

Jeremiah Hanson
Cs422
Distributive program report

This program is designed as a scouting app for the 2018 FIRST Robotics Competition game Power Up. It is designed to be used by 6 people simultaneously to scout the effectiveness of teams robots in a match. There are six because each game has two alliances of 3 teams, one robot per team. The app can be used with a minimum of two people but really requires 6 to be most effective.

The basic working idea of this program is that all the clients will connect to a server using java sockets. From there, the server will assign the first person to connect as the leader who is responsible for setting up the matches. The server then sends connection data to each client so they can create a network ring to send all future data to each other.

The leader starts the communication by sending the match data for the first match. From there they all get to add the teams to their own personal list of teams and are given a team to scout for based on their order. They are free to scout that team until they have collected all the data from the match, then they all send the data they gathered on that team around the circle so all other clients can add it to there list. Then the leader can set up a new match and it begins again.

To run this program, start the server (ScoutServer) on a computer and pass the number of clients (between 2 and 6) as an argument. Then on the client computers start the client (Client) and pass the computer you wish to connect to as the first argument. Once all the clients have connected then the lead client will have a special message. Use that computer to create a match by entering 6 team numbers; for example 1011, 1492, etc. Then all the clients, including the lead, can scout the match by entering "start". Then the clients can type "switch", "scale", "vault", or "done" to score the match or finish. That will prompt sending the data to the other users. Will not in a match you can type "list" to list all the team you have data for, or "show" to show a specific team. The command "exit" will quit the program.