CP372: Assignment 2

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The Datagram api provides us with the tools required to create a UDP connection. In doing so we were able to implement the algorithms used for lossless packet transfer. We attempted to implement both Stop and Wait 3.0 and Go Back N. Unfortunately we were only able to complete portions of Go Back N as we did have other assessments throughout the week.

Our Datagram for Stop and Wait 3.0 is 128 bytes, the first 4 bytes are allocated to the sequence number (either 0 or 1) and the remaining 124 bytes to data.

Our datagram for Go-Back-N is 125 bytes in size, the first byte is the sequence number from 0-127.

An RN of 0 indicates that 0 packets are lost when attempting to send them to the server. An RN of 1 indicates that all packets are lost, and that we must resend all packets. For RN=2 every other packet is lost, and thus we must stop and resend, in order to get an ACK from the server. Our results for Stop and Wait are below:

|  |  |  |  |
| --- | --- | --- | --- |
| File Size\RN | 0 | 1 | 2 |
| 0.6kb | 57 milliseconds | 80 milliseconds | 173 milliseconds |
| 1.67 mb | 1097 milliseconds | 3392 milliseconds | 2601 milliseconds |

As for Go Back N, we were unable to get our code to interact with the server, given more time we would have been able to complete and come up with accurate timings for packet transfer.