Networking Document

In order to implement the networking architecture, this client server architecture should be divided into two main parts: client and server.

Client Side

The client side will have control over the UI of Can't Stop. The game should be installable on the user's machine. UI system would perform like the single-player mode in the online version offering different themes so that users could customize their client color of the cubes. The user also controls the dice roll and deciding whether to place a white cube or the player cube

Server Side

The server side will handle the logic of the game. When a client creates a player, chooses color of the cube or makes a move on the board, the system will read the information. The system will inform the server about the player's steps and all information. The server will store the player data and the game state data. The player data includes the client's user name, password, previous logs. The game state data will keep information about the player's scores, movements on the board, previous game state. And the server will also have to connect with other players on the board. The server will have to show each player's activities in the game to all the player's screen. The server will keep track of game statistics, which includes player turn, scores of each player and current state of the board.

Other Aspects

Along with the Client and Server protocol there needs to have a management side. When a player initiates the game on the machine, the server will respond with instructions to the UI telling it to render the start screen of the game. At this point the server will ask the user to log in or register. This helps maintaining the service by keeping track of how many clients are playing the game and how many have logged out.

In addition to the program, the appropriate internet protocol is also important. The Transmission Control Protocol (TCP) is the preferred choice as it ensures message delivery in order, minimizes message loss, and avoids duplicates. As Can't Stop is a turn-based game, TCP's reliability is necessary to ensure the game runs smoothly.

The group will focus on the details of interacting between the server and users, such as the first person entering the room being the owner who controls the game start. Developing software can be challenging, and the group will need to anticipate any potential problems and provide effective strategies and methods to overcome them.