Unity Developer Test: Magic Tiles 3 (Simplified)

This task is designed to assess your fundamental skills in Unity development by creating a simplified version of a rhythm game similar to Magic Tiles 3. It should take approximately **4 hours** to complete.

Instructions:

1. **Download Assets:** Download and import the provided assets.
2. **Unity Version:** Please use **Unity 2021.3.xxx LTS** (Long Term Support) version for this project. This ensures compatibility with our current development environment.
3. **Complete Tasks:** Develop the game following the tasks below.

Task 1: Basic Gameplay (Core Requirement)

Develop a basic version of the Magic Tiles 3 gameplay (refer to the `demo.mp4` for visual reference) with the following requirements:

- **Rhythmic Tile Generation & Movement:** Tiles should be generated and fall downwards rhythmically, synchronized with a background music track.
- **Player Input & Scoring:**
  - Allow the player to tap/click on the falling tiles to score points. Successfully tapped tiles should disappear.
  - Implement a scoring system that awards points based on the **timing accuracy** of the player's taps (e.g., higher points for perfect taps on the beat). Define clear windows for "Perfect," "Good," and "Miss."
- **Game Over Condition:** Implement a basic "Game Over" state when a tile reaches the bottom of the screen without being tapped.

Task 2: Additional Features (Bonus / Stretch Goals)

These features are optional but highly encouraged to showcase additional skills.

- **Visual & Audio Feedback:** Implement a visual feedback system (e.g., particle effects, animations) and/or an audio feedback system (e.g., sound effects) for successful tile taps and misses.
- **Dynamic Background:** Enhance the game with a visually appealing and dynamic background. Examples could include parallax scrolling, animated elements, or simple visuals reactive to the music.
- **Combo System:** Implement a basic combo system where consecutive successful taps increase the score multiplier.

Technical Requirement:

- **Unity Version:** Unity 2021.3.xxx LTS.
- **Target Platform:** Mobile (Android/iOS).

Evaluation Criteria:

- **Functionality & Task Completion:** 35%
- **Code Quality, Readability, & Maintainability:** 30%
- **Implementation & Quality of Additional Features:** 20%
- **Basic Performance Considerations (e.g., efficient object pooling):** 15%

Submission & Notes:

- **Submission:** Please submit your project as a link to a **private GitHub repository** (preferred) or a zipped Unity project folder.
- **README File:** Please include a `README.md` file in your submission with:
  - Instructions on how to run the project.
  - A brief explanation of your design choices.
  - Proper attribution for any external assets or scripts used from the Unity Asset Store or other sources.
- Feel free to be creative within the given scope.
- Focus on delivering clean and well-structured code.
- If you have any questions, please do not hesitate to contact me via email at `giang.nguyen@amanotes.com` or on my phone at `+84 356 151 516`.

We look forward to reviewing your submission!