CS 5220 Project

Fall 2012

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Compilation and Execution

Test script

The program may be built and tested by running

        sh run.sh

in the top-level "CS5220" directory. This script produces summary logs in the CS5220/tcpTest and CS5220/udpTest directory.

Manual compilation

Enter the either the "CS5220/TCPFileServer/Release" or the "CS5220/UDPFileServer/Release" directory and run:

    make

Manual execution

The program is built at CS5220/TCPFileServer/Release/TCPFileServer or CS5220/UDPFileServer/Release/UDPFileServer.

The usage information for the TCP file server is as follows:

```
Usage:- Client (./TCPFileServer):
        -c                      #Act as client
        -p portNumber           #Use this port

        <Remote Server Name> <File Name>
Usage:- Server (./TCPFileServer):
        -s                      #Act as server
        -p portNumber           #Use this port

Client Example:
>./TCPFileServer -c -p 1234 127.0.0.1 MyFile.txt
Server Example:
>./TCPFileServer -s -p 1234
```

The usage information for the UDP file server is as follows:

```
Usage:- Client (UDPFileServer/Release/UDPFileServer):
  -c                   # Act as client
  -p portNumber        # Use this port
  -t <ARQ-Type>        #1 - Stop and Wait, 3 - Selective Repeat
  -d <dropPercentage>  #Integer percentage of packets to drop
  -o <trace out file>  #The file to print the trace with #Seq, #Ack,...

  <Remote Server Name> <File Name>

Usage:- Server (UDPFileServer/Release/UDPFileServer):
  -s                   # Act as server
  -p portNumber        # Use this port
  -t <ARQ-Type>        # 1 - Stop and Wait, 3 - Selective Repeat
  -d <dropPercentage>  #Integer percentage of packets to drop
  -o <trace out file>  #The file to print the trace with #Seq, #Ack,...

  Client Example:
  >UDPFileServer/Release/UDPFileServer -c -p 1234 -t1 -o out.txt 192.168.0.10 MyFile.txt
  Server Example:
  >UDPFileServer/Release/UDPFileServer -s -p 1234 -t1 -o out.txt
```

Test Results

The included test script runs stop and wait, and selective repeat tests with 15% packet loss. The results are reproduced below.

Stop-and-wait

```
Client - UDP Socket Created.

Client - Server Name: 127.0.0.1 Server Port: 2860

Client - Filename sent to server: file.pdf

Client - Received file size of 131094
```

Client – Received data.

Creating output file: file.pdf

File Received. Done.

file.pdf MD5 verified

Selective repeat

Client – UDP Socket Created.

Client – Server Name: 127.0.0.1 Server Port: 2860

Client – Filename sent to server: file.pdf

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Client – Received data.

Creating output file: file.pdf

File Received. Done.

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Team Evaluation – Default (50%-50%)