Protocol for Lab 5- CSE 5462 - Spring 2021
Version 3

Server can handle multiple games….server MUST BE single threaded.

Server will ignore new game requests if already full

Server will ignore moves if the game doesn't exist

Clients are allowed to exit if they receive bad data

Entire datagram to be sent across:

1. **All datagrams will be max size 40-bytes**
2. One byte for version # (In this lab it is 3 0x 03)
3. One digit byte for type of command
    a. Hex 00 = new game
    b. Hex 01 = move
4. One ASCII character for square(assuming command is move)
    a. So move 1 sends byte 0x31
    b. Move 2 is byte 0x32
    c. etc
5. One digit byte for gameNumber - assigned by server when game created

EX: 0x 03 01 31 01 = Version 3, command is move, moving on square 1 (moves are ASCII characters), game #1
EX: 0x 03 00 = Version 3, command is new game

The numbers for each square of the tic-tac-toe grid:

1	2	3
4	5	6
7	8	9

DGRAM sockets

Player 1 is the "server": they are the one who calls bind()

- The server / player 1 goes first
    - Responds to client game request with the first move.

Player 2 is the "client"

<u>On any errors, close the socket</u>

Timeout Time: up to the implementer (unenforceable by protocol)

If server has a game running and gets another new game request, it handles it!

Scenarios…

- If the client asks server for a game, but the server can't run any more games…
    - Server just doesn't reply (so client will timeout on their end)

- If the client sends a move to the server for a game that no longer exists…
    - Server just doesn't reply

- If the client gets data that it was not expecting …
    - It can ignore it and loop back to a recvfrom(); or it may exit