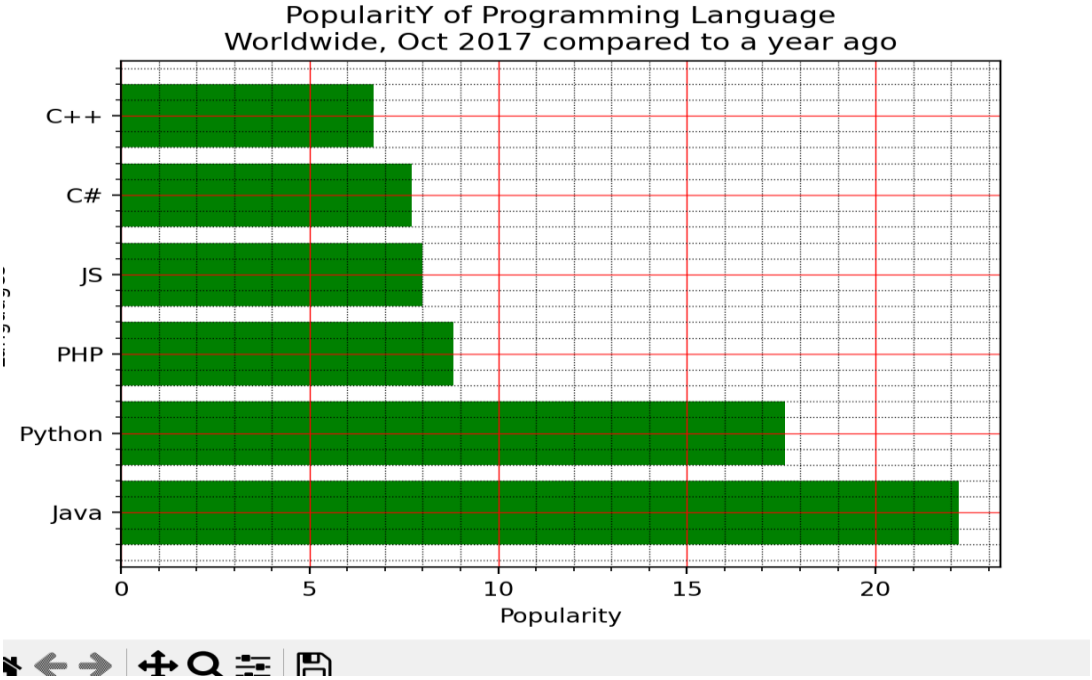
Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7



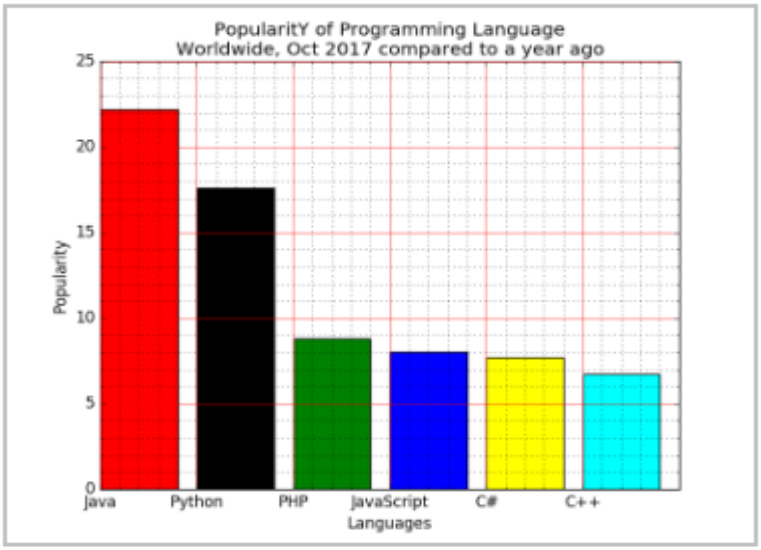
Input:



