CSC 4800 Python Applications Programming

HW/Lab #5 – Chapter 2: TCP Server/Client

Due: Wednesday, February 8, 2017, 12:30pm deadline

Chun: Core Python Applications Programming

(Similar to exercise 2-5, 2-11)

Implement the sample TCP client/server TimeStamp programs found in Chun Examples 2-1 and 2-2. Set up the server and then the client. Copies of these programs are available in Canvas for this assignment. An online version of the source is also available here: http://corepython.com

In addition to the initial built-in behavior, update the server to recognize and respond to the following commands if received from the client:

1. EXITSERVER
   If the client sends a message "EXITSERVER", then the server must terminate the client connection, close both the client socket and the server socket, and terminate. Also, after sending an "EXITSERVER" message to the server, the client must close its socket and terminate.

2. date
   Server will return its current date/timestamp (time.ctime()), in a message such as
   date: timestamp-string

3. os
   Get OS information (os.name), return in a message such as
   os: os-information-string

4. ls -- defaults to current directory
   ls server-path
   Return a message with the current directory or the specified directory listing as a list-string, e.g.
   ls "path": (…..)

5. sleep -- defaults to 5 seconds
   sleep secs
   Server sleeps for specified number of seconds, then returns a message such as
   Slept for … **seconds**

6. default behavior, if no special command received from client, return message
   [timestamp-string] echo received client message

Submit your lab solution in Canvas as file attachments by the deadline
(either a ZIP of your Pycharm project directory, or at least your Python server.py and client.py files).