How the game will be played

When a client first connects to a server they are sent their playerID, bingo sheet and if there are less than four players, the client will be told to wait. Once at least four players are connected the game will begin. The server will send the gameReady instruction to each client to enable their bingo sheets. The server will send drawn numbers to the clients based upon a timer. The clients may only select numbers on their bingo sheets that have been drawn, (client GUI prevents selecting undrawn number). If a client wants to see all the numbers that have been drawn they press the Drawn History button which sends the history instruction to the server to return all the drawn numbers. If a client wants to see all the players and their points in the game they press the Leaderboard button which sends the leaderBoard instruction to the server to return the leaderboard. Once a client believes they have bingo they will press the Bingo! button which sends all the locations of the drawn numbers on the clients bingo sheet to the server. In other words, only the coordinates of the drawn numbers will be sent the server. The server will analyze the data set and determine whether or not the player has Bingo. If the client does not have bingo, a message will be output to the screen to notify the client. If the client does have bingo, the gameWinner instruction will be sent to all clients which alerts that that player X has won the game. The game will immediately reset with every client receiving a new bingo sheet. The newGame instruction sent at the end of a game as well as the bingoSheet instruction.

Server Instructions to Client

- Client first connects to server
  - playerID ID
  - bingoSheet num1 num2 … num24
  - If less than 4 clients connected
    - waiting
- Once at least 4 clients are connected
  - gameReady
- Every x amount of time
  - drawn num
- Drawn History button pressed (client sends instruction: history)
  - history num … num end
- Leaderboard button pressed (client sends instruction: leaderboard)
  - leaderboard playerID points … playerID points end
- Bingo! button pressed (client sends instruction: bingo row col … row col end)
  - If client doesn't have bingo
    - invalidBingo
  - If client does have bingo
    - gameWinner playerID points
      - This instruction is sent to all clients in the game.
- Once someone wins game resets

- ○ newGame
- ○ bingoSheet num1 num2 … num24

        At this point logic loops around to start the game

- ○ If less than 4 clients connected
  - ■ waiting
- ○ Once at least 4 clients are connected
  - ■ gameReady
- ○ …
- ○ ...