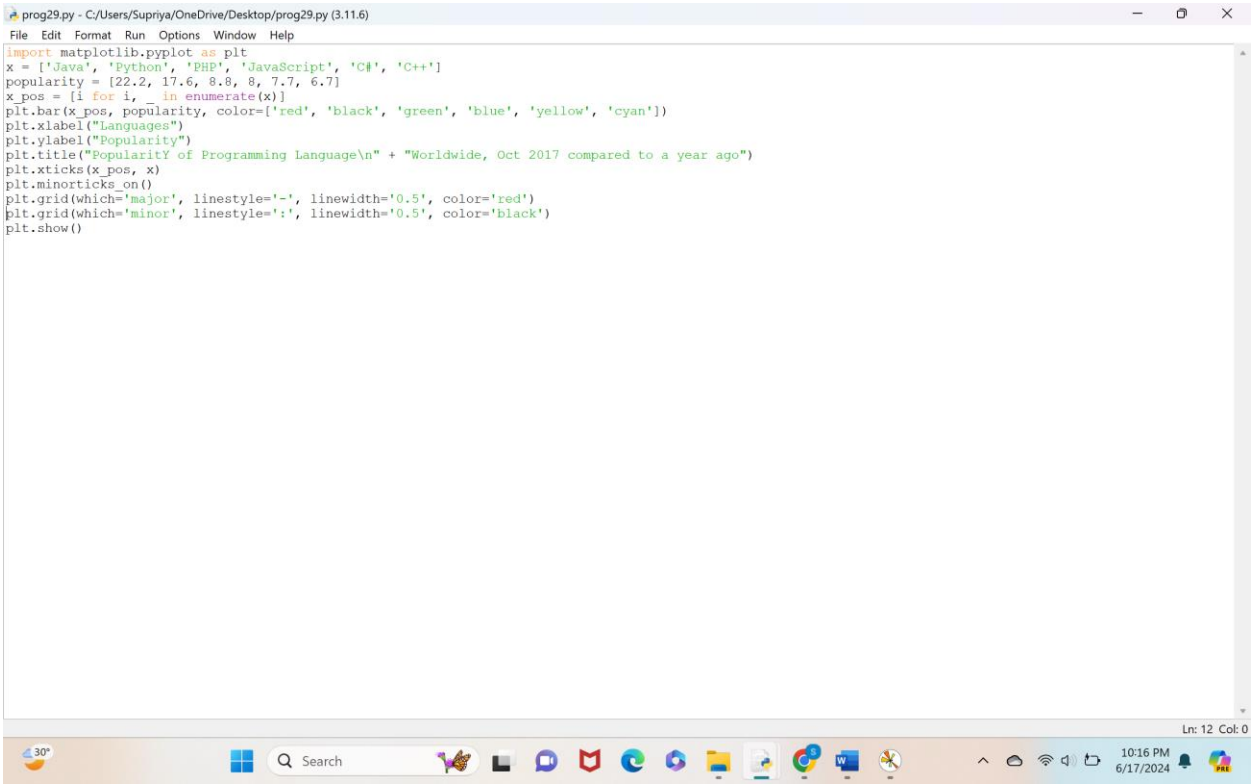
Output:



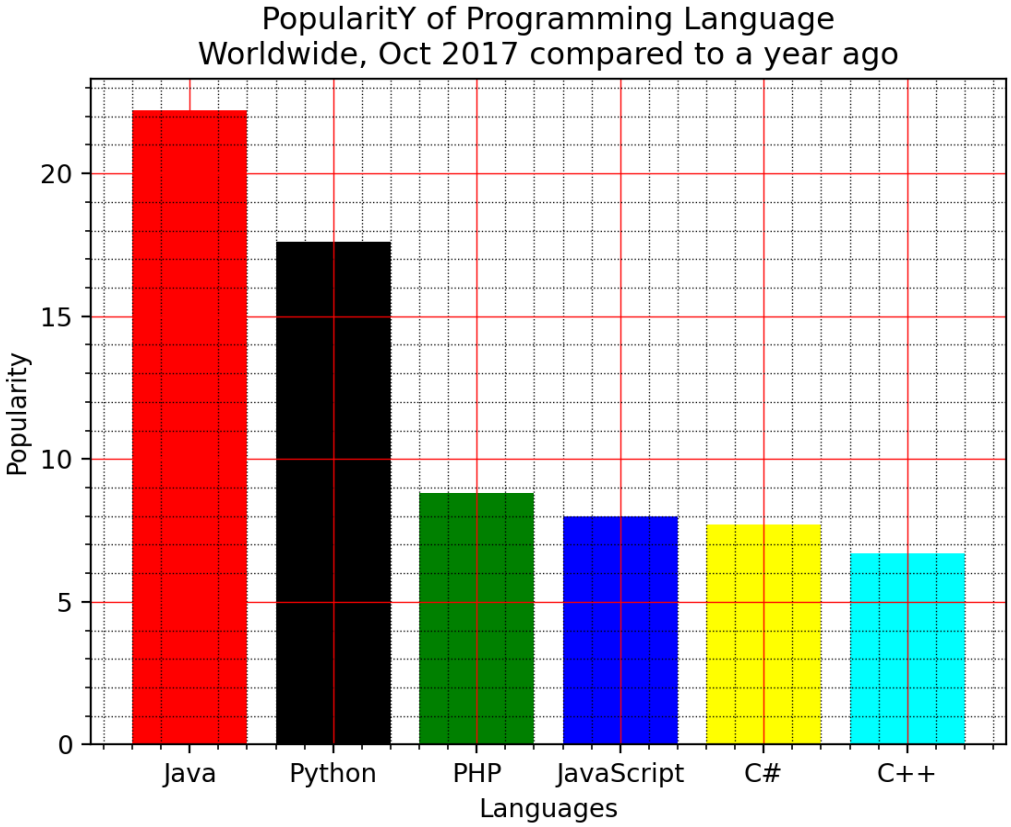
29.Write a Python programming to display a bar chart of the popularity of programming Languages. Use different color for each bar.
Sample data:
Programming languages: Java, Python, PHP, JavaScript, C#, C++
Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7



Input:

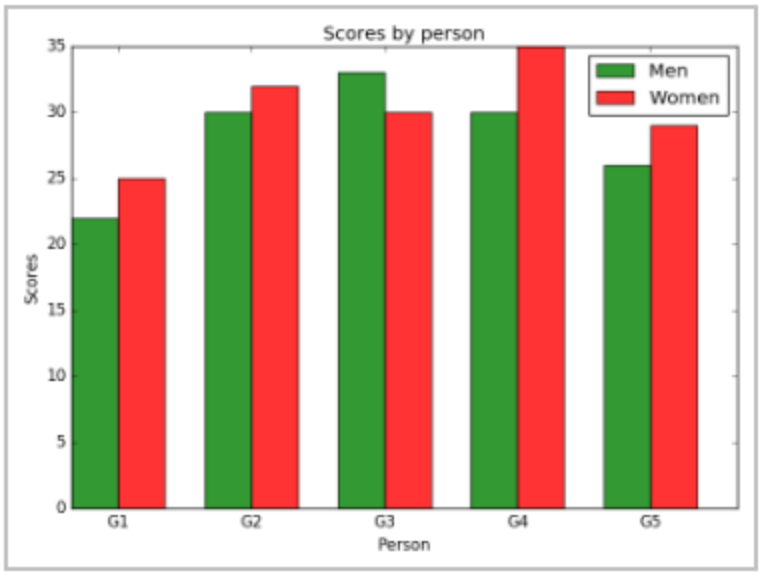


Output:

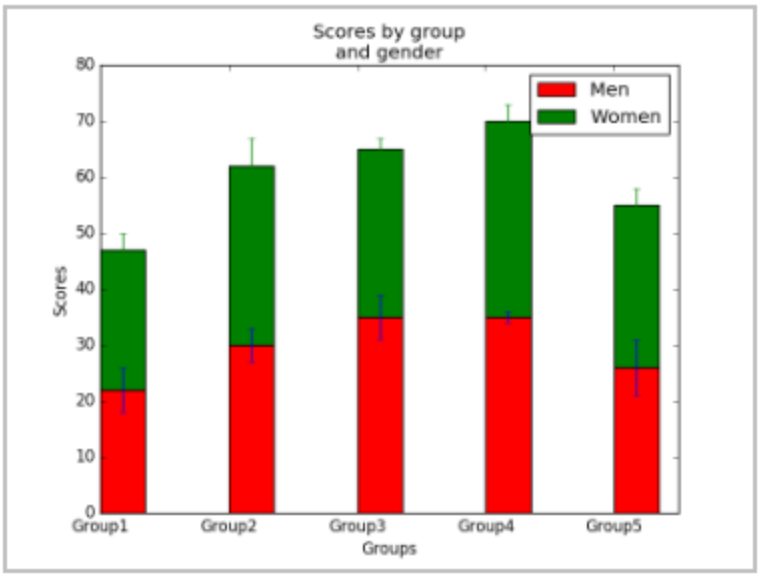


30.Write a Python program to create bar plot of scores by group and gender. Use multiple X values on the same chart for men and women.

