

CSC015 Assignment 1 (100pts)

Submit on BlackBoard, in Assignments, September 21 by end of day

What to Submit:

Problems 1, 2, 3, 4: Submit 4 .py files (as separate files, one for each problem; do not zip).

This is not an essay, do not use Word. Use IDLE to type, save, run and test the programs.

The files should be named as follows: hw1_ProblemNumber_YourName.py

For example hw1_1_KamberovaG.py, hw1_2_KamberovaG.py, etc.

If you do not follow the naming conventions, I will not grade the assignment.

The purpose of this assignment is for you to : (1) practice the use of IDLE integrated development environment and practice writing simple Python programs.

This assignment assumes that you have completed the Lab0, so you know how to start and work with IDLE. Go to Labs content area on BlackBoard and follow instructions on how to type and run a Python program if you need a refresher.

1. Write a Python program which will print the following information regarding you personally (I want accurate information): your name, major, class standing, experience with programming (what if any or none), highest level of math you have completed (for example algebra, calculus...)

Below is a sample output

```
Name: Jane Dow
Major: Undecided
Class standing: freshmen
Programming experience: basic JavaScript
Completed math: precalculus
```

Below is the structure of your program, you fill the missing parts, save, run and test

```
# include your header comment here
# File:
# Purpose:
# Name and date
#

def main():
    # Notice the block following main
    # up to and including return must be perfectly indented

    # write the commands to print your information as required

    # include a return statement as last in main()
    |
# make a call to execute main
```

Call me to check your program during lab today.

2. Now extend your program to ask the user to enter their name, major, class standing, programming experience and math level completed, and then the program prints the information entered.

Sample output is given below. I want you to display the questions and the output data exactly as given. Test your program with different input data.

```
Name? John Doe
Major? mathematics
Class standing? junior
What programming experience do you have? none
what level of math have you completed? Calculus III
**** You entered:
Name: John Doe
Major: mathematics
Class standing: junior
Programming experience: none
Completed math: Calculus III
```

Below is an outline of your program

```
# include your header comment here
#
#
#
#

def main():
    # prompt user and enter data, use input()

    # print the data entered

    return

main()
```

3. Using as a model the program we discussed for adding two integer numbers entered by the user, write a program to find the area of a rectangle given its length and width. You should prompt the user to enter the length and width of the rectangle (real numbers) and compute and print the area. I am not giving you the skeleton of this program, but expect that you will follow the style rules we discussed.
4. Write a program to read the total rain fall in integer inches for a 30 day period (the total is entered by the user) and compute the average rainfall per day (the average is the total divided by the number of days.) The program prints the average rainfall per day in inches as a float number with 2 digits after the decimal point. Use a named constant for the number of days in the period (i.e. `NUMBER_DAYS = 30`). Follow style rules! To format you may use `.format` or the f-string, whatever you prefer.

