Worksheet#2 : Python 3 at home

1 INSTALLING PYTHON AT HOME

If you have Windows XP or earlier, or a non-Windows operating system, talk to Mr. Rodriguez. Otherwise, follow these directions to install Python 3 on your home computer:

1. Go to: https://www.python.org/downloads/
2. Hover over the "Downloads" tab, and under "Download for Windows" click on Python 3.5.1
3. Find and open the downloaded file: python-3.5.1.exe
4. Follow the on-screen directions for a regular installation

You should now have Python 3 installed on your computer. If you can't find it, search for "IDLE", and that should bring up the Python interface. It will probably be useful to right-click on the search result and add a shortcut to your desktop.

2 FINDING YOUR SAVED DOCUMENTS FOLDER

It can sometimes be a challenge to locate the saved files you have created with Python. Follow these directions to establish an easy-to-find folder:

1. Open Python, and in the File menu choose New File. This opens a new script.
2. In the new script, under the File menu choose "Save As...". A Save window will pop up.
3. Just under the window title "Save As" is the folder address bar. It should end with the name Python35-32. Right-click on this folder name, and select "Copy Address".
4. Right-click on an empty space on your desktop, and choose "Paste Shortcut".

   Now you can quickly access your saved file folder.

3 TESTING OUT YOUR SHELL

Do the following steps to practice debugging with Python on your own computer.

3.1 IMPORTING AND RUNNING A SCRIPT

1. Check your email for a message entitled "Worksheet 2 - Faulty Script", and download the attachment entitled "Worksheet 2 - Faulty Script.py". This is a script of code with errors; it will not run properly.
2. The code below is a correct version of the script you just downloaded. Use it to proof-read your faulty script, and correct the 8 errors it contains.
3. Run your debugged script and record the 3x3 matrix output here:

```
# Code Start

# 3x3 matrix
X = [[12,7,3],
     [4 ,5,6],
     [7 ,8,9]]
# 3x4 matrix
Y = [[5,8,1,2],
     [6,7,3,0],
     [4,5,9,1]]
# result is 3x4
result = [[0,0,0,0],
          [0,0,0,0],
          [0,0,0,0]]

# iterate through rows of X
for i in range(len(X)):
    # iterate through columns of Y
    for j in range(len(Y[0])):
        # iterate through rows of Y
        for k in range(len(Y)):
            result[i][j] += X[i][k] * Y[k][j]

for r in result:
    print(r)
```