
Programming Assignment 1 (30 points)

Due date: July 5, 2016 at 11:59 PM

Assignment Overview

The goal of this assignment is to gain experience with mathematical manipulation of numeric values. The basic design consists of prompting the user for information, receiving information, processing that information, and then displaying the result. This assignment focuses on the use of:

- integers and floats
- input / output
- mathematical operations
- the float(), int(), print(), and input()functions

Part 1: A Large Letter [10 points]

A large letter H can be produced like this:

```
*   *
*   *
*****
*   *
*   *
```

It can be declared as a string literal like this: LETTER_H = "* *\n* *\n*****\n* *\n* *\n" (The \n escape sequence denotes a “newline” character that causes subsequent characters to be printed on a new line.)
Do the same for the letters E, L, and O. Then write the message H E L L O in large letters.
Name the source code file “*LargeLetter.py*”.

Here is a sample run:

```
*   *
*   *
*****
*   *
*   *

*****
*
***
*
*****

*
*
*
*
*****

*
*
*
*
*****

 ***
*   *
*   *
*   *
 ***
```

Part 2: Book Order [20 points]

Write a program to compute and display the total price of a book order. The following pseudocode describes how a bookstore computes the total price of an order from the price and the number of the books that were ordered.

1. Read the book price and the number of books.
2. Convert the input strings to numbers (use float and int)
3. Compute the tax (7.5 percent of the book price).
4. Compute the shipping charge ($2 per book).
5. The price of the order is the sum of the total book price, the tax, and the shipping charge.
6. Include suitable prompts for all inputs, and label all outputs appropriately. After you have coded a program, be sure to test it with a reasonable set of legitimate inputs.
7. Print the price of the order.

Algorithms are often written in a somewhat stylized version of English called **pseudocode**.

Here is a sample run:

```
>>>
Enter the book price: 45.5
Enter the number of books: 2
The total cost of the order is $101.83.
>>>
```

Name the source code file "*BookOrder.py*".

Submission instructions:

1. Include the standard program header at the top of your Python files.
2. You need to label your assignment with your first name initial, last name, and the name of the assignment. Example: hibrahim_assignment1.zip
3. Zip the files to upload to Canvas (hibrahim_assignment1.zip).
4. Submit the zipped file containing the following files:
    a. LargeLetter.py
    b. BookOrder.py

Standard program header

Each programming assignment should have the following header, with italicized text appropriately replaced.

Note: You can copy and paste the comment lines shown here to the top of your assignment each time. You will need to make the appropriate changes for each assignment (assignment number, due date, and description).

```
'''
 * Program #: Insert assignment name
 * Programmer: Insert your name
 * Due: Insert due date
 * CS21A, summer 2016
 * Description: (Give a brief description for Assignment 1)
'''
```