Homework 3

Jamie Andrews

Problem 1:

```
#----------Homework 3 Question 1 by Jamie Andrews----------

#1. Define the input tuple and call in 3 different arguments.

#2. Call in 5 different variables and assign it to the a.split(separator).

#3. Write and if/else statement to determine whether the fulltime is true or not.

#4. Call a variable called mytup[i] and assign to the 5 other variables.

#5. Create a for loop in which takes the tuples that are in range of the 5 variables.

#6. Set mytup equal to the tuple of mytup and return it.

#7. Create a def function that is supposed to take the input of the tuples entered into the program.

#8. Repeat steps 2-4, however the variable should be called 'raw' when assigning it to the other 5
variables.

#9. Set mylist to be assigned to the range of raw.

#10. Create a def function that reads the tuples into the program.

#11. Create a for loop in which handles the inputs into the program.

#12. Write a try/except statement in which the program will read the file and see if it equals

# to the tuple def function (the first one), if it does not then it will print 'adsf' and it will break.

#13. Outside of the 3 def functions, call file object and have it assigned to open a txt file.

#14. Assign type to the 5 variables.

#15. Assign separator to be a ','.

#16. Assign myfile to third def function and print myfile.


#1.
def input_tuple(a, type, separator):
    #2.
    firstname, lastname, age, id, fulltime  = a.split(separator)


    #3.
```

```
    if fulltime=='true' or fulltime=='1':
        fulltime = '1'
    else:
        fulltime = '0'

    #4.
    mytup = [firstname, lastname, age, id, bool(eval(fulltime))]

    #5.
    for i in range(len(mytup)):
            mytup[i] = type[i](mytup[i])

    #6.
    mytup = tuple(mytup)
    return mytup


#7.
def input_tuple_lc(a, type, separator):
    #8.
    firstname, lastname, age, ID, fulltime  = a.split(separator)


    if fulltime=='true' or fulltime=='1':
        fulltime = '1'
    else:
        fulltime = '0'
    raw = [firstname, lastname, age, ID, bool(eval(fulltime))]
```

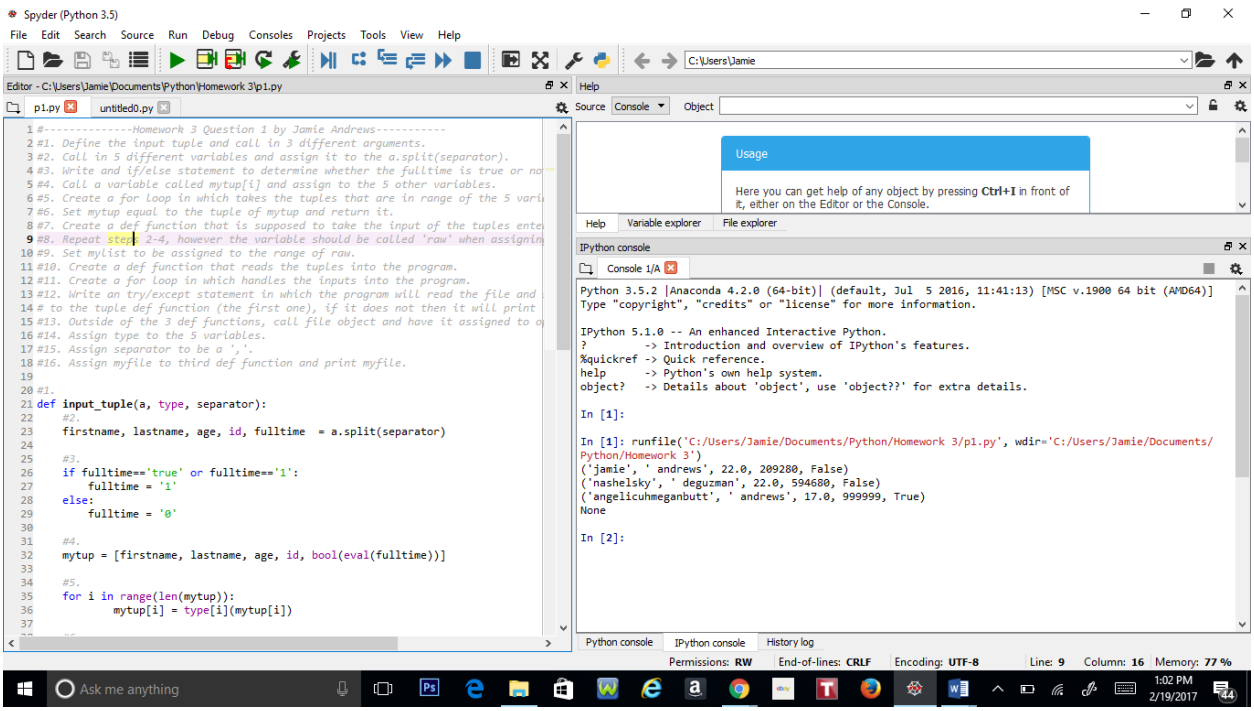
```
    #9.
    mylist = [type[i](raw[i]) for i in range(len(raw))]
    return mylist

#10.
def read_tuple(file_obj,type, separator):
        #11.
        for line in file_obj:
            #12.
            try:
                myfile = input_tuple(line,type,separator)
                print(myfile)
            except 'empty' in line:
                print("adsf")
                break



#13.
file_obj = open('textfile.txt','r')
#14.
type = [str, str, float, int, bool]
#15.
separator = ','

#16.
myfile = read_tuple(file_obj,type,separator)
print(myfile)
```



