CIS 122 Winter 2016   Project 1
Due Monday Jan. 11, Midnight

Use **Python 3** for all projects this term.

Submit your Python 3 .py programs to Canvas.

20 points total
General Hint
Look in Canvas for Files > Examples for similar programs

P1_hello.py   7 points

2 points
1) Print "Hello World" then print a blank line

3 points
2) Experiment with variables and "literals"
   Assign your first name to a **name** variable

   print("name")
   print (name)

   What does each print ?
   # Make a comment with your conclusions

3 points
3) Print a blank line
   Assign a phrase to the variable **ambition**
   then print the ambition variable

Your output should look similar to this

```
Hello World!

name
Jan

I want to study in Paris (any line of text here OK)
```

P1_numbers.py   4 points

2 points -- Raise a big integer to a power
1) Assign **123456789** to the variable **x**
   Assign **444** to the variable **y**
2) Compute the variable **z** as **x** to the **y** power; print **z**
   Hint:
   answer = 4 ** 3 # Computes answer as 4 to the 3 power

3) Add a comment to your program
   Did you get **z** computed, or did you get an error message?

2 points -- Raise a big floating point number to a power
1) Assign **123456789.0** to the variable **a_float**
   Assign **44** to the variable **b**
2) Compute the variable **c** as **a_float** to the **b** power
3) Add a comment to your program
   Did you get **c** computed, or did you get an error message?

Your output will look like this:
```
A big integer (whole number):
42919026551938447447460459359360653929028343180580623671216724356538204052030496059517709030
18276835870153061194812609532007468168617185919811249646068263667506365338628254738990828607
34705228804711370384995753618626351729917410508179525054913767501249121957885022691182460463
81195394304083236165477872450296210350243174621309148964206677954070361356271389788355874504
15652894179650520950430648454317088069258715969337230975609827124379441343371142556147861892
46195769568349769520579936878583872592136512754015126338152645570813121568049405114672710732
...
36798099940474348762217702562084534787161765139835120403128407138322686294629267985462033625
73436802605557427344995794020390615627421533272722111809766248604799293161088944743756970525
10150112521254356603628303993586595791381312609809759797841
A big floating point number
Traceback (most recent call last):
  File "/Users/kuahiwi/Dropbox/CIS122/cis122-W2016/Examples/P1_numbers_demo.py", line 14, in
<module>
    too_big = a ** b
OverflowError: (34, 'Result too large')
```

The next part of your project lets you see some results without needing to know a lot of Python.

Never *save a file called "***turtle.py***" – if you do so, turtle graphics will* **not work** *on your computer until you change the name to something else.*

First
Be sure to include this statement before the rest of your program:
import turtle as t

Other useful "turtle" commands
```
t.pencolor("green") # Use any common color name
t.pensize(2) # Make lines wider

t.forward(50) # Move forward 50 units
t.left(60)    # Turn left 60 degrees,
              # Turtle does not move, just turns

t.penup()     # Lifts pen up for no visible
              # marks when moving
t.pendown()   # Sets pen down; move forward
              # will make a mark
```

P1_draw.py 9 points

4 points
Set the pen's color to "**red**".
Draw a **square**, each side **100** pixels long.

1 point
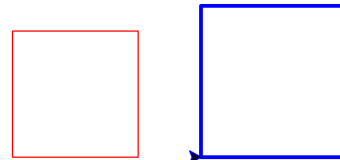Move forward **150** pixels **without making a mark**.

4 points
Set the pen's color to "**blue**".
Set the pen's size to **3**.
Draw a **square**, each side **120** pixels long.

Your drawing will look like this when run:

Before you submit your .py files, test each one.

Submit your **.py** files in Canvas > Assignments > P1