FCN – Project 3 (Kunal Nayyar kvn9339)

Custom Transfer Protocol

- General Packet Format

Sequence Number (2B)	Acknowledgement Number (2B)
Last packet Flag (1B)	Source Port
Destination Port	Length
Checksum	

The protocol works in the following way –

- While sending the packets, from sender to the receiver, the sender uses the Sequence and Acknowledgment field to send the Sequence number only. This is done in the program by shifting the bits right in java.
- Similarly, while the acknowledging packets, the receiver uses the same principle.
- The last packet flag tells if the coming packet is the end of transmission.
- The protocol sends each packet of size 5120 including header. 5117 (excluding the header)
- It will keep sending those packets until and Ack for the packet is received.
- A control message containing an arbitrary value of 64 is used to confirm the receiver is indeed listening and only then the packets are sent to it.

Reasons behind the choices: -

- UDP seemed to be the obvious choice to build on top of.

- We do not need to have to go through sort of connection setup, since we can just send a control message to see if the receiver is alive and/or exists.
- Do not need a checksum, we can simply send the packets until the receiver receives a valid one.

Instructions to run Program –

1. Run sender first.
   a. It takes parameters – Port number, ip address of receiver, name of the input file.
2. Receiver
   a. Takes parameters – Port number, name of the output file of your choice