Problem 2:

#----------Homework 3 Question 2 by Jamie Andrews----------

#1. Import the math library.

#2. Create a def function called compute_pythagoreans which is suposed to calculate

the values in the Pythagorean Theorem.

#3. Assign list to be a set of i and j values that are in range of n values and the i and j values squared

should be less than or equal to n values squared and return the list.

#4. Outside of the def function, assign n to be the integer of inputs to input values into the program.

#5. Print the def function.

#1.

```
import math
```

#2.

```
def compute_pythagoreans(n):
```

#3.

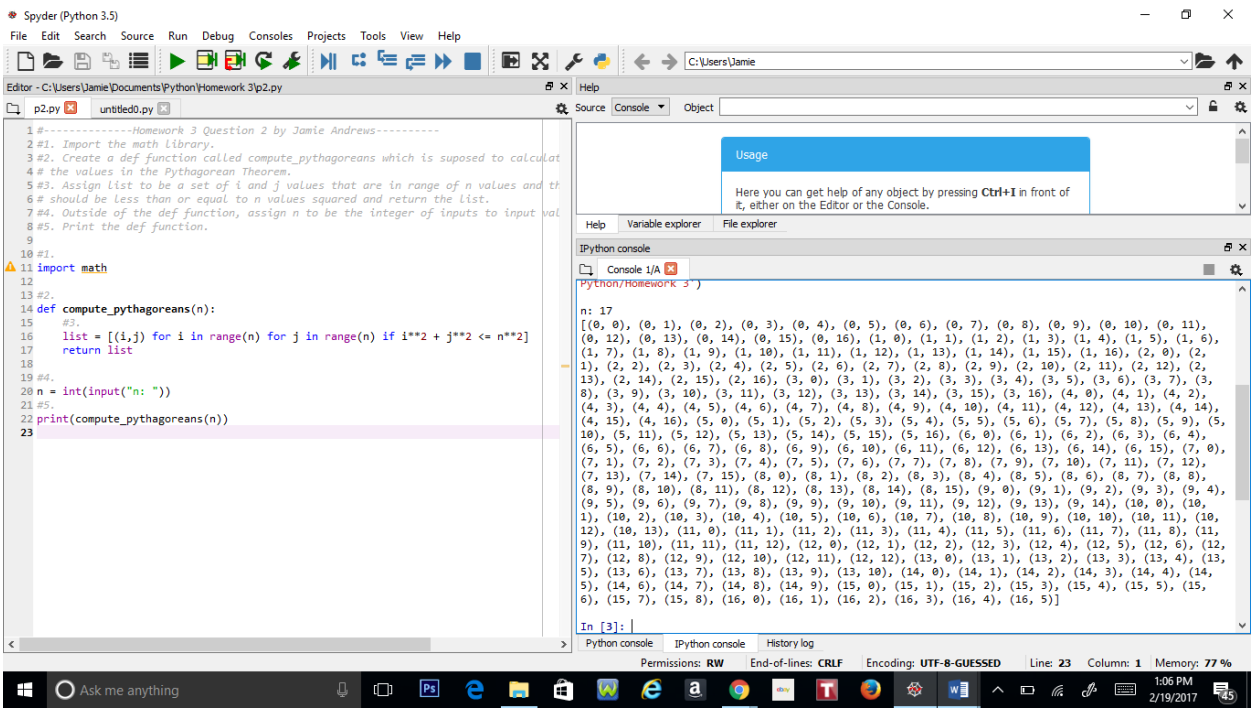
```
    list = [(i,j) for i in range(n) for j in range(n) if i**2 + j**2 <= n**2]
    return list


#4.

n = int(input("n: "))

#5.

print(compute_pythagoreans(n))
```



