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Distributed Project Description

The project I wish to undertake for the distributed project is a 4-player version of the classic board game Stratego. The reason I want to do Stratego is because the game inherently has an aspect of hidden information between players. The only information a player should know about the game is the rank and location of their own pieces and the location (not the rank) of the other player's pieces. Furthermore, there are certain restrictions on the actions that a user can do. Each client can individually verify whether or not another client's action is allowable by the rules of Stratego and send a message to the offending client if an invalid action is detected. This would be good practice for a simple security system in the gameplay.

The design of this game will be as follows: a server should initially be started, and then four clients individually connect to the server. The server will set up the client orders and colors, and then give information of the other clients to each client so that the clients can communicate directly. The server, from this point, should wait for 4 more clients to connect. From there, each player will set up their pieces and signal the other clients when they are ready. From there, turns will proceed in a specific repeating order. After every move, the other three clients will verify whether that is a valid move. A valid move includes whether a piece can move to a certain location, attack, and whether a piece is the same kind of piece that it was revealed to be before (to prevent a player from cheating). Turns continue in this way until a player is eliminated, at which point clients skip over that client's turns. This continues until all but one player is eliminated, or a draw scenario is reached.