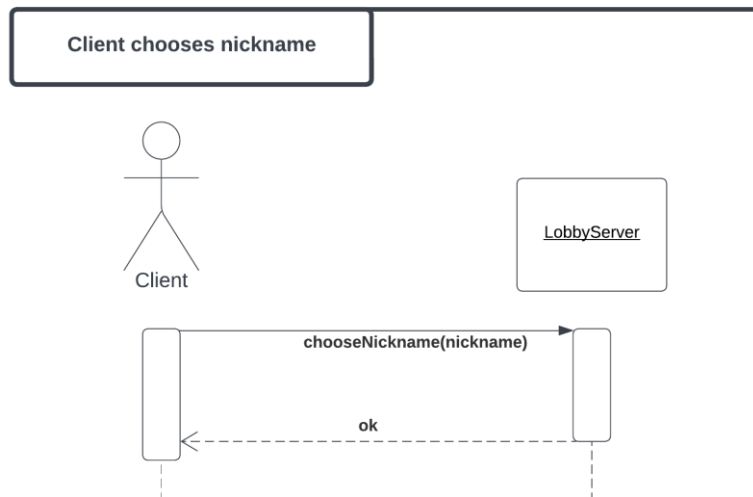


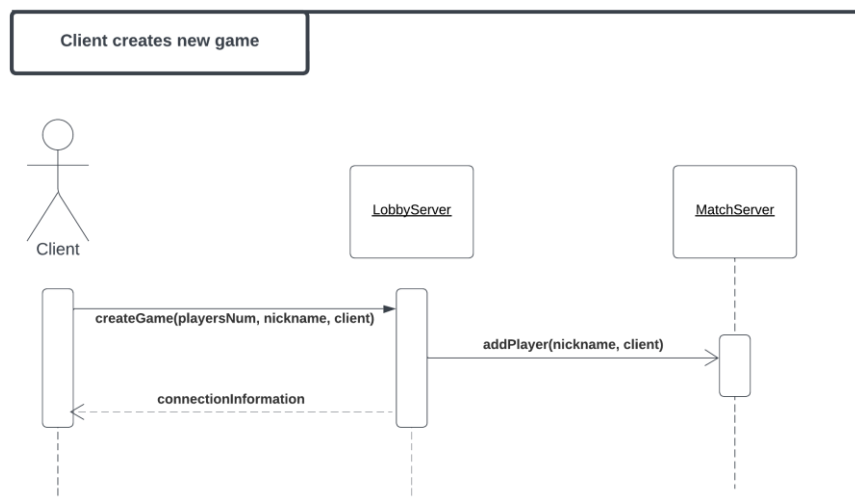
## SEQUENCE DIAGRAM

- Client chooses nickname:



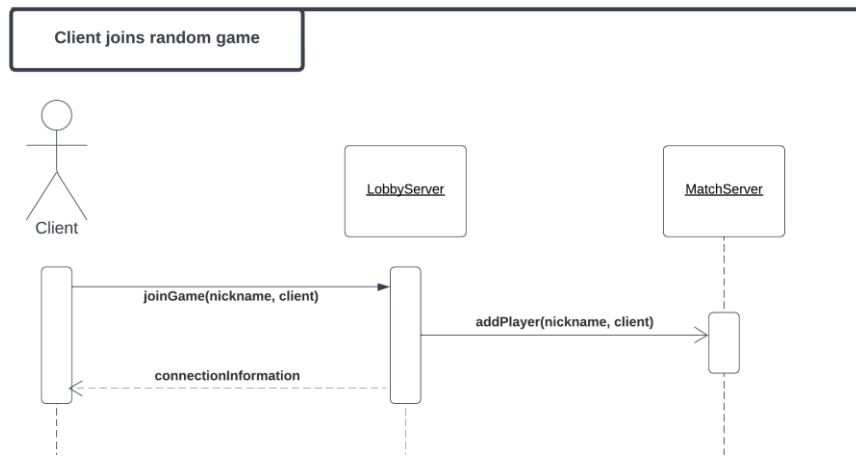
When the player types his nickname the method chooseNickname is called on the server, which will throw an exception if the nickname is invalid (already chosen or banned).

