**Simple Web-Server and Client**

Project report submitted for

**Computer Networks CSE 5344-001**

Under

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A Python implementation of Simple HTTP Web Client and a Multithreaded Web Server.

###Development Tools:

1. **Programming Language:** Python (python 3.6)
2. **IDE:** IDlE (Python 3.6)
3. **External Packages:** No external packages are required.
4. **OS:** Windows 10
5. **Command Line Interface:** Windows command prompt used to run/test the program

###Directory Structure

1. **server:** Contain Webserver.py File. And Place The Hello or any Html File in “C:\” this Directory (Please Put 404.html in C:\)
   * Webserver.py: Initializes the WebServer at either a default 8080 or a user provided port.
   * Webserver.py: Implements a multihreaded server and initializes a socket to listens to the client requests. Once a client is connected, the processing is handed over to a separate handle\_client thread.
2. **client:** Contains source files for the client implementation.
   * Client.py: Implements web client which communicates with the server on a specific ip:port address and request a HTTP request on the server.

###Compile & Run Instructions (Run on Windows cmd prompt):

1. Open CMD and Navigate to the Directory where the Webserver.py is placed
2. Run the Command python Webserver.py <portnumber>
3. Open Another Cmd and Navigate to the Directory Where the Client.py is placed.
4. Run The Command python Client.py <Ip address> <port no> <”GET \Filename.html HTTP\1.1”> (Note: Don’t Forget to Put the HTTP request in the same format and Inside Double quotes)

###References

1. Book: Computer Networking. A Top Down Approach. Sixth Edition by James F. Kurose, Keith W. Ross. Chapter 2.
2. Format of the HTTP GET request and response from [Wikepedia](http://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)
3. Threading http://bt3gl.github.io/black-hat-python-networking-the-socket-module.html
4. Socket Communications <https://docs.python.org/2/tutorial/index.html>

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