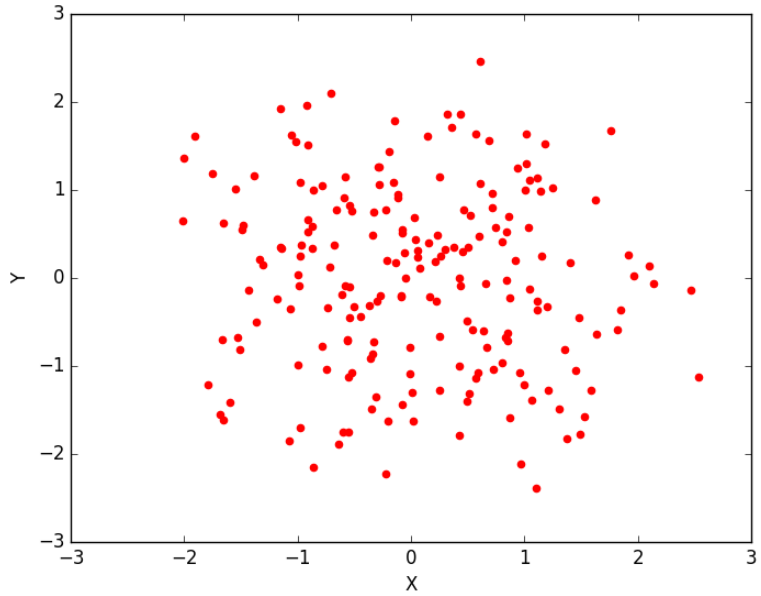
Sample Data:
Means (men) = (22, 30, 35, 35, 26)
Means (women) = (25, 32, 30, 35, 29)



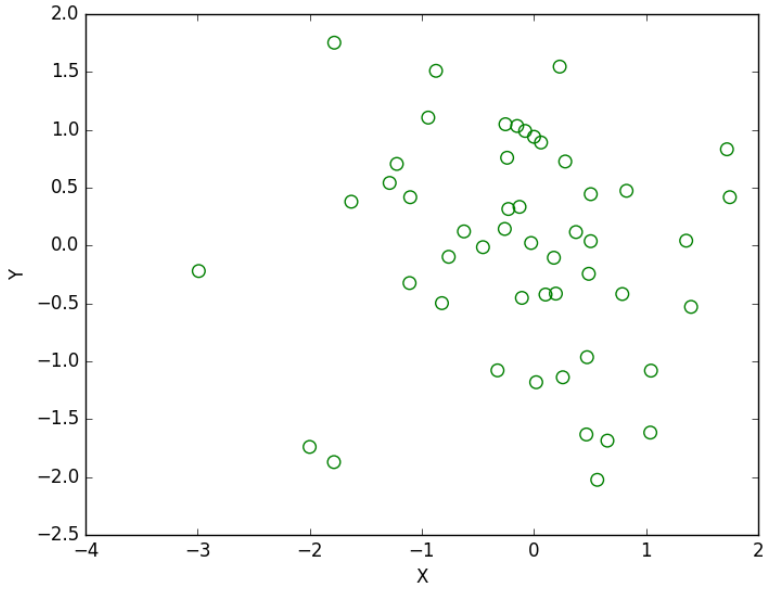
31.Write a Python program to create a stacked bar plot with error bars.
Note: Use bottom to stack the women?s bars on top of the men?s bars.
Sample Data:
Means (men) = (22, 30, 35, 35, 26)
Means (women) = (25, 32, 30, 35, 29)
Men Standard deviation = (4, 3, 4, 1, 5)
Women Standard deviation = (3, 5, 2, 3, 3)



