

Networking Document

Additional requirements:

- The game needs the players to have a stable internet connection at all times.
- The game must allow players to create player profile that would include a username, profile photo and store those in a server database.
- The game needs to Implement a matchmaking system that connects 2 to 4 random players.
- The game must allow players to add other players to their friendlist and allow matchmaking with friends.
- The game needs a way to store and display game data such that it cannot be modified .
- The game should allow players to communicate with other online players.

Networking solutions:

1. The start UI in the game would be replaced by a lobby UI. The lobby UI would include a chat box that allows players to chat with other online players. The lobby UI would allow player to select the number of player along with start game button that allows matchmaking.
2. The Player and piece setting UI would be discarded entirely and instead each player would be assigned random piece attributes to avoid conflict. The player name would be same as the username in the player profile.
3. The game would use a client-server architecture where the game data will be stored and modified on a server. The game would display the same game state to all players but only the player with current turn would be allowed to interact with game. Any change to game state will be stored on the server and then the server will update the game state for all players. By storing data on the server rather than client systems will eliminate any duplicates that susceptible to change by players and ensure the data is same across all clients.