Memory Training Game

Introducing a Flutter-based application designed to enhance cognitive function and memory skills through engaging gameplay and modern design.

Comprehensive Technology Stack Overview

Explore the components of our tech stack

- **Frontend Development**

  Utilizing Flutter with Dart for building efficient and beautiful user interfaces.

- **State Management**

  Leveraging Provider for effective state management in the application.

- **Local Database Storage**

  Using Hive for local storage solutions to enhance performance.

- **Leaderboard Data Management**

  Employing Firestore for dynamic leaderboard data management when required.

- **User Authentication**

  Integrating Firebase Auth for secure user authentication processes as needed.

Understanding Game Flow Mechanics

Explore the Sequential Steps of Game Play

Player Enters Name

The player inputs their name prior to starting the game, creating a personalized experience.

Shuffled Cards Appear

12 shuffled cards are displayed on the screen, initiating the game environment.

Timer Starts

The game timer activates as soon as the cards are displayed, adding urgency to the gameplay.

Finding Card Matches

The player flips cards to identify matching pairs, engaging in the core gameplay mechanic.

Record Completion Time

When all pairs are matched, the game records the player's completion time for leaderboard purposes.

Leaderboard Storage

The player's name and completion time are saved in the leaderboard, sorted by time in ascending order.

Overview of Game Implementation

Exploring essential components of game development

- **Game Logic Implementation**

  The core functionality involves matching card pairs to create an engaging user experience.

- **Timer Functionality**

  A timer is integrated to measure and display the completion time for players, enhancing competitiveness.

- **Leaderboard Storage**

  Player data is stored and sorted for leaderboard functionality, allowing users to see their ranking.

- **State Management**

  Utilizes a provider to handle app state updates, ensuring smooth gameplay and data flow.

- **Database Integration**

  Scores are stored locally using Hive, providing efficient data management without internet dependency.

Engaging Memory Training Game Conclusion

Key insights from the Memory Training Game

- **Fun and Engaging Memory Game**
  The Memory Training Game makes memory improvement enjoyable and interactive.
- **Fully Functional Game Built with Flutter**
  Utilizes Flutter for a seamless and functional gaming experience.
- **Leaderboard Feature**
  Tracks player scores and fosters competition among users.
- **Interactive User Interface**
  Designed for a smooth user experience with engaging visuals.
- **Future Enhancements Planned**
  Potential upgrades include multiplayer mode and difficulty levels.
- **Multiplayer Mode**
  Introducing a multiplayer feature for competitive gameplay.
- **Different Difficulty Levels**
  Customization of game difficulty to cater to all skill levels.
- **More Interactive UI Animations**
  Enhancements in animations to increase user engagement.