

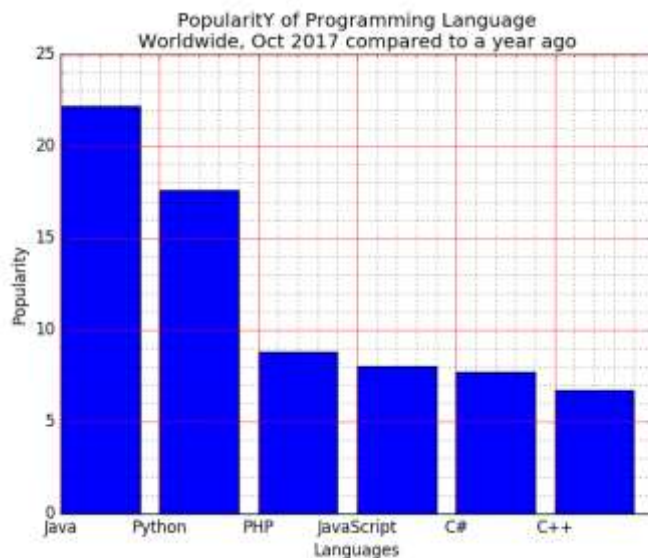
1. Write a Python programming to display a bar chart of the popularity of programming Languages.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



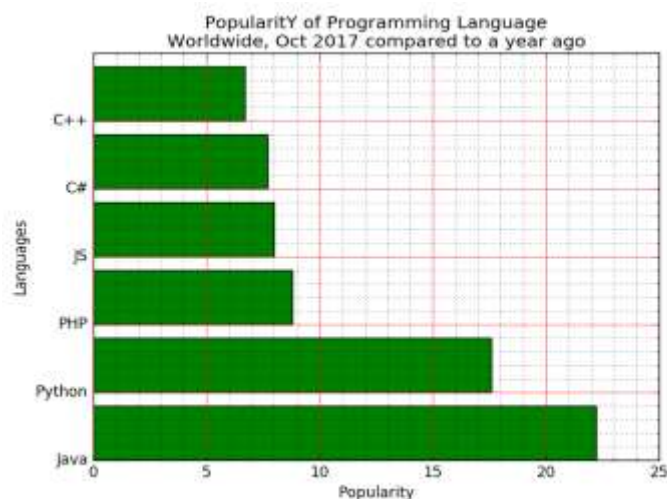
2. Write a Python programming to display a horizontal bar chart of the popularity of programming Languages.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



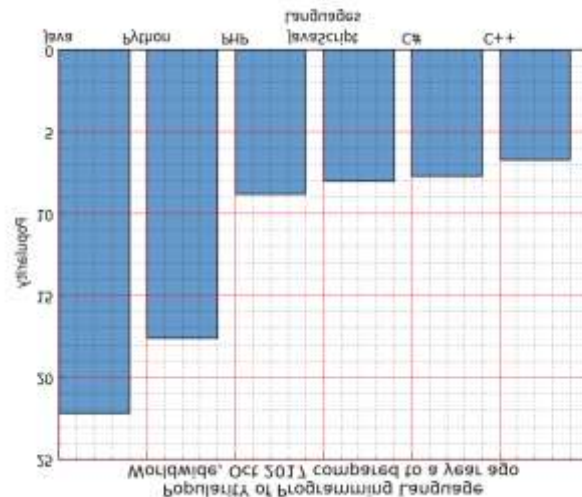
3. Write a Python programming to display a bar chart of the popularity of programming Languages. Use uniform color.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:

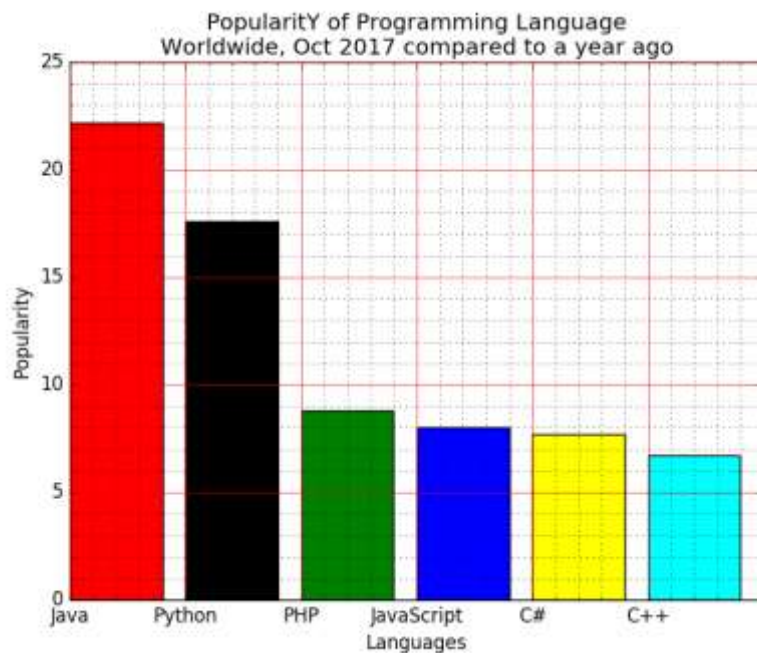


4. Write a Python programming to display a bar chart of the popularity of programming Languages. Use different color for each bar.

Sample data:

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

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



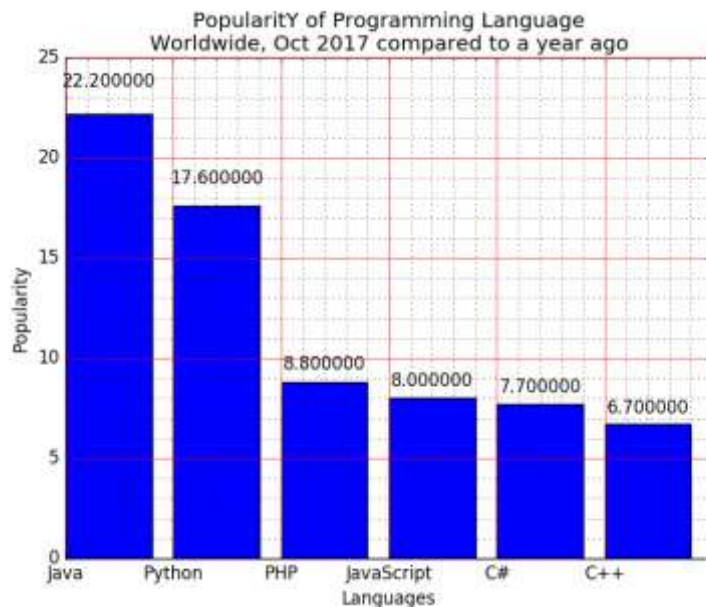
5. Write a Python programming to display a bar chart of the popularity of programming Languages. Attach a text label above each bar displaying its popularity (float value).

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



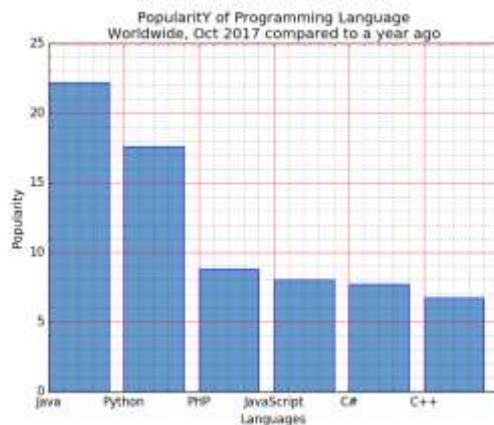
6. Write a Python programming to display a bar chart of the popularity of programming Languages. Make blue border to each bar.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



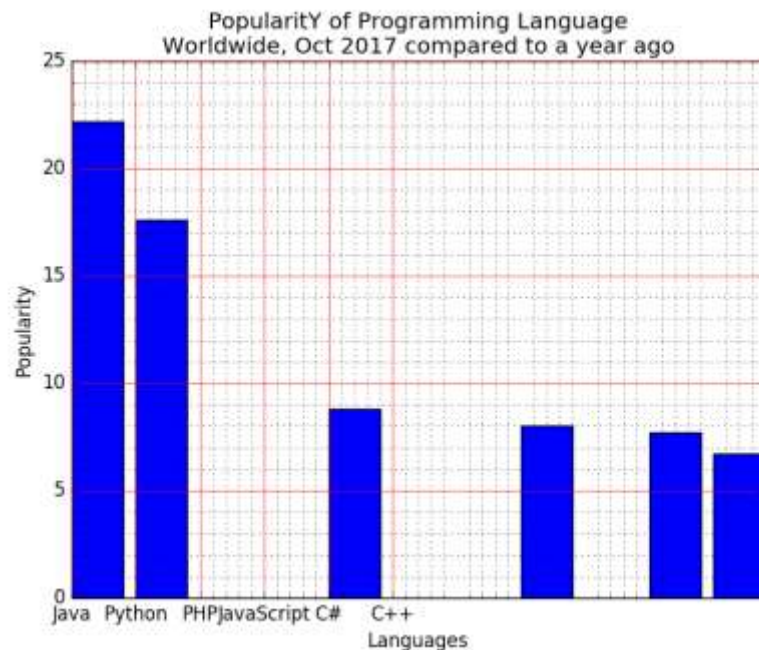
7. Write a Python programming to display a bar chart of the popularity of programming Languages. Specify the position of each bar plot.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



