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CSE461 Project2 TCP Report

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I implemented the code in Java; therefore, I do the experiments in Java as well.

I add a close statement in run method of the ClientHandler and send a request to www.google.com through Firefox, and then the first request causes IOException to be thrown with the message "Socket closed" by the TCP program.

I found that there are two kinds of shutdown, shutdownInput and shutdownOutput, for Socket class in Java; therefore, I did experiment on both.

I replace the close statement which I just added with shutdownInput statement and send a request to <http://www.washington.edu/students/timeschd/WIN2014/cse.html>, and the first request causes the IOException to be thrown with the message "Socket input is already shutdown" by the program.

I change the shutdownInput statement to shutdownOutput and do the same thing I did for shutdownInput experiment, and the first request also causes IOException to be thrown with the message "Socket output is already shutdown" by the program.

I also tried putting close/shutdownInput/shutdownOutput at other place, and the outcomes of those are all the same except for shutdownOutput.

I place a shutdownOutput statement in a private helper method, fetchRequest, I wrote for sending request and getting response in the inner class ClientHelper. I run the program and send a request to <http://www.whitehouse.gov/>, and then the program throws IOExpctions multiple times with the message "Broken pipe."

I disconnect the Internet connection while loading the www.cnn.com, and then multiple IOExceptions (the printed messages showed both "Connection refused" and "Connection reset") and multiple UnknownHostException are thrown by the TCP program. The printed message of UnknownHostException shows the host of the failed request. The program keeps sending the requests while the network is down. Once the Internet is up, it fetches the requested pages from the server.