



Project Report: Art Battle Royale 🔥

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Project Description:

Traditional drawing-based games often lack intuitive collaboration features and engaging mechanics such as custom word sets, hints, and dynamic scoreboards. Our goal is to create a fun, interactive multiplayer drawing game where players can join or create private lobbies, draw and guess words in real time. The game will include features like undo, clear, color selection, a real-time hint system, a spectator mode, chats and moderation tools. Built with Next.js, Java & Spring Boot, and WebSockets, the platform will be accessible across devices, support multiple languages, and integrate an external dictionary API for word generation. The game fosters creativity and friendly competition while enhancing social interaction. This web application is ideal for the course, combining intuitive gameplay with real-time communication in a multiplayer environment.

ID: US-01 Category: User Management

Story:

As a new user, I want to create an account with a username and password so that I can access the game and save my progress.

Acceptance Criteria:

- Users can sign up with an username and password.
- Upon successful registration, the user is automatically logged in.
- If registration fails (e.g., username already taken), an error message is displayed.
- The account is saved in the database.

Priority: Critical

Author: N/A

Estimate: 4-6h



ID: US-02 Category: User Management

Story:

As a returning user, I want to log in and log out so that I can access my profile and game history.

Acceptance Criteria:

- Users can enter their credentials to log in.
- Incorrect credentials show an error message.
- Clicking "Logout" redirects to the main page and clears the session.

Priority: Critical

Author: N/A

Estimate: 2h

ID: US-03 Category: User Management

Story:

As a user, I want to delete my account so that I can remove my data permanently.

Acceptance Criteria:

- Users must confirm account deletion via a pop-up modal.
- Upon confirmation, the account and all associated data are removed from the database.
- Deleted users cannot log in again.

Priority: Medium

Author: N/A

Estimate: 2h

ID: US-04 Category: Profile Customization

Story:

As a player, I want to set a profile picture and edit my username so that I can personalize my profile.

Acceptance Criteria:

- Players can upload an image as a profile picture.
- Username changes are reflected in the game.
- Changes persist between sessions.

Priority: Medium

Author: N/A

Estimate: 2h



ID: US-05 Category: Lobby Management

Story:

As a player, I want to create a game lobby with custom settings so that I can tailor the gameplay experience.

Acceptance Criteria:

- Players can set max players, round time, and number of rounds.
- The host can choose a word set (predefined/custom).
- A unique lobby code is generated and displayed.

Priority: Critical

Author: N/A

Estimate: 8h

ID: US-06 Category: Lobby Management

Story:

As a player, I want to join a game lobby so that I can play with my friends.

Acceptance Criteria:

- Players can enter a valid lobby code to join.
- The UI updates to show joined players.
- A message appears when a lobby is full.

Priority: Critical

Author: N/A

Estimate: 2-4h

ID: US-07 Category: Lobby Management

Story:

As a player, I want to leave a game so that I can exit at any time.

Acceptance Criteria:

- Players can exit via a button.
- If the drawer leaves, the turn switches automatically.
- If only one player remains, the game ends.

Priority: Medium

Author: N/A

Estimate: 2h



ID: US-08 Category: Game Functionality

Story:

As a player, I want to choose between different word sets (English, German, Custom) so that the game supports multiple languages.

Acceptance Criteria:

- Players can select a predefined language set.
- Hosts can create and upload custom word lists.
- The system fetches words accordingly.

Priority: Medium

Author: N/A

Estimate: 8-10h

ID: US-09 Category: Drawing Mechanics

Story:

As a player, I want to draw using different tools so that I can create better illustrations.

Acceptance Criteria:

- Players can change pen color.
- Background color can be filled.
- Different pen sizes are available.

Priority: Medium

Author: N/A

Estimate: 8-10h

ID: US-10 Category: Drawing Mechanics

Story:

As a player, I want to have an undo and clear button so that I can fix mistakes while drawing.

Acceptance Criteria:

- The "Undo" button removes the last stroke.
- The "Clear" button resets the canvas.
- Only the current drawer can use these functions.

Priority: Medium

Author: N/A

Estimate: 4h



ID: US-11 Category: Game Mechanics

Story:

As a player, I want to see a hint system that reveals letters over time so that guessing becomes easier.

Acceptance Criteria:

- The game reveals letters at set intervals.
- The number of revealed letters depends on round duration.
- Hints stop when someone guesses correctly.

Priority: Medium

Author: N/A

Estimate: 4-6h

ID: US-12 Category: Score Tracking

Story:

As a player, I want to track points so that I can see my performance in the game.

Acceptance Criteria:

- Correct guesses give points based on speed.
- The scoreboard updates live.
- Points persist throughout the game session.

Priority: Critical

Author: N/A

Estimate: 3-4h

ID: US-13 Category: Score Tracking

Story:

As a player, I want the game to determine a winner at the end so that I know who performed best.

Acceptance Criteria:

- The player with the highest score wins.
- A final results screen appears.
- The winner is displayed prominently.

Priority: Critical

Author: N/A

Estimate: 2h



ID: US-14 Category: Moderation

Story:

As a host, I want to be able to kick disruptive players so that I can maintain a fair and fun environment.

Acceptance Criteria:

- The host can select a player and remove them.
- Kicked players are unable to rejoin that lobby.
- A notification is sent to all players.

Priority: Medium

Author: N/A

Estimate: 3h

ID: US-15 Category: User Experience

Story:

As a player, I want a background music option so that I can enhance my gaming experience.

Acceptance Criteria:

- Players can toggle background music on/off.
- Volume adjustment is available.
- The setting is saved per session.

Priority: Low

Author: N/A

Estimate: 2h

ID: US-16 Category: Matchmaking

Story:

As a player, I want to join a public game so that I can play without needing a private lobby.

Acceptance Criteria:

- Players can click "Quick Play" to join a random game.
- Public lobbies auto-fill until they reach max players.
- If a game is full, the player joins the next available one.

Priority: Low

Author: N/A

Estimate: 4h



ID: US-17 Category: Spectator Mode

Story:

As a player, I want a spectator mode so that I can watch games if I don't want to play.

Acceptance Criteria:

- Spectators can view the game but not guess.
- They see chat messages but cannot send messages.
- They can join a game mid-session.

Priority: Low

Author: N/A

Estimate: 4h

ID: US-18 Category: User Experience

Story:

As a player, I want an in-game chat system so that I can communicate with other players, share hints, and enhance the social experience during the game.

Acceptance Criteria:

- Players can send and receive messages in real time.
- Messages are visible to all players in the current lobby.
- The chat system should allow for text input and message display.
- The chat window can be toggled open or closed by the player.
- Offensive or inappropriate messages can be flagged or reported by players.
- Chat history persists for the duration of the session.

Priority: Medium

Author: N/A

Estimate: 8h