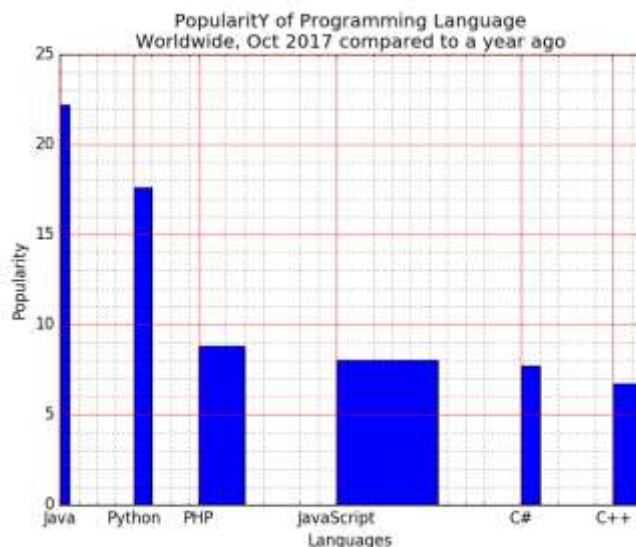
8. Write a Python programming to display a bar chart of the popularity of programming Languages. Select the width of each bar and their positions.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



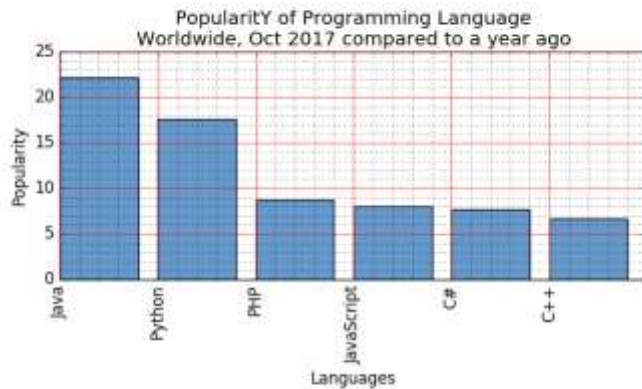
**9.** Write a Python programming to display a bar chart of the popularity of programming Languages. Increase bottom margin.

Sample data:

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

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

The code snippet gives the output shown in the following screenshot:



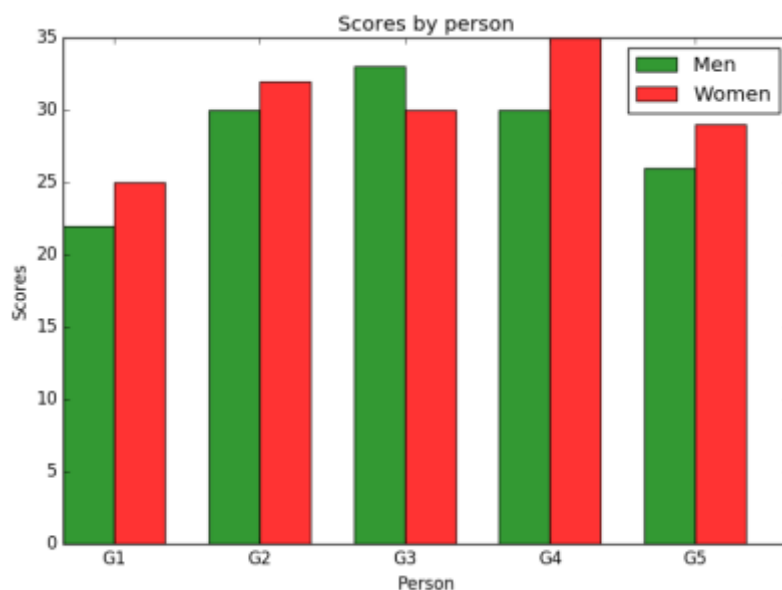
**10.** Write a Python program to create bar plot of scores by group and gender. Use multiple X values on the same chart for men and women.

