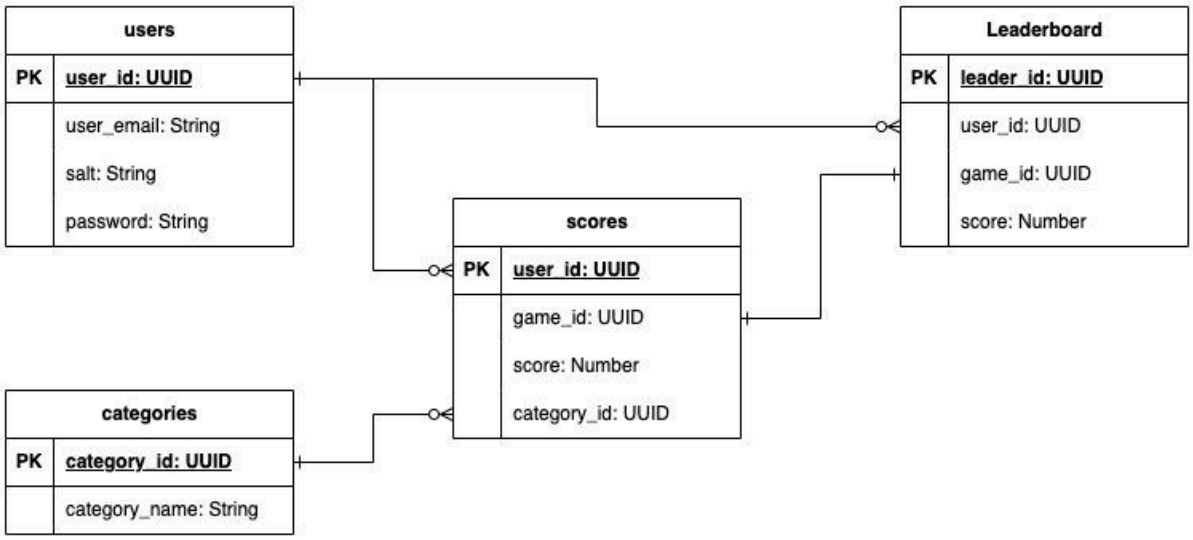
Letter Detective
Product Design Specification

End Product Description:

The end product, "Letter Detective," is a multiplayer word-guessing game where users compete to guess a word based on a given topic. Users will have the option to choose topics from predefined categories. The game will involve two players who take turns guessing letters to uncover the mystery word. The game interface will consist of all alphabets for guessing letters, a display showing the current state of the word with revealed letters, and feedback on the correctness of the guesses. The game will be implemented as a web application using Flask for the backend and Next.js for the frontend.



Methods Used in the Puzzle Solver:

The puzzle solver in "Letter Detective" will employ a basic approach similar to a brute-force method. It will iterate through the letters of the mystery word, checking if the guessed letter matches any of them. If a match is found, the corresponding letter in the word will be revealed to the players. But the catch is that there are a limited number of times a player can guess the letter wrong.

Market Space and Selling Points:

"Letter Detective" caters to the market space of casual multiplayer games, offering an engaging and interactive experience for users looking for entertaining word-based challenges. Its selling points include:

Multiplayer functionality, allowing users to compete with friends or strangers in real-time.

Customizable topics, providing a personalized gaming experience based on user preferences.
Simple and intuitive gameplay suitable for players of all ages and skill levels.
Social interaction features, fostering competition and collaboration among players.

Functional Specifications

Product Features:

Topic Selection: Users can choose from predefined topics or input custom topics for the mystery word.

Multiplayer Mode: Support for two players competing simultaneously using websockets for real-time collaboration.

Letter Guessing: Players can input guesses for individual letters of the mystery word.

Word Display: The current state of the mystery word, with revealed letters, is displayed to the players.

Feedback Mechanism: Users receive feedback on the correctness of their guesses.
Score Tracking: Points are awarded based on the accuracy and speed of guesses, with scores displayed at the end of each round.

Deployment

Deploying the Flask Project:

To deploy the Flask project "Letter Detective," follow these steps:

1. Set up a Heroku account and install the Heroku CLI.
2. Create a new Heroku app from the Heroku dashboard or using the Heroku CLI.
3. Clone the Github Repository locally.
4. Connect your local Git repository to the Heroku app using the Heroku CLI.
5. Push your code to the Heroku remote repository to trigger deployment.
6. Configure any necessary environment variables (Specified in Readme.md).
7. Access your deployed application via the provided Heroku app URL.

Features for Major Milestones:

M1: Basic game functionality with single-player mode and predefined topics.
M2: Implementation of multiplayer mode allowing two simultaneous players.
M3: Integration of score tracking and leaderboard features.
M4: Fine-tuning of user interface and gameplay experience based on user feedback and testing.
M5: Deployment and optimization for performance, ensuring smooth gameplay experience for all users.