

Networked Games

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Overview:

This project involves, development of a game “Rock-Paper-Scissors” over a TCP Network, where the sever host’s the game and multiple users can access the game by connecting to the server and start playing the game by forming a pair.

Server Operations:

The server which hosts the game, lets clients to connect to it and sends the messages from one player to another. It performs following operations.

- It waits for the players to connect.
- It keeps track of all players/ clients that are connected to it.
- whenever a player wants to play, the server searches for another available player and joins them to play the game as a pair.
- It creates a unique gamming ID for that playing pair and transfers the informant between the players. (this unique ID maintains records related to both the players)
- The server can support multiple playing pairs.
- If a pair gets disconnected, it can pair the existing player to another existing player or to a newly connected player.

Client operations:

The client/ player who wants to play the game and getting connected to the server can perform the following operations.

- Opens the game interface, by connecting to the server.
- Can choose when to start the game, that is, stay connected to the network for limited time period and click “start playing” to start the game; of course, client can start immediately (client could get disconnected if not responding for longer time period).
- While playing the game, client selects the move he wants to make and sends it to the server, which in turn sends to the opponent connected.
- During the game when any of the player stays unresponsive for longer time duration, they will be disconnected, and the other player will be notified of the same.
- The player can leave the game whenever he wants to, doing so the TCP connection will be closed, and another player will be disconnected as well.
- The other player who also got disconnected, if wishes to continue playing can wait for another player to connect to the server and start playing.