Sample Data:

Means (men) = (22, 30, 35, 35, 26)

Means (women) = (25, 32, 30, 35, 29)

The code snippet gives the output shown in the following screenshot:





**11.** 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

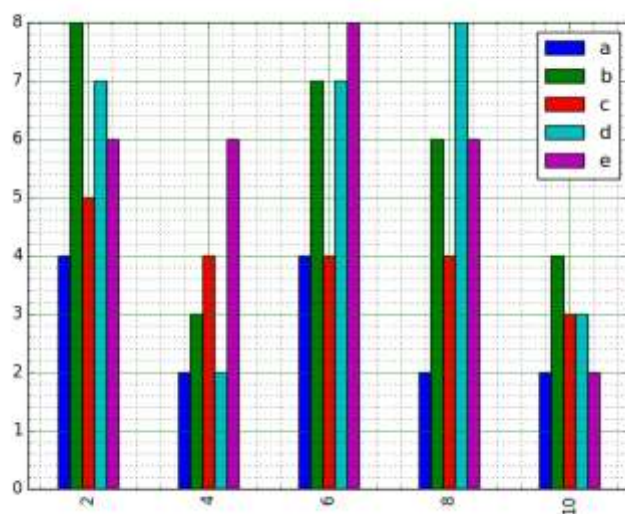
4 2,3,4,2,6

6 4,7,4,7,8

8 2,6,4,8,6

10 2,4,3,3,2

The code snippet gives the output shown in the following screenshot:



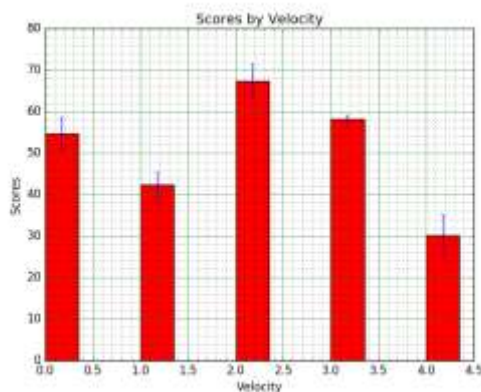
**12.** Write a Python program to create bar plots with error bars on the same figure.

Sample Date

Mean velocity: 0.2474, 0.1235, 0.1737, 0.1824

Standard deviation of velocity: 0.3314, 0.2278, 0.2836, 0.2645

The code snippet gives the output shown in the following screenshot:



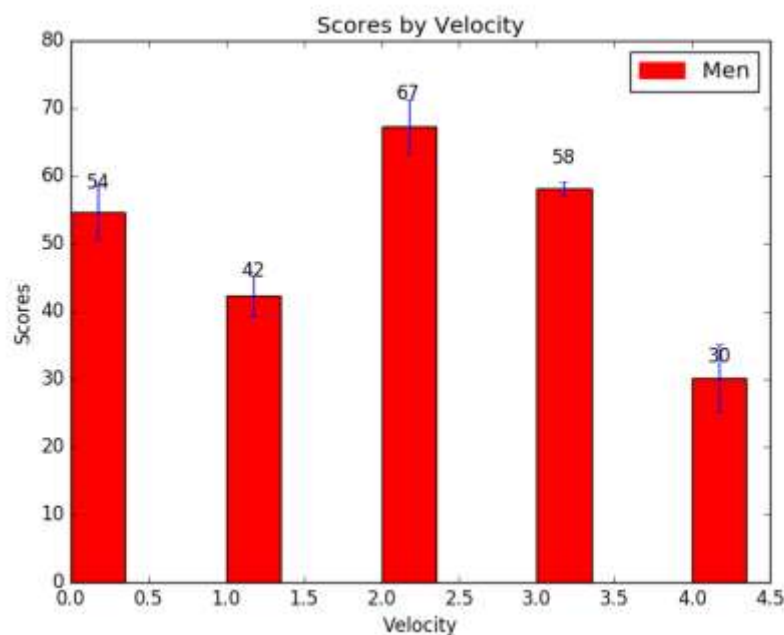
**13.** Write a Python program to create bar plots with errorbars on the same figure. Attach a text label above each bar displaying men means (integer value).

Sample Data

Mean velocity: 0.2474, 0.1235, 0.1737, 0.1824

Standard deviation of velocity: 0.3314, 0.2278, 0.2836, 0.2645

The code snippet gives the output shown in the following screenshot:



**14.** 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:

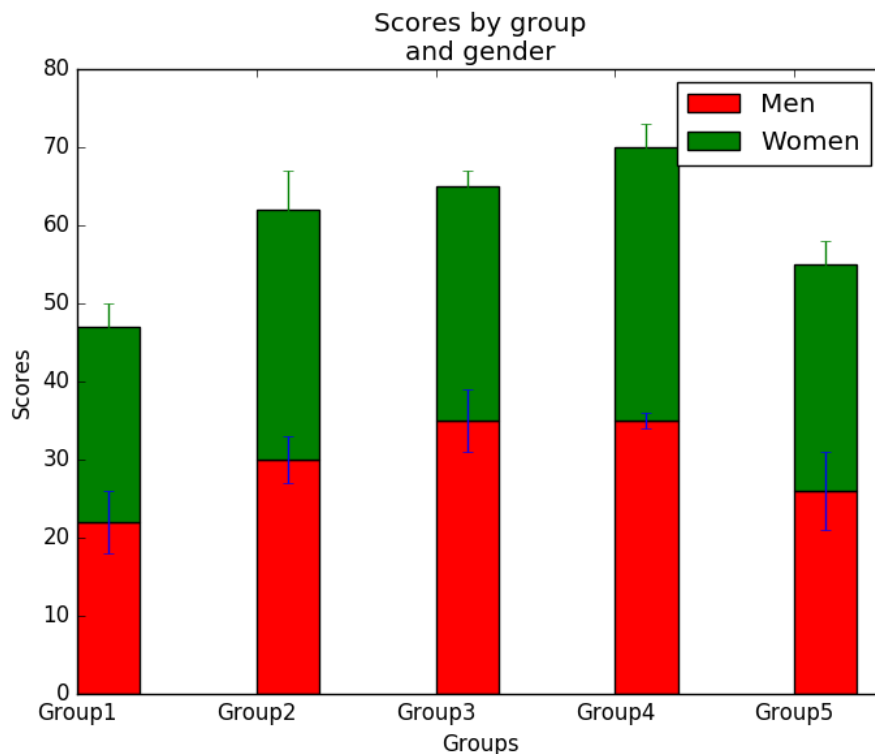
Means (men) = (22, 30, 35, 35, 26)

Means (women) = (25, 32, 30, 35, 29)

Men Standard deviation = (4, 3, 4, 1, 5)

Women Standard deviation = (3, 5, 2, 3, 3)

The code snippet gives the output shown in the following screenshot:



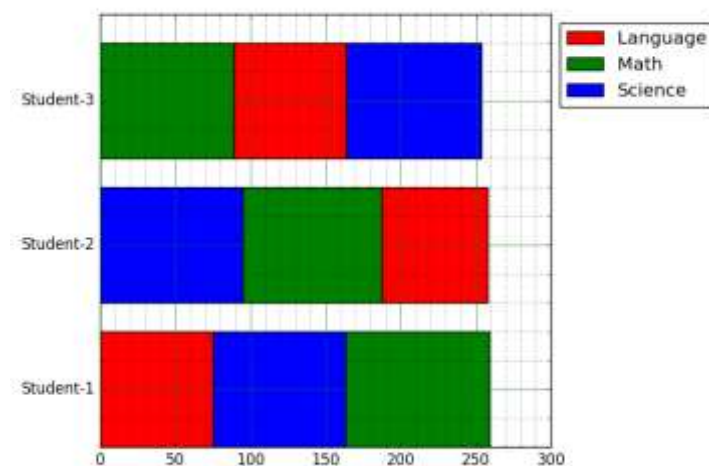
**15.** Write a Python program to create a horizontal bar chart with differently ordered colors.

Note: Use bottom to stack the women?s bars on top of the men?s bars.