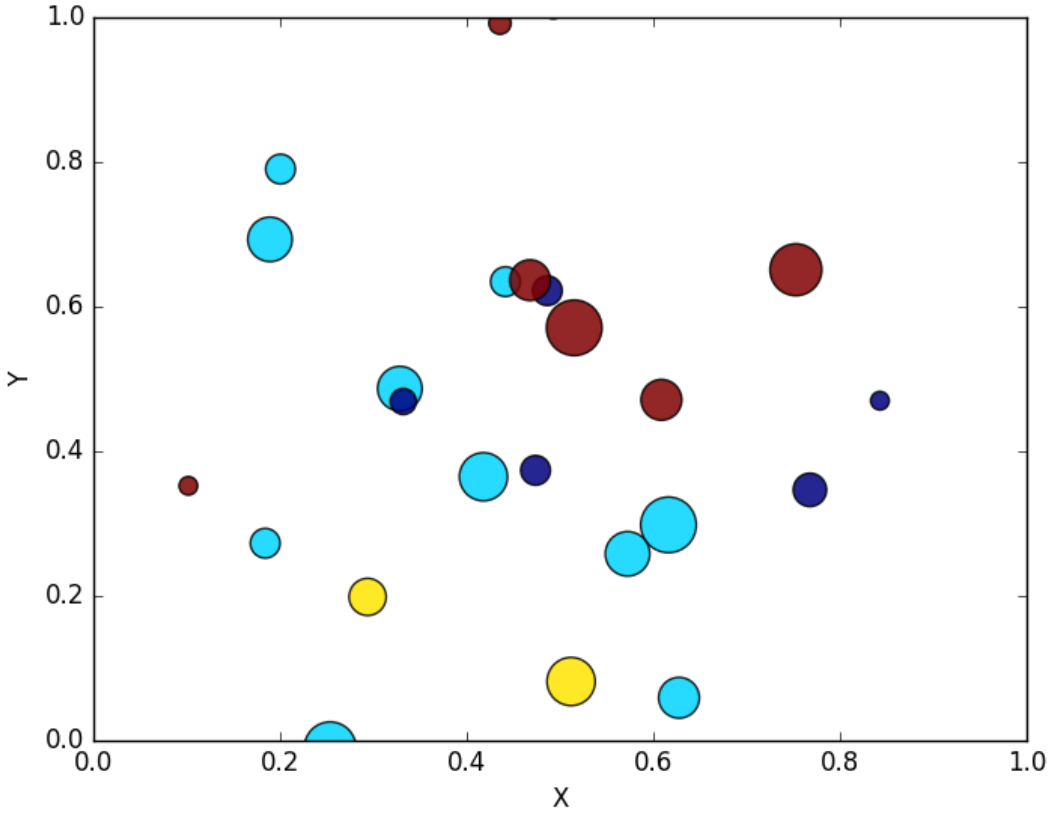
32.Write a Python program to draw a scatter graph taking a random distribution in X and Y and plotted against each other.



33.Write a Python program to draw a scatter plot with empty circles taking a random distribution in X and Y and plotted against each other.

