# OMIS 673 MODULE 12 HOMEWORK

* You are supposed to submit three ipynb files in addition to this word document
* Add your full name to the title of each chart (e.g. Chart A by Young Lee). Otherwise, I will give you 0 points.

**Visual 1** (15 points):

1. Build your own vertical bar chart by following Video 12.4 (Advanced Bar Chart with Python).
   1. Set yellow (y) for the color of bars. The base color codes for Python are introduced below.
   2. The title of this chart should include your name. Change the title text color to blue.
2. Save a PNG file of this chart as introduced in Video 12.3 (Simple Bar Chart with Python) and insert it here.
   1. If your figure seems to be cropped, use the following code to make it smaller. plt.savefig(*yourownfilename*, bbox\_inches = 'tight')

Chart, bar chart, histogram

Description automatically generated

1. Submit the ipynb file which includes the codes to generate the above figure to Blackboard.

**Visual 2** (15 points):

1. Build your own line chart by following Video 12.5 (Line Chart with Python). a. Change the line markers and colors as follow.
   1. Item A line: Blue color. Diamond marker. ii. Item B line: Magenta color, X filled marker.

iii. For marker codes, you can check this webpage, https://matplotlib.org/3.1.0/api/markers\_api.html

b. The title of this chart should include your name.

1. Save a PNG file of this chart as introduced in Video 12.3 (Simple Bar Chart with Python) and insert it here.
   1. If your figure seems to be cropped, use the following code to make it smaller. plt.savefig(*yourownfilename*, bbox\_inches = 'tight')

Chart, line chart

Description automatically generated

1. Submit the ipynb file which includes the codes to generate the above figure to Blackboard.

# Visual 3:

1. Build your own charts by following Video 12.6.(Stacked and Side by Side Bar Chart).
2. Change the codes in a way that C6 (i.e. class 6)'s scores are added to your visualizations.
   1. Its men's mean score is 40
   2. Its women's mean score is 36
3. Generate a PNG file of a side-by-side bar chart with this new data set (10 points).

Chart, bar chart

Description automatically generated

1. Generate a PNG file of a stacked bar chart with this new data set. Now, women's scores should be placed in the bottom (10 points).

Chart, bar chart

Description automatically generated

4. Submit the ipynb file which includes the codes to generate the above figures to Blackboard.