Client job:

connect to server over IP

retrieve user input

display new board after every move

Server job:

make new thread per new connected user

track player moves

potentially handle multiple simultaneous games

potentially track total score across all games

game output:

X | X | X

\_\_\_\_\_\_\_\_\_

X | X | X

\_\_\_\_\_\_\_\_\_

X | X | X

X's are just placeholders for real move, the

actual game would start blank

ask user for column and row to place X or O

This output would be sent after every move with updated

information

example:

| | |

\_\_\_\_\_\_\_\_\_\_\_

| | |

\_\_\_\_\_\_\_\_\_\_\_

| | |

enter move: 1, 2, X

| | |

\_\_\_\_\_\_\_\_\_\_\_

X | | |

\_\_\_\_\_\_\_\_\_\_\_

| | |

enter move:

what's needed:

IP + port required to connect

server and client bouncing information back and forth

error handling

board can be stored as array

determine winner or tie

tie might be hard to determine programmatically, could

be hardcoded. Maybe a restart game button as failsafe

sort of plan:

make a client and server that connect and send messages to each other

have server save client user input

make server spit out received information back to client

have server send client tic tac toe board

make client input save and server and be sent back

as updated tic tac toe board

determine a win condition

do error handling/make failsafe

save scores

maybe add something else

bug fixes

Jack Notes:

Tic-Tac-Toe Example of Output

Numbers represent the position

1 | 2 | 3 |

\_\_\_\_\_\_\_\_\_\_\_

4 | 5 | 6 |

\_\_\_\_\_\_\_\_\_\_\_

7 | 8 | 9 |

enter move: 4

| | |

\_\_\_\_\_\_\_\_\_\_\_

O | | |

\_\_\_\_\_\_\_\_\_\_\_

| | |

(Board Sent to Server)

// default array

// int array[9]{ 2, 2, 2, 2, 2, 2, 2, 2, 2, 2 };

// 0 = Player (O), 1 = Computer (X), 2 = Empty

mt19937 mt(time(nullptr));

while(1)

{

int val = (mt() % 9 + 1);

if (array[val] != 2)

{

Array[val] = 1;

}

}

Send the array back through buffer to client

| X | |

\_\_\_\_\_\_\_\_\_\_\_

O | | |

\_\_\_\_\_\_\_\_\_\_\_

| | |

enter move: