Abstract - Minesweeper

The program our team has created is an online video game called Minesweeper. Minesweeper is single player video game, and the objective of the game is to clear a rectangular board containing hidden mines without making any of them erupt. It is a simple test of memory and reasoning with the goal to empty squares and avoid mines.

To create this program, our group created code on java to construct this game with some rules. Our group made 3 classes - a Main class, GridClass, and GridRunner, MGame, MinesweeperGame, and Square. The GridClass creates the rows and columns of the play board for the program, minesweeper. To play this game, there are some stipulations to follow. The requirements are easy: (1.) Uncover a mine, and the game ends; (2.) Uncover an empty square, and the game continues; (3.) Uncover a number, and the number of mines near the area is revealed.

Some unique features included in our game is the ability to mark the mines on the program. If the player suspects a square consists of and is hiding a mine, the player can right click the square to flag it. But if the person is not sure about his or her decision, then he or she can click on it again which just places a question mark, and the player can continue playing. In addition, clicking on an empty square, will uncover that region and shows the squares with numbers to indicate how many mines are nearby that region or area that the player clicked on.

A restriction or limitation of our program is the inability of the player or user to decide or pick how big their playing field for minesweeper is. Usually in the actual Minesweeper game, a player is allowed to pick different boards: Beginner (9 by 9); Intermediate (16 by 16); and Difficult (20 by 24). However, in our program, there will only be one standard board, consisting of 10 by 10 squares, in which the player can play the game. In addition, the program will say "Game Over" in the bottom of the screen after a player clicks on a mine. However, the player can still click on other squares, but the game is still over, and the player needs to click "Play Again" to start over and continue playing the game.