- Client creates a new game:



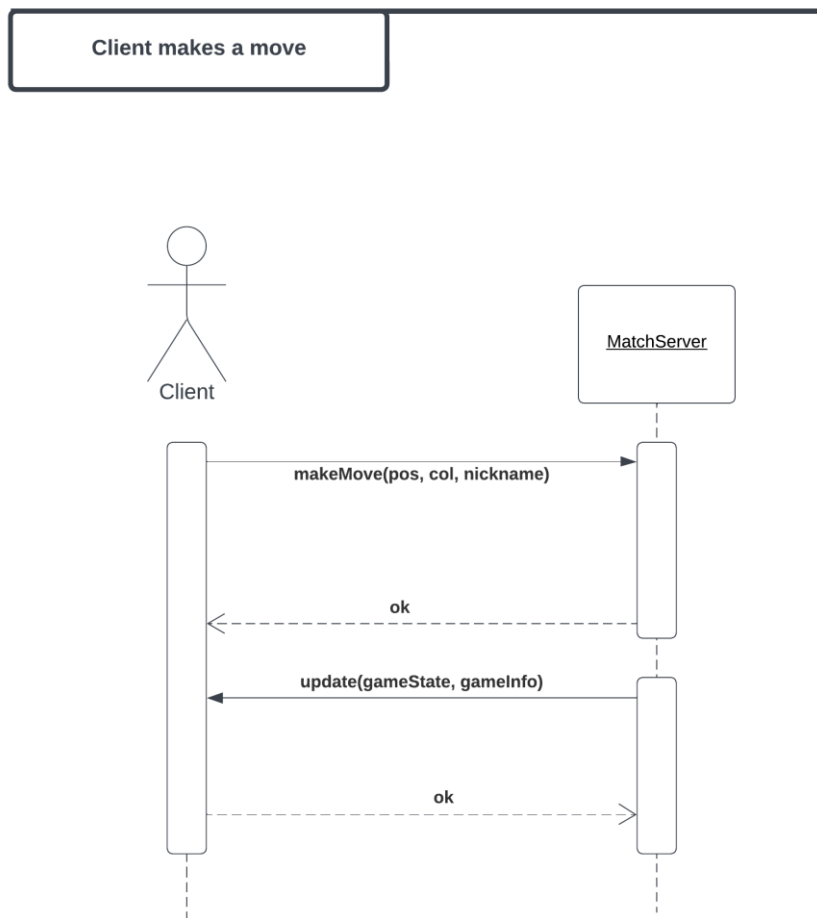
When the player selects the option “create new game” he must select the number of players, then the method createGame is called on the LobbyServer, which creates a new Match server and adds the player to it, to then return the connection information for the MatchServer to let the client connect.

- **Client joins an existing random game:**



Same as the previous interaction but in this case the player select the option “join an existing game”

- **Client makes a move:**

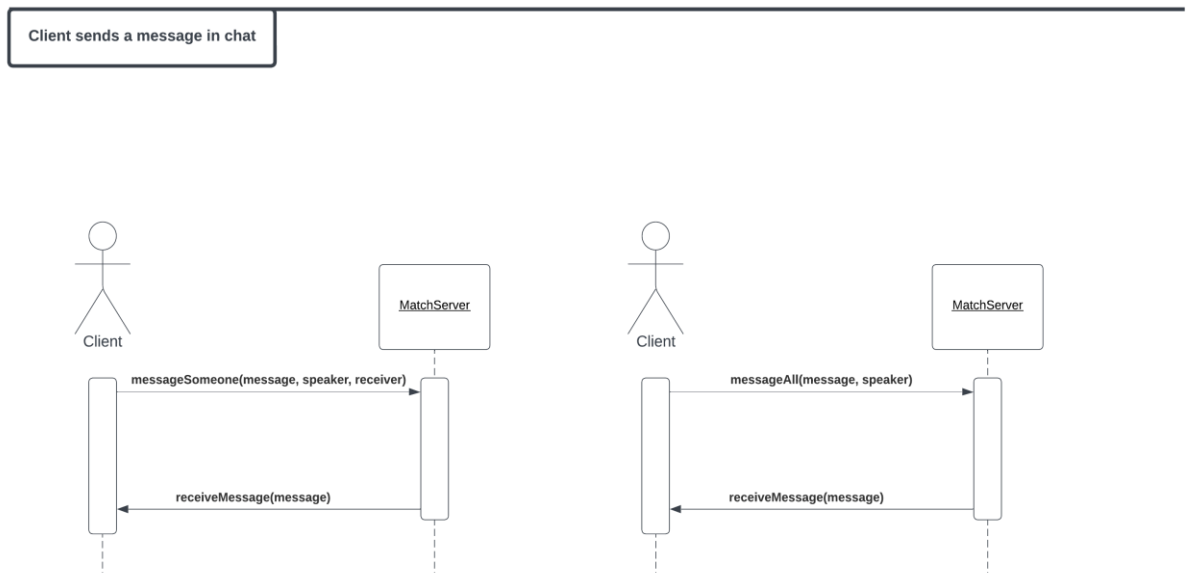


When a player selects a move he calls the makeMove method on the MatchServer, which calls the corresponding method on the controller and updates the model accordingly. When the model is updated it calls an update method on a VirtualView which creates the new gameState and gameInfo based on the changes the player's move caused and calls the updateClients method on the MatchServer which will call the update methods on all the clients.

\*\* mettere controller model e virtualview

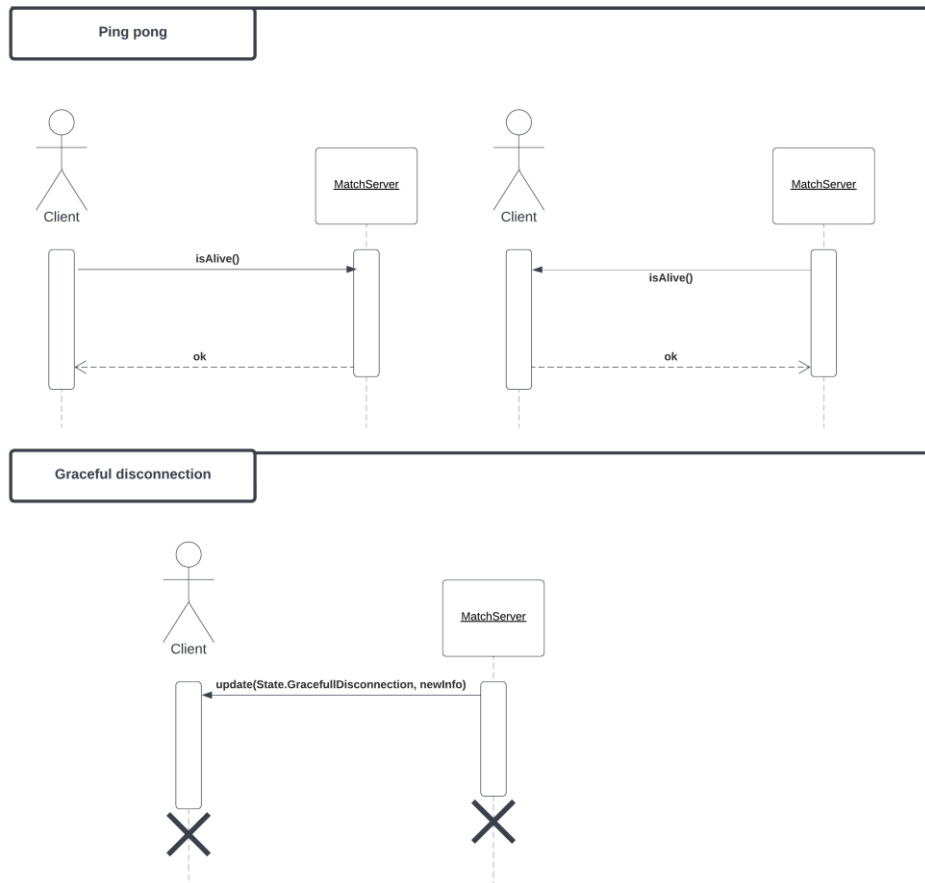
\*\* freccia da client che torna a client per indicare il controllo lato client

- **Client sends a chat message**



When the player wants to write a message in chat he must select if the message is global or directed to a specific player, this will change the method called on the server, in case of "all" selected the server will call the receiveMessage method on all clients, otherwise only on the ones interested.

- **Ping pong and disconnection**



When the connection between the client and the server is established a ping pong starts from both sides calling the `isAlive` method on the other side independently, in this way both are able to detect if the connection is lost, in this case (when the `isAlive` method throws an exception) the server will notify all the other clients that one is not connected anymore and close the game. The disconnected client thanks to its ping detect that it can't reach the server and automatically set its state to `State.GRACEFUL_DISCONNECTION` and closes itself.