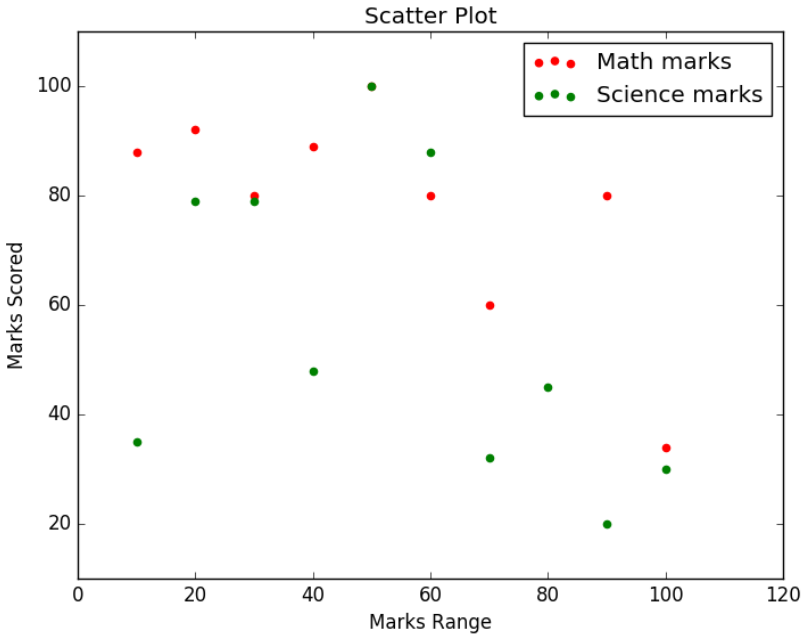


34.Write a Python program to draw a scatter plot using random distributions to generate balls of different sizes.

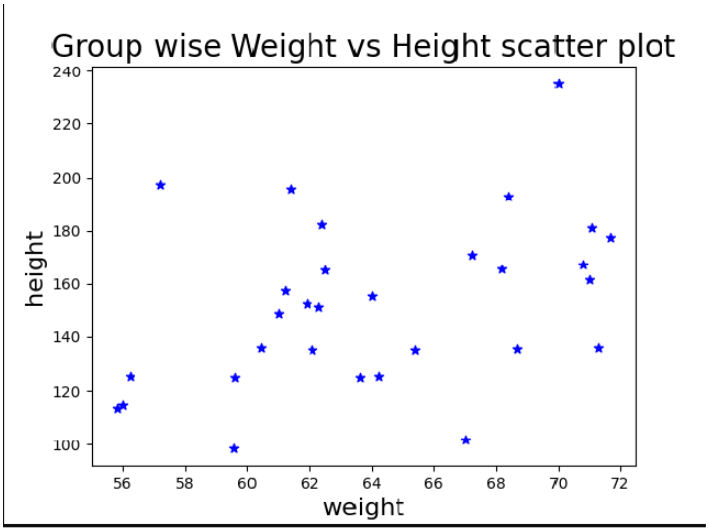


35.Write a Python program to draw a scatter plot comparing two subject marks of Mathematics and Science. Use marks of 10 students.
Sample data:

Test 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]



36.Write a Python program to draw a scatter plot for three different groups comparing weights and heights.



37.Write a Pandas program to create a dataframe from a dictionary and display it.

Sample data: {'X':[78,85,96,80,86], 'Y':[84,94,89,83,86],'Z':[86,97,96,72,83]}

```
Expected Output:
    X   Y   Z
0  78  84  86
1  85  94  97
2  96  89  96
3  80  83  72
4  86  86  83
```

38.Write a Pandas program to create and display a DataFrame from a specified dictionary data which has the index labels.
Sample Python dictionary data and list labels:
exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin', 'Jonas'],
'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

```
Expected Output:
   attempts       name qualify  score
a         1  Anastasia     yes   12.5
b         3       Dima      no    9.0
....
i         2      Kevin      no    8.0
j         1      Jonas     yes   19.0
```

39.Write a Pandas program to get the first 3 rows of a given DataFrame.
Sample Python dictionary data and list labels:
exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin', 'Jonas'],
'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

```
Expected Output:
First three rows of the data frame:
   attempts       name qualify  score
a         1  Anastasia     yes   12.5
b         3       Dima      no    9.0
c         2  Katherine     yes   16.5
```

40. Write a Pandas program to select the 'name' and 'score' columns from the following DataFrame.
Sample Python dictionary data and list labels:
exam_data = {'name': ['Anastasia', 'Dima', 'Katherine', 'James', 'Emily', 'Michael', 'Matthew', 'Laura', 'Kevin', 'Jonas'],
'score': [12.5, 9, 16.5, np.nan, 9, 20, 14.5, np.nan, 8, 19],
'attempts': [1, 3, 2, 3, 2, 3, 1, 1, 2, 1],
'qualify': ['yes', 'no', 'yes', 'no', 'no', 'yes', 'yes', 'no', 'no', 'yes']}
labels = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j']

```
Expected Output:
Select specific columns:
        name  score
a  Anastasia   12.5
b       Dima    9.0
c  Katherine   16.5
...
h      Laura    NaN
i      Kevin    8.0
j      Jonas   19.0
```