Problem 3:

#----------Homework 3 Question 3 by Jamie Andrews ----------

#1. Create def function that collects the data from the string

#2. Write a for loop that splits the string.

#3. Create another for loop that prints the string in range of the def functions length.

#4. Declare a variable that opens the csv file in the program.

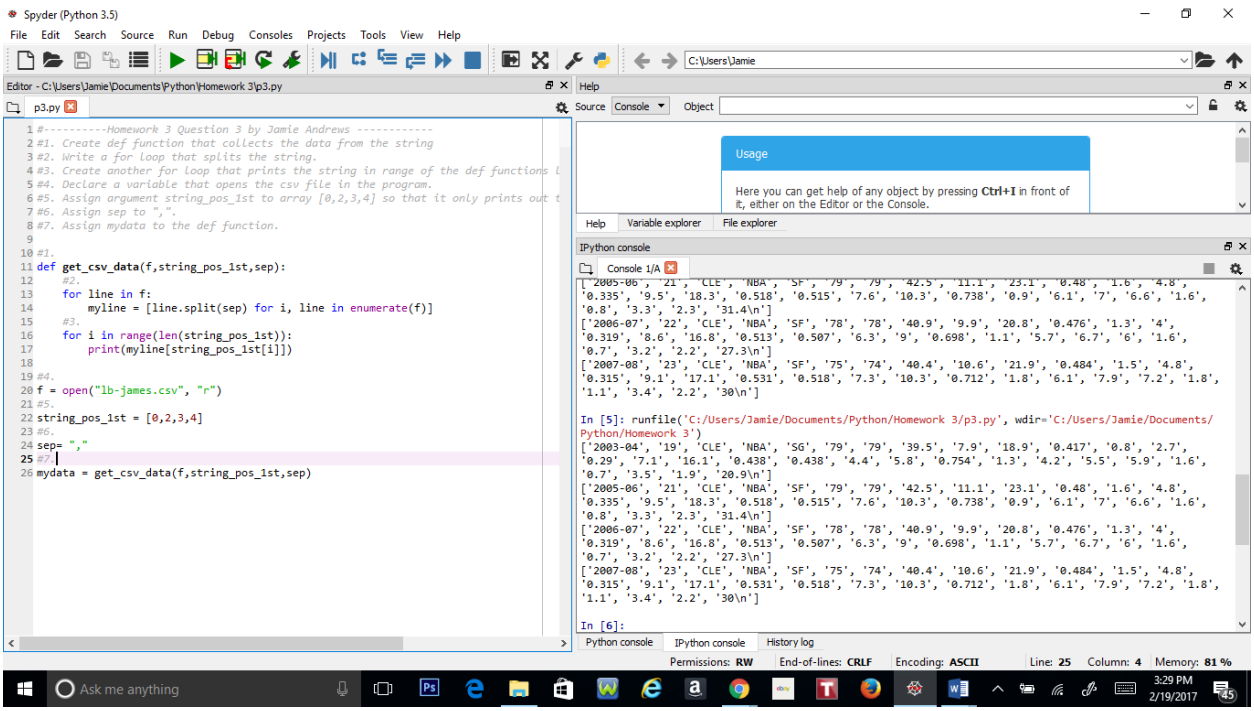
#5. Assign argument string_pos_1st to array [0,2,3,4] so that it only prints out the 1, 3, 4, and 5 set of strings

#6. Assign sep to ",".