Sample Data Set:

```
languages = [['Language','Science','Math'],
['Science','Math','Language'],
['Math','Language','Science']]
numbers = [{'Language':75, 'Science':88, 'Math':96},
{'Language':71, 'Science':95, 'Math':92},
{'Language':75, 'Science':90, 'Math':89}]
```

The code snippet gives the output shown in the following screenshot:





**16.** Write a Python program to create stack bar plot and add label to each section.

Sample data:

```
people = ('G1','G2','G3','G4','G5','G6','G7','G8')
```

```
segments = 4
```

```
# multi-dimensional data
```

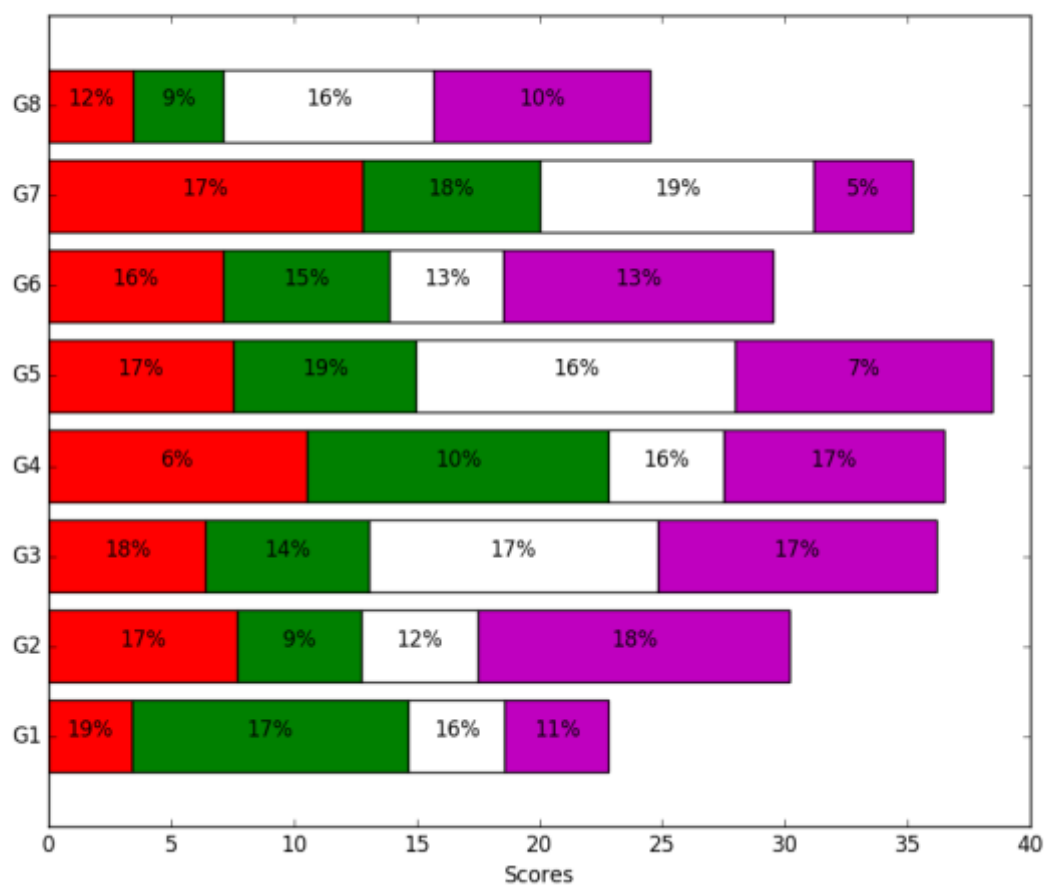
```
data = [[ 3.40022085, 7.70632498, 6.4097905, 10.51648577, 7.5330039,  
7.1123587, 12.77792868, 3.44773477],
```

```
[ 11.24811149, 5.03778215, 6.65808464, 12.32220677, 7.45964195,  
6.79685302, 7.24578743, 3.69371847],
```

```
[ 3.94253354, 4.74763549, 11.73529246, 4.6465543, 12.9952182,  
4.63832778, 11.16849999, 8.56883433],
```

```
[ 4.24409799, 12.71746612, 11.3772169, 9.00514257, 10.47084185,  
10.97567589, 3.98287652, 8.80552122]]
```

The code snippet gives the output shown in the following screenshot:



**17.** Write a Python program to add textures (black and white) to bars and wedges.

Note: Use bottom to stack the womens bars on top of the mens bars.

The code snippet gives the output shown in the following screenshot:

