Homework 3 – Programming Assignment

CS5700

Add 100

Points Possible: 20

Problem Statement:

Using the server.py and client.py code on Canvas as a guide, modify them to accommodate the following use case:

The client will send an integer to the server, the server will then respond back to the client with the sum of that integer and 100 as a byte data type. The format of the message that should be displayed must match exactly to that of the examples below.

You can use whatever integer you want for your testing, we'll only test with integers as indicated in the "Constraints" section below. We will not reveal our test cases before the deadline and will only reveal failed test cases after the deadline.

The input integer must be able to be inputted to the client via the command prompt or Terminal.

See examples below.

Submission Requirements:

1. Write your name as a comment at the top of your code.
2. You should submit two files: client.py and server.py
    a. Using any other file name will get you points deducted.
3. Your program must be able to be executed via the command prompt in Windows or the Terminal on the Mac. See the examples below.
4. The input integer must be able to be inputted to the client via the command prompt or Terminal.
5. You can work with other students or individually, up to you. However, you must submit your assignment individually on Canvas.
6. You must submit your file(s) on Canvas. Any other submission method (such as email) will be rejected and you will receive zero credit.
7. This assignment must be done using the Python version as mentioned in the syllabus.
8. The format of the output after you execute the client.py should match exactly to the format that you see in the examples below. Anything different or any other result that's outputted via our test cases will result in point deductions.
9. Canvas will automatically add a hyphen and a number to the file name if you upload the same file more than once (e.g. client-2.py or server-3.py). That's fine and don't worry about it, I will not deduct points for that.
10. Do not have your code in any class. You will get points deducted if you do.
11. Do not have any print statements in your client.py code other than the print statement to output the sum (as you can see in the examples). Any other print statements will get you points deducted.

12. You can only use the following libraries:
    - **client.py:** socket, sys
    - **server.py:** socket

Examples:

The following are run from the command prompt. This is how your code will be graded. Your program absolutely needs to be able to be run from the command prompt or Terminal, otherwise you will get zero credit. No exceptions.

Example of sending 7 from the client to the server:

>python client.py 7

Sent 7 and received b'107'

Example of sending -5 from the client to the server:

>python client.py -5

Sent -5 and received b'95'

What to submit:

- Two files must be submitted on Canvas for this assignment:
    - client.py
    - server.py

Constraints:

- -1000 <= integer from client <= 1000

Grading Guidelines:

- Does the program meet the requested requirements/criteria?
- Are the submission instructions followed?
- Does your code compile and execute?
- Does your code pass my test cases?