

## Offline Games Collection

**Project Name:** Offline Games Collection

**Project Moto:** Our goal is to provide users with a versatile platform for playing and enjoying offline games. This project is designed to cater to a wide audience by offering a collection of engaging games, user-friendly interfaces, and leaderboard functionality—all without requiring an internet connection.

**Team Name:** Static Playmakers

**Team Members:**

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**Benefits of This Project:**

**1. Offline Accessibility:**

- ✓ Users can play games without requiring an internet connection, making it suitable for regions with poor or unstable connectivity.

**2. Stress Relief and Entertainment:**

- ✓ The project provides users with a variety of games to relieve stress and pass leisure time.

**3. Skill Development:**

- ✓ Certain games, such as Sudoku Solver and Tower of Hanoi, help users enhance problem-solving and logical reasoning skills.

**4. Engagement and Competition:**

- ✓ The leaderboard feature fosters healthy competition and motivates users to improve their scores.

**5. Educational Value:**

- ✓ Games like Number Conversion System and Hangman serve an educational purpose while entertaining users.

**6. Sharpens Cognitive Skills:**

- ✓ The Minesweeper game sharpens users' brain knowledge by improving strategic thinking and problem-solving abilities.

**7. Memory Enhancement:**

- ✓ The Memory Match game enhances users' memory retention and recall skills through engaging gameplay.
















**8. Multiplayer Functionality:**

- ✓ The inclusion of multiplayer modes, such as "Player vs Player" in Tic Tac Toe, adds social interaction and fun to the gaming experience.

**9. Customization and Variety:**

- ✓ Users can choose from a collection of games with varying levels of difficulty, ensuring engagement for all age groups.

## Technologies Used in This Project:

Feature/Concept	Description
 <b>Java</b>	Core programming language used for logic and application development.
 <b>JavaFX</b>	Framework for building rich graphical user interfaces.
 <b>CSS</b>	Used for styling the user interface (application.css).
 <b>Eclipse IDE</b>	Development environment suggested by .classpath, .project, and .settings files.
 <b>File I/O</b>	File handling for data storage (users.dat, leaderboard.txt).
 <b>Resource Management</b>	Use of images and resources (background.png, ic_apple.png).
 <b>OOP</b>	Evident from modular structures, classes, and inheritance.
 <b>Modular Programming</b>	Use of module-info.java to define module dependencies.
 <b>Game Development</b>	Includes logic for games like FlappyBird, SnakeGame, Minesweeper, etc.
 <b>Game Physics/Animations</b>	For interactive games (e.g., FlappyBird, RacingCar3).
 <b>Data Serialization</b>	Likely used for saving and retrieving game state (e.g., UserManager).
 <b>Access Control</b>	Managing user data and game logic securely (User, UserManager).
 <b>Algorithm Design</b>	Algorithms for games like SudokuSolver, TowerOfHanoi, and 2048.
 <b>Event Handling</b>	For user interactions within games.
 <b>Custom Graphics</b>	Customizing visual elements in the games.

## UI Design:

