Latest protocol agreed on:

Matthew v2

1	2	3
4	5	6
7	8	9

| 1 byte | 1 byte | 1 byte |

Field descriptions

- First byte: Version 2
- Second byte Position
- Last byte: 2 == Error, 1 == Game complete, 0 == Game in progress

Notes

- Client plays first (Client is ‘X’, Server is ‘O’)
- No timeouts
- Nothing is an ASCII value, example for all values: (1 -> 0b00000001)

<u>These are not protocol these are error checking on your programs/additional info:</u>

- Handle case when client/server disappears, see videos

- All values above must be validated, and if anything is incorrect, print an informative error, send a move with the error flag set, and close the connection

- After we receive a “Game complete”, verify that the game is in fact complete. If so, determine if we won or lost. If not, print an error

- What If player1 put “X” in position 1 and player2 also want put “O” in position 1?
    - Close connection on anything invalid
- Stdint.h has the typedefs https://pubs.opengroup.org/onlinepubs/009696799/basedefs/stdint.h.html
    - <inttypes.h> has definitions for printf on top of everything stdint.h includes
    - https://stackoverflow.com/questions/7597025/difference-between-stdint-h-and-inttypes-h

- Is the position an ascii representation of ‘1’ or the value 1 I.e. are we sending 1 or 49?
- Send a 1 not a ‘1’
    - For the end game byte, couldn’t it be 1 for player 1 wins and 2 for player 2 wins?

- Why do we send the version number after every turn? Shouldn’t it be once the game start?

This is just an observation: The client and server applications can independently choose wich mark ('X' or 'O') they would like to play. As long as the application keeps track of which player played which move, there is no reason for both sides to agree on a convention as long as different marks are set for both players on their respective machines.