Challenge

Request by

Challenge: Memory Matching Game

Description

Develop a web application for a memory matching game where players match cards with identical images until all cards are matched. You may use any technology you are comfortable with for both **Frontend** and **Backend** development.

Requirements

Frontend

- Design a simple and functional (Responsive) UI.
- Display cards in a grid format (e.g., 4×4), with each card having a hidden image.
- When a player clicks a card, the card should flip to reveal the image.
- If two revealed cards match, they should remain flipped and marked as matched.
- If they do not match, the cards should flip back to their hidden state after a short delay.
- Display the number of attempts made by the player.
- When all cards are matched, display a congratulatory message.

Backend

- Develop APIs for:
  - Fetching card data (e.g., `/api/cards`).
  - Recording player scores (e.g., `/api/score`).
  - Retrieving high scores (e.g., `/api/leaderboard`).
- Use a database to store player scores and statistics (if necessary).

Submission

- Candidates should use a version control system (Git) during development.
- Create a repository on platforms like **GitHub**, **GitLab**, or others.
- Share the repository link and provide access for code review.

Expected Outcomes

- **Frontend:**
  - A fully functional and responsive UI.
  - The game operates smoothly without errors.
- **Backend:**
  - APIs function as required.
  - Scores and card data are handled correctly and securely.
- **Code Management:**
  - Clean and well-structured code.
  - Proper use of Git, including meaningful commit messages.

Evaluation Criteria

- Completeness of the required functionality.
- Code quality and structure.
- Well-designed and responsive UI/UX.
- Proficiency in using Git and version control.

Additional Notes

- Candidates can choose any tools or technologies they are comfortable with for both Frontend and Backend.
- If you wish to add features or improvements to enhance the game, feel free to do so and document them in the README.md file.