CS 8 Lab: pa01

October 15, 2014

1 Overview

This week, finish your first programming assignment, pa01. It is okay if you do not finish in lab, but make sure you have it turned in by Thursday at 11pm to get credit for it.

2 Suggested Steps

Last week, we typed the following into a file:

```
# your name here, lab time here
# your email here
# your perm number here

# this is the actual sum function, which you will write.
#right now it just prints 0.
def Sum():
    print(0)

# this calls the sum function
#it tells the computer "hey! run that function I wrote."
#This is here so you can actually see what your function does.
Sum()
```

It should have printed 0 when you ran it. Open up this file. Make sure the file is saved as pa01.py. If it isn't resave it with this name.

Remove the last line of this file which says Sum(). When you turn in the program, we only want the Sum function in the pa01.py file. We do not want anything other than comments, def Sum() and whatever is in the def Sum() part. Now your file should look like this:

```
# your name here, lab time here
# your email here
# your perm number here

# this is the actual sum function, which you will write.
#right now it just prints 0.
def Sum():
    print(0)
```

2.1 If you're using your own computer

If you're using IDLE on your own computer, go to Run→ Run Module. Nothing should print now, because you removed the call `Sum()` from your program. Now, go to the IDLE script window (the window with the prompt `>>>`) and type the following:

```
import pa01
Sum()
```

(Note that these are on two different lines. Press enter after each of them). After doing this, you should see the following:

```
>>> import pa01
>>> Sum()
0
>>>
```

You can see that you can make your function run by typing `Sum()` right into the prompt! This will be very useful for checking your code.

Move on to section 2.3.

2.2 If you're using the lab/CSIL computers

If you're using the lab or CSIL computers, open Terminal and navigate to the folder containing your `pa01.py` file (remember the ls, cd, pwd commands from last week?). Once you're there, type the following into the Terminal:

```
python3
```

This will open up an interactive python shell, much like IDLE. You should see a prompt (`>>>`). Now type the following:

```
exec(open("pa01.py").read())
Sum()
```

(Note that these are on two different lines. Press enter after each of them). The first line essentially imports your file into this command-line interface so you can use it in the terminal. After doing this, you should see the following:

```
>>> exec(open("pa01.py").read())
>>> Sum()
0
>>>
```

You can see that you can make your function run by typing `Sum()` right into the terminal! This will be very useful for checking your code. Note that you can type `quit()` to exit the interactive python shell at any time.

Move on to section 2.3

2.3 Write your code!

Now, work on writing the Sum function. Here are some hints to get you started:

- Note that the function has two parameters, i and j. This will slightly change how the line `def Sum()` looks.

- You'll probably have to use `for` and `range`. Refer to last Thursday's lecture.

- You might also want to use an `if/else` statement. The assignment can be done without one, though.

- Make sure it outputs 0 when it's supposed to.

When you want to check your program, go over to the IDLE shell window (if you're on your own computer) or the Terminal (if you're on a lab/CSIL computer), and type commands such as:

`Sum(5,4)`

which should print 0. Or type:

`Sum(1,5)`

which should print 15.

Make sure you check all of the examples listed on the assignment page (`http://cs.ucsb.edu/~koc/cs8/hwexpa/pa01.html`), and make up some number pairs of your own.

3 Requirements

The following is required to get full credit on your programming assignment:

- an email to me (emilie@cs.ucsb.edu) with your College of Engineering account name **before the assignment is due** if you're enrolled in my lab on GOLD

- correct Sum function (and just the function) with no errors in a file called pa01.py

- top lines of your file should have your full name, lab time, UCSB email address and perm number in comments

- submission of the pa01.py file via the TURNIN program by 11pm on Thursday

4 Submitting your Project

Ready to submit? Make sure you give yourself some time to submit your project to make sure you meet the 11pm deadline on Thursday. We will grade the last submission submitted before the deadline, in case you submit multiple times.

4.1 Submitting from your own computer

If you're submitting from your own computer, you first need to move your pa01.py file over to CSIL. Step-by-step instructions on how to do this can be found in the handout from last week (read section 3 onward): `http://cs.ucsb.edu/~koc/cs8/docx/gettingStartedYourComputer.pdf`
Once you've moved your file over to CSIL and have a terminal window up that's connected to CSIL, follow the steps in the next section.

4.2 Submitting from a lab/CSIL computer or a CSIL connection

In the terminal window, navigate to the folder containing your lab01.py file (using ls, cd, pwd commands). Then, type `turnin pa01@cs8 pa01.py` and then follow the instructions to complete your submission.

Congratulations! You have just submitted your first programming assignment! It will be graded within one week.