#7. Assign mydata to the def function.

```
#1.
def get_csv_data(f,string_pos_1st,sep):
    #2.
    for line in f:
        myline = [line.split(sep) for i, line in enumerate(f)]
    #3.
    for i in range(len(string_pos_1st)):
        print(myline[string_pos_1st[i]])

#4.
f = open("lb-james.csv", "r")
#5.
string_pos_1st = [0,2,3,4]
#6.
sep= ","
#7.
mydata = get_csv_data(f,string_pos_1st,sep)
```


Spyder (Python 3.5)
File Edit Search Source Run Debug Consoles Projects Tools View Help
Editor - C:\Users\Jamie\Documents\Python\Homework 3\p3.py
p3.py
#----------Homework 3 Question 3 by Jamie Andrews ----------
#1. Create def function that collects the data from the string
#2. Write a for loop that splits the string.
#3. Create another for loop that prints the string in range of the def functions
#4. Declare a variable that opens the csv file in the program.
#5. Assign argument string_pos_1st to array [0,2,3,4] so that it only prints out
#6. Assign sep to ",".
#7. Assign mydata to the def function.
#1.
def get_csv_data(f,string_pos_1st,sep):
#2.
for line in f:
myline = [line.split(sep) for i, line in enumerate(f)]
#3.
for i in range(len(string_pos_1st)):
print(myline[string_pos_1st[i]])
#4.
f = open("lb-james.csv", "r")
#5.
string_pos_1st = [0,2,3,4]
#6.
sep= ","
#7.
mydata = get_csv_data(f,string_pos_1st,sep)
Help
Source Console Object
Usage
Here you can get help of any object by pressing Ctrl+I in front of it, either on the Editor or the Console.
Help Variable explorer File explorer
IPython console
Console 1/A
['2005-06', '21', 'CLE', 'NBA', 'SF', '79', '79', '42.5', '11.1', '23.1', '0.48', '1.6', '4.8',
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'0.8', '3.3', '2.3', '31.4\n']
['2006-07', '22', 'CLE', 'NBA', 'SF', '78', '78', '40.9', '9.9', '20.8', '0.476', '1.3', '4',
'0.319', '8.6', '16.8', '0.513', '0.507', '6.3', '9', '0.698', '1.1', '5.7', '6.7', '6', '1.6',
'0.7', '3.2', '2.2', '27.3\n']
['2007-08', '23', 'CLE', 'NBA', 'SF', '75', '74', '40.4', '10.6', '21.9', '0.484', '1.5', '4.8',
'0.315', '9.1', '17.1', '0.531', '0.518', '7.3', '10.3', '0.712', '1.8', '6.1', '7.9', '7.2', '1.8',
'1.1', '3.4', '2.2', '30\n']
In [5]: runfile('C:/Users/Jamie/Documents/Python/Homework 3/p3.py', wdir='C:/Users/Jamie/Documents/
Python/Homework 3')
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'0.8', '3.3', '2.3', '31.4\n']
['2006-07', '22', 'CLE', 'NBA', 'SF', '78', '78', '40.9', '9.9', '20.8', '0.476', '1.3', '4',
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['2007-08', '23', 'CLE', 'NBA', 'SF', '75', '74', '40.4', '10.6', '21.9', '0.484', '1.5', '4.8',
'0.315', '9.1', '17.1', '0.531', '0.518', '7.3', '10.3', '0.712', '1.8', '6.1', '7.9', '7.2', '1.8',
'1.1', '3.4', '2.2', '30\n']
In [6]:
Python console IPython console History log
Permissions: RW End-of-lines: CRLF Encoding: ASCII Line: 25 Column: 4 Memory: 81 %
Ask me anything
3:29 PM
2/19/2017