Here’s the message formats for sending information between client and servers (application side). The words “player”, “user”, and “client” are used interchangeably. \*\*\*Very important: However it may look in this document, all fields are only separated by a comma, not a comma and a space or anything else.\*\*\*

Client 🡪 Server:

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| --- | --- | --- |
| Name | Format | Description |
| Logon Request | “LR: ” | Request for a new user to join the lobby and wait for a game. |
| Send Username | “SU:username” | Sends a username to be associated with the player’s user\_id. Not necessarily unique username on the server. |
| Send move | “SM:game\_id, move” | Send movement information to the game with gam\_id and the user with user\_id. u for up, d for down. |
| Quit or Rematch | “QR:game\_id, option” | After a loss is recorded, ask each user whether to quit to lobby or rematch same opponent. Option can be R for remath or Q for quit to lobby. |
| Begin Matchmaking | “BM: ” | Indicates to server to begin matchmaking. |
| Disconnect | “DC: ” | “Disconnects” user from the server (just deletes them from the player list). |

Server 🡪 Client:

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| --- | --- | --- |
| Name | Format | Description |
| Username Request | “UR: ” | Requests the client to send a username to associate with their user\_id. |
| Direct to Lobby | “TL:lobby\_port,lobby\_size” | Directs the player to the lobby after he has supplied a username or requests new matchmaking. Supplies client with the port on the server servicing the lobby and the current size of the lobby. |
| Update Game State | “UG:game\_id,player1\_pos,player\_2 pos,ball\_x\_pos, ball\_y\_pos,player1\_score, player2\_score,is\_loss” | (All one line, no new line character between fields). Sends game state information to be rendered client side. |
| Game Over | “GO: ” | Directs client to a rematch or quit screen. |
| Reject Connection | “RJ:message” | Sends a message to the client explaining why the connection to the server was rejected.f |
| Accept Connection | “AC: ” | Replies to the client that the connection has been accepted. |
| Error | “ER:message” | Sends an error message to the client. |
| Start Game | “SG:game\_id,game\_port,player1\_pos, player2\_pos,ball\_x\_pos,  Ball\_y\_pos” | Tells the client to start rendering game state information, sending the id of the game and the port for the client to send to on the server. |