Computer Network Assignment-2

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We have implemented a client-server model with a proxy server acting as the intermediate. Client are available from ports 20000-20099, proxy-server at 20100 and outside servers from 20101-20199. This model has been implemented using threads where one thread of the proxy server serves one client via socket connections.
Caching has been done to speed up the response serving process. If the same file in requested from the same port three times and the file remains unchanged, then the response is cached. Hence, if accessed again, the response is served directly from the cache. The size of the cache is limited to 3 responses. Also, the size of the response is limited to one packet. We have added a test file in the servers directory. It does not work as effectively for larger websites as a single webpage has more data than a single packet.
Certain servers are blacklisted and they are listed in blacklist.txt. Clients can access these servers after providing authentication. The required username and password are provided in auth.txt.

Directory structure -

client server proxy-server.py blacklist.txt auth.txt
Client and server directories contain the client and server .py files respectively.

Instructions to run -

1. Cd into client directory and run any .py file(s) using python [filename].
2. Run the proxy server via python proxy-server.py
3. Cd into server directory and run any .py file(s) using python [filename].
4. In client side, specify port number and filename that you want.

5. Provide authentication if you want(required to access any blacklisted site).