Networks Lab Report - Lab 4

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TCP Concurrent Server

We extend the TCP server to handle multiple clients at the same time. The parent server process creates child processes using fork() to handle multiple clients :

1. The listen() is called in the parent process, which listens on a predefined(specified by the user) port. It specifies the length of backlog queue, maximum number of clients that can connect at the same time.
2. The parent then goes into a loop, accepting a new connection and forking a new child process which handles this new connection.
3. The child closes the listening socket, while the parent closes the accepting socket before going in the next iteration.

Directions to use the network application

1. Start the server :
   a. Compile using gcc TCPserver_con.c -lssl -lcrypto
   b. Execute using ./a.out $<$server_port$>$

2. Start the client :
   a. Compile using gcc TCPclient_con.c -lssl -lcrypto
   b. Execute using ./a.out $<$server_ip$>$ $<$server_port$>$