Minesweeper

CS585C – Java Programming

Submitted to: Dr. Mihaela Malita

Submitted by: Aishwarya Munusamy, Aayush Prasad

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Overview:

The Minesweeper project is a Java-based implementation of the classic Minesweeper game, offering an engaging and interactive gaming experience. The game provides three distinct difficulty levels – Easy, Medium, and Hard – catering to players of varying skill levels.

Key Features:

- **User-Friendly Interface:** The project boasts an intuitive graphical user interface, making it easy for players to navigate and enjoy the game.
- **Dynamic Board Generation:** Mines are strategically placed on the game board, generating a new and challenging layout with every playthrough.
- **Interactive Gameplay:** Players can left-click on tiles to uncover hidden numbers or potential mines, and strategically use right-clicks to flag tiles. The goal is to reveal all non-mine tiles without triggering a mine.
- **Scalable Difficulty:** Choose between three difficulty levels, each altering the size of the game board and the number of mines, providing a customizable and scalable gaming experience.
- **Game Outcome Feedback:** The game provides immediate feedback, declaring victory upon successfully clearing all non-mine tiles or signaling defeat if a mine is uncovered.

Software Required:

- Jgrasp or Visual Studio Code

How to play:

1. Choose a difficulty level: Easy, Medium, or Hard.
2. Left-click tiles to reveal numbers or mines.
3. Right-click to flag potential mine locations.
4. Clear all non-mine tiles to win the game.

Project Scope:

The Minesweeper project not only recreates the timeless Minesweeper experience but also adds a touch of personalization with scalable difficulty levels. Including a visually appealing graphical user interface enhances the overall gaming experience. This project is an homage to a classic game and serves as a learning platform for Java programming enthusiasts.

Conclusion:

In conclusion, the Minesweeper project represents a successful endeavor in Java game development, combining classic gameplay with modern design principles. The implementation showcases a commitment to creating an immersive and enjoyable user experience while adhering to the fundamental mechanics that have made Minesweeper a timeless game.