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**Project 1 – Computer Networks (FALL 2015)**

**Building a Simple Web Client and a Multithreaded Web Server**

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1. The program can be run from the command line as follows, two separate cmd terminals has to be open and execute each command in one separate terminal.

**Python server.py**

**Python client.py 127.0.0.1 1234 hello.html**

1. On execution of the server program, it will be waiting to listen to client connections. Kindly follow accordingly. On execution of the client program**,** it displays the values of timeout, RTT, Hostname, socket family, socket type, protocol and peer name of the server. **The input should be as “localhost port filename” or “127.0.0.1 port filename” as shown above.**  The port number for my program is **1234**.
2. Once the connection is successful the server will show the details of client connection and the message body of the filename with thread number.
3. The file name only with “.HTML” extension is supported and is to be entered in the client console.
4. The web server is also capable to accept requests from Web Browsers. **The server accepts requests from web browsers as outlined by requirements:**
   1. “**localhost:Port\_Number/filename**” which displays the html page.
5. The server log messages can be viewed from server console window.
6. The package offers one html file for testing purpose with in the folder namely hello.html. From the client console and browser when the request is given with file name this file can be used.
7. The Program has been documented with appropriate comments to understand the flow of the multi-threaded server and also the client.

**SOFTWARES REQUIRED:**

1. Python 2.8 and above installed in the computer.
2. No Specific IDE is required. The code can be viewed in simple text editors (Notepad++ is recommended.)
3. Command Line Clients (CMD Terminals might be required to run the server and clients).

**REFERENCES FOR CODE:**   
  
1. https://docs.python.org/2/library/socket.html#socket.socket.family

2. https://elearn.uta.edu/bbcswebdav/pid-4282636-dt-content-rid-34616750\_2/courses/2158-COMPUTER-NETWORKS-87994-002/Programming%20Assignment%201\_reference\_Python.pdf3.

3.<http://pymotw.com/2/SocketServer/>

4. https://docs.python.org/2/library/basehttpserver.html

**5.** http://stackoverflow.com/questions/20792499/how-to-get-fully-qualified-host-name-in-python