# Skribbl

Online multiplayer drawing and guessing game

# Flow of Control

## Room

All players must join the game room to participate and start playing together.

## Drawing

One randomly chosen player will be selected to draw on the canvas.

## Guessing

The other players must guess the word being drawn on the canvas.

## Leaderboard

Correct guesses increase your score, and the drawer earns points if many guess correctly.

# Host

The host creates the game room and starts the game once all players join. The host can adjust drawing time, kick players individually or all at once, restart the game, and even award bonus points to any player if desired.

# Clients

Clients join the game room and must wait for the host's approval to start. The game begins only after the host confirms, ensuring all participants are present before gameplay starts.

# Features

# Drawing tools

Clients have access to a variety of drawing tools during their turn. They can change the brush color, adjust the brush size, and clear the entire canvas instantly. Additional features enhance the drawing experience and creativity.

# Voting

Clients have the option to like or dislike a drawing during the game based on their personal opinion. These reactions help reflect the players' feedback on the drawing quality or accuracy of the depicted word.

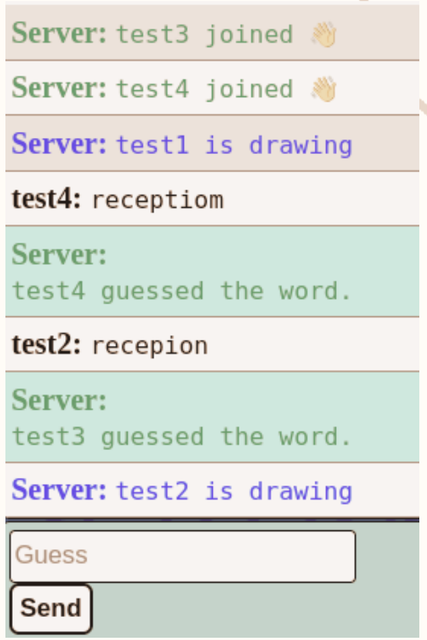
# Administrative privileges

Admins have special controls that allow them to manage the game. These controls are implemented in the adminControl function on the server side. Admins can execute commands like:

- Kick all players: //**admin <password> kickall**
- Kick a specific player: //**admin <password> kick <playerName>**
- Give points to a player: //**admin <password> givePoints <playerName> <points>**
- Set draw time: //**admin <password> setdrawtime <time>**
- Set word choose time: //**admin <password> setchoosetime <time>**
- Restart the game: //**admin <password> restart**

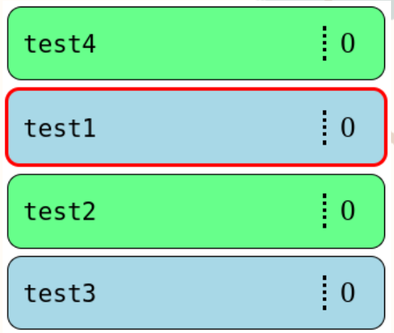
# Interactive Chat Space

The game features a dedicated chat space where players can interact in real-time. It shows messages like who joined, who is currently drawing, and whether a guess is correct or close. Players can like or dislike drawings and also see which participants have already guessed the word, enhancing communication and engagement throughout the game.

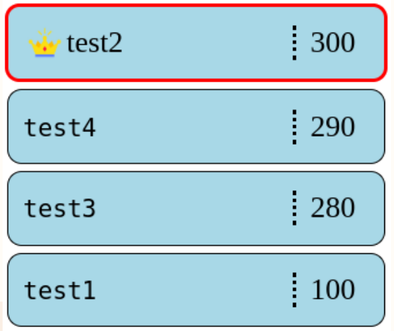


# Leaderboard

The game features a dynamic leaderboard where players can monitor real-time standings and see who is leading. It also provides a guess tracker that shows which participants have already guessed the word correctly. This dual function enhances competition, offers immediate feedback, and keeps everyone updated on the progress and performance throughout each round.




Green indicates player guessed correctly.




Final Leaderboard

# Technical Architecture

# Tech Stack

## Frontend :

- HTML5 Canvas (for drawing functionality)
- Vanilla JavaScript (no frameworks)
- CSS (for styling and animations)

## Backend :

- Node.js (runtime environment)
- Express.js (web server framework)
- Socket.io (real-time bidirectional communication)

# API Calls/Socket Events

## Client-to-Server:

- **playerName** – Register player with the server
- **startGame** – Host initiates game
- **position** – Drawing coordinates
- **startPaint** – Drawing start/stop
- **penColor** – Color selection
- **clearCanvas** – Clear drawing
- **vote** – Like/dislike drawing
- **chosenWord** – Selected word to draw
- **updateText** – Chat messages/guesses

# API Calls/Socket Events

## Server-to-Client

- **welcome** – Connection acknowledgment
- **newPlayerJoined** – New player notification
- **playersList** – Current players
- **hostPlayer** – Designate host
- **gameStarted** – Game begins
- **wordList** – Word choices for drawer
- **chosenPlayer** – Current drawer
- **wordCount** – Word length hint
- **correctGuess** – Player guessed correctly
- **chatContent** – Chat messages
- **otherPOS** – Drawing coordinates
- **scoreBoard** – Current scores
- **gameOver** – Round/game end

# Future Enhancements

- The project is highly scalable, with potential for future integration of voice and video chat.
- Private rooms and chat filters can be added to enhance user experience and safety.
- Custom game modes can be introduced to offer variety and keep gameplay engaging.
- A collaborative drawing feature can be implemented to allow another person to assist if someone is unable to draw.

# Thank you!

**Visit:** https://github.com/gargparv/Skribbl.git