

Product Backlog: Team 7

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PROBLEM STATEMENT

Everybody gets bored sometimes and a simple, easy, and fun way to solve that is by playing a game. We want to implement a casual, online version of Pictionary. With the new recreation of this classic game, called Yoodle, we hope to provide people with an entertaining way to connect with their friends and families.

BACKGROUND INFORMATION

People have searched for entertainment in various forms, from ancient games like chess to modern games like Cards Against Humanity. Both of those games requires setup and individual game pieces, but Pictionary does not. Pictionary is an excellent way to spend some time with friends and practice your art skills. Pictionary is an easy and fun game for all ages that is being brought back with this fresh implementation.

ENVIRONMENT

We plan on using Electron to create our application. Electron is a framework for creating cross platform applications using web technologies. On top of that, we will use AngularJS for building user interfaces and Node.js for the server.

Backlog ID	Functional Requirements	Hours
1	As a user, I want a canvas to draw pictures on.	20
2	As a user, I want to be able to play with friends locally.	15
3	As a user, I want to be able to play with friends online.	15
4	As a user, I want to be able to play a game with 2 or more other players.	45
5	As a user, I would like the ability to save drawings during a game as PNG files.	10
6	As a user, I would like to have a slideshow featuring all the	14

	correctly-guessed pictures after each game.	
7	As a user, I want to be able to save images from the end-game slideshow as PNG files.	3
8	As a user, I would like to have a scoreboard that keeps track of all the players' performance.	6
9	As a user, I would like to have appropriate audio feedback for correct/incorrect guesses.	3
10	As a user, I want to be able to join a friend's game.	6
11	As a user, I want word clues to be randomized during play.	5
12	As a user, I want to choose between three levels of word set difficulties.	3
13	As a user, I want a main menu to serve as the starting point to create/join games and change settings.	10
14	As a user, I want to have the ability to send guesses and receive immediate feedback.	8
15	As a user, I want to have game settings to set username, choose game difficulty, and change IP address.	20
16	As a user, I want player names and scores to be displayed live and in-game.	6
17	As a user, I want a round timer and countdown bar to show how much time remains for the artist player's turn.	6
18	As a user, I want to be able to skip words and receive a time penalty for doing so.	6

NON-FUNCTIONAL REQUIREMENTS

- As a developer, I want the server to support more than 50 concurrent players.
- As a developer, I want the application to be cross-platform.
- As a user, I want a visually appealing interface to promote intuitive gameplay.
- As a user, I want the game to run smoothly and be highly responsive.

USE CASES

Case: Playing a Game (Artist Player)

Actor	System
	1. A random word clue is shown to the player, and the round timer begins.
2. Click and drag on the drawing canvas to “paint” a picture of the word.	3. Line following cursor path appears on canvas.
4. Release mouse press.	5. Line following cursor stops appearing where mouse press ended.

Case: Playing a Game (Guessing Player)

Actor	System
	1. The artist’s drawing word appears in real time on the guessing player’s canvas.
2. Type and send a guess of what is being drawn on the canvas by the artist.	4. Automatically check the player’s guess against the actual word clue for a match.
	<p>5.</p> <p>If the player’s guess is correct, then a success sound effect is triggered, visual confirmation is displayed to all players, points are added to the artist and guessing player, all canvases are cleared, and a new, random word is shown to the artist player.</p> <p>If the player’s guess is incorrect, then an audiovisual failure effect is given to the guessing player, and the round of gameplay continues.</p>

Case: Creating a Game

Actor	System
1. Launch Yoodle application.	2. Main Menu is displayed options to “Create a Game”, “Join a Game”, or change game settings.
3. Click “Create a Game” button.	4. Pre-game window is displayed, with the game room’s code in the top right corner along with some other basic gameplay elements, including “Start Game”.
5. Wait for at least 2 other players to join the game.	
6. Click “Start Game”.	7. System initiates a new game with all players who are in the game room and displays the full game environment.

Case: Joining a Game

Actor	System
1. Launch Yoodle application.	2. Main Menu is displayed options to “Create a Game”, “Join a Game”, or change game settings.
3. Click the game settings modal (cog icon) in the upper right corner.	4. Game settings modal is displayed: IP Address, Username, and Game Difficulty.
5. Enter the IP Address of the player hosting the game you want to join and click “Save”.	6. Game settings modal disappears and a notification informs user of server connection success.
7. Click “Join a Game” and enter the 4-character room code of the game you want to join.	8. System connects to the indicated game room and player is added to the game.

Case: Game ended

Actor	System
1. The final round of the game concludes (all players have been the artist).	2. Final scoreboard is displayed along with the winning player(s).
	3. Slideshow containing all correctly guessed pictures is shown to all players.
4. Enter slide number of desired picture to save and click "Save."	5. User's system file browser drops down to select a location to save the image.
6. Choose location and click "Save."	7. The image file of the picture is saved to the specified location on the user's machine.

Case: Change Game Settings

Actor	System
1. From the main menu, click the game settings modal (cog icon) in the upper right corner.	2. Game settings modal is displayed: IP Address, Username, and Game Difficulty.
3. Enter a new username, choose a new Game Difficulty and click "Save."	4. Game settings modal closes, settings are saved, and a success notification is displayed. The main menu greeting updates to reflect new username.