CPE464 Program #3 Lab section(circle): noon   3pm   no lab

Full Name: _____   Grade: _____

Turn in date and time: _____   Due Date: Friday, May 31 at 11:59 pm
                                                     25% Extra Credit date: Sunday, May 26
Extra credit/Late Points: _____   Last late day: Sunday, June 2 (-10% per day)

Style (e.g. error checking, short functions):   _____

Grep for seek, pwrite, pread, lseek, fseek   _____
(Should find none of these)

Multithreading or Multiprocessing (circle):   Yes   No   (-15% if not)
(can the server handle multiple clients simultaneously)

Error Detection (bit flips handled)   _____

[1]**Run with error rate 0 on both client/server**   _____
windows size of 5, verify that the 1-second select() in **server child process** never times out. If the student
did the program correctly NO 1-second timeouts should be seen with an error rate of 0. NOTE – there may
be a timeout in the parent process of the server – it's the child process we are looking at.)

Basic Tests: Rerun any failing tests a total of 3 times to see if you can get it to work. BOTH bit flips and
packet drops enabled, 1 client talking to the server, make sure debug is on.

1. File **small** (no more than 900 bytes), window = 10, Buffer = 1000, Client/Server error rate = .2[2]

    Shortest run time: _____   Server message counts[3]:   _____

2. File **medium** (~50k bytes), window = 10, Buffer = 1000, Client/Server error rate = .2

    Shortest run time: _____   Rcopy and Server message counts: _____

3. File **big** (~420k bytes), window = 50, buffer = 1000, Client/Server error rate = .1

    Shortest run time: _____   Rcopy and Server message counts: _____ _____
                        (note to students message count should be around 550 to pass this test)[4]

4. File **big** (~420k bytes), window = 5, buffer = 1000, Client/Server error rate = .15

    Shortest run time: _____   Rcopy and Server message counts: _____ _____
                        (note to students message count should be around 550 to pass this test)

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[1] Make sure debug is turned on so you can see that NO packets (for this test) are dropped/no bit flips.
[2] Make a note of how many times a test failed. (So failed 1 out of 3 runs.)
[3] For one run include both the unique and total message counts from both rcopy and server. (Eg. 200/1000 - so unique/total)
[4] For longer run times (over 30 seconds) or higher packet counts (over 500) we may check packet flow for resending good data or
unnecessary timeouts. Resending good data or unnecessary timeouts may result in a failed test.

Comments on program runs:

Special cases (if they pass all 4 of the basic tests, then do these tests):

5. File medium, window = 1, Client/Server Flag = 2^5 (testing stop and wait, with an error rate)

_____

_____

6. File medium - Drop packets 20-30 on server (window = 10), Client Flag = 2, Server Flag = 6

_____

_____

7. File medium - Drop packets 15,18,30,31, 35,37 on rcopy (window = 10) Client Flag = 7, Server Flag = 2

_____

_____

Window buffering:

The size of the window buffer is created based on the window size: Yes   No

Which did they use to create the window (circle):   malloc()   calloc()   new   Other

Comments:_____

_____

_____

Other things to think about:
- Run **top** while grading - look for extra high CPU or memory usage
- grep for sleep - there should not be any sleeps (grep sleep *.c *.cc *.cpp)
- grep for seek (looking for lseek, fseek or any other seek) (grep seek *.c *.cc *.cpp)
- Output file created with correct name and at least owner read permission

_____

[5] This flag is for our testing and is something that gets set in our testing program, it has nothing to do with the PDU flag. So don't worry about it!