CS 342 Project 5
Guess a Number

Team 19 (11am section)
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Rules of the Game

Server randomly generates a positive number in some range like 1 - 100. All clients try to guess what it is.The server gives one hint about the number to start with. When a client guesses incorrectly the server will give them information about the number. No client can guess twice. If they guess correct number with at most all clients guessing then the clients win; otherwise they lose. Losing takes clients to a losing screen and then winning takes them to a victory screen. After a game the server makes up a new number.

Languages and Frameworks

The languages and frameworks used will be Java, for the logic of the game, and JavaFX, for the GUI programming and presenting the screens that the user sees. We will be making use of networking with sockets and threading within Java to allow for communication between the server and all of the clients.

Client/Server Relationship

As mentioned previously, the client and server will communicate via networking with sockets in Java. The server will control the flow of the game and will be the primary source of the game logic. As such, the server will be the one choosing the number at the outset of the game; it is this number that the clients have to try to guess correctly and which will be hidden from the clients (only the server will know the value of the number). Each client's guess will be sent to the server, which will compare it to the correct number and notify the client if they need to guess a higher or lower number. In the case that the client guesses the number correctly, the server will notify that client that they won and also will notify the other clients that this one has guessed the number correctly. In this way, if multiple clients guess the number correctly, the server will notify all of the clients which ones won the game by guessing the number correctly.

User Interface

The user interface will be similar to ones used in previous projects, with the server and each client all having their own GUI window. The GUI for the server will have a way for the user to enter the port number, which will be used to start the server and establish the connection. At the end of the game, it will also include a way to display which player or players won and what the actual number was. The GUI for the client will include some elements that allow the user to enter the port number and IP address that allow it to connect to the server. The window will also include a text area in which messages from the server will be displayed, and a means for the client to enter their number and send it to the server. After each guess, the GUI will display the number that the client chose and whether the server said to go higher or lower. If the client won, this will also be displayed on the GUI window.