Minesweeper

Problem Statement:

Design and implement a **Minesweeper** game using Java Swing. The goal is to create an interactive game where the player clicks on tiles to uncover them and avoids tiles containing mines. If the player clicks a tile with a mine, the game is over. If all non-mine tiles are uncovered, the player wins. The game should include functionality for marking potential mine locations and dynamically displaying the number of neighboring mines when a tile is clicked.

Game Rules:

1. **Board Setup**: Create an 8x8 grid where 10 tiles contain hidden mines.
2. **Tile Click**: On left-click, if the clicked tile contains a mine, all mines are revealed, and the game ends. If the tile does not contain a mine, the number of neighboring mines is displayed.
3. **Flagging Mines**: On right-click, the player can place a flag on a tile to mark it as a potential mine. Right-clicking again removes the flag.
4. **Game Over**: The game ends when the player clicks a mine or clears all non-mine tiles.
5. **Victory**: The player wins if all non-mine tiles are successfully uncovered without clicking a mine.
6. **Adjacent Mines Count**: Display the number of adjacent mines (if any) when the player clicks on an empty tile. If there are no neighboring mines, the adjacent tiles are recursively uncovered.

Requirements:

1. Create a GUI for the game using Java Swing.
2. Implement a 2D grid of tiles (JButton), with each tile representing a cell on the game board.
3. Randomly place mines across the board.
4. Implement mouse controls for left-click (uncovering a tile) and right-click (flagging a potential mine).
5. Ensure the game handles the conditions for winning and losing, with appropriate messages displayed.