

## Networking on Can't Stop Board Game:

To pass information between several computers in Our Can't Stop Board Game, we will need to add network communication using Java Sockets.

**Networking architecture:** We will use a client-server architecture where one computer acts as the server and others connect to it as clients.

**Implement network communication code:** Depending on the client-server architecture, we will need to write code to create network sockets and send/receive data between the computers. This could involve creating a separate thread or class to handle network communication, setting up socket connections, sending messages using streams, and handling errors.

**Define a protocol for exchanging game data:** We will need to define a protocol for how game data will be exchanged between the computers. This could involve creating custom message formats, serializing game objects into a common format (like JSON) or using a higher-level protocol like XML-RPC.

**Send game updates over the network:** As the game progresses, we will need to send updates about the game state over the network to keep all computers in sync. This could involve sending messages about dice rolls, moves, wins, and losses.

**Handle network errors and disconnections:** Network communication can be unreliable, so we will need to handle errors like dropped connections, timeouts, and out-of-order messages. We may also need to implement a mechanism for detecting when a player has disconnected from the game and removing them from the game.

To pass control between several computers in our Can't Stop board game, we will need to implement a mechanism for deciding which player's turn it is and how to transfer control to the next player over the network.

We must follow these steps to implement control passing in our game:

**Decide on a turn order:** we need to decide on a turn order for our game, which could involve a simple round-robin system, or a more complex system based on player scores or other factors.

**Determine who has control:** we will need to keep track of which player currently has control of the game, which could involve storing this information in a shared data structure or sending messages over the network to synchronize the state across all computers.

**Implement the logic for passing control:** When it's time to pass control to the next player, we need to implement the logic for determining which player is next in the turn order and transferring control to them. This could involve sending a message over the network to notify the

other players that control has passed, updating the game state to reflect the new player's turn, and displaying a message or animation to indicate whose turn it is.

**Test and refine the control passing system:** Once we have implemented the control passing system, we need to test it thoroughly to ensure that it works correctly and is free of bugs. We may need to refine the system based on feedback from playtesting, such as adjusting the turn order or adding error handling code.

To control starting and ending a game, we could implement a similar approach like we are using now. For example, we could add a "Start" button that would initiate the game and send a message to all clients indicating that the game has started. We could also add a way to detect when the game has ended, such as when one player has reached a certain score, and to send a message to all clients indicating that the game is over.