MyChat Design Document

MyChat Behavior and Scenarios

* Forming the connection
  + Sender will send a chat request to receiver with random ISN (initial sequence number)
    - Receiver will reply with ACK or FIN
  + If sender receives FIN, display message saying receiver does not want to chat
  + If request times out (no response), display message informing user of the time out
  + If sender receives ACK, connection is formed and both sides have the same ISN
* Once connection is formed (connection can be terminated at any time with a FIN)
  + Both sender and receiver have the same abilities
  + Sender will send messages and store the messages in the sliding window //Are we using sliding window?
    - Receiver will respond with an ACK and an updated ISN
  + Sender will use updated ISN and decide to update the sliding window or resend the messages
* Terminating the connection
  + Connection is broken when either side sends a FIN

MyChat Message Format

256 character limit per message. Each character uses 8 bits according to ACSCII, so 2048 bits will be used for the payload at most.

| 8 bit message size | x bit checksum? | 2 bit message type | variable length payload |

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| Message type | Meaning |
| 00 | Normal Message |
| 01 | ACK |
| 10 | FIN |
| 11 | - |