Project Name: Minesweeper Game using Java Swing API

Overview

Implementation of Java Swing API using Gradle to create “Minesweeper” game.

Game rules are as follows:

- Reveal as many blocks as possible without clicking on the block that contains a mine.
- Once all the blocks are revealed which does not contain any mine, Player wins.
- If a player clicks on any hidden block that contains a mine, all mines will be revealed, and the player will lose the game.
- High score is shown (Need to discuss and finalize on what basis the high score is shown)
- Current Score is shown (Need to discuss how the score of the current session can be calculated)

Functional Requirements:

FR1: User should be able to select the modes of difficulty of the game. Which will trigger UIR2.

FR2: User can click on any block until he clicks on a mine, which will trigger the UIR3.

FR3: User can click on any block that does not contain a mine to open and view its content.

FR4: Showing the revealed blocks neighboring mines count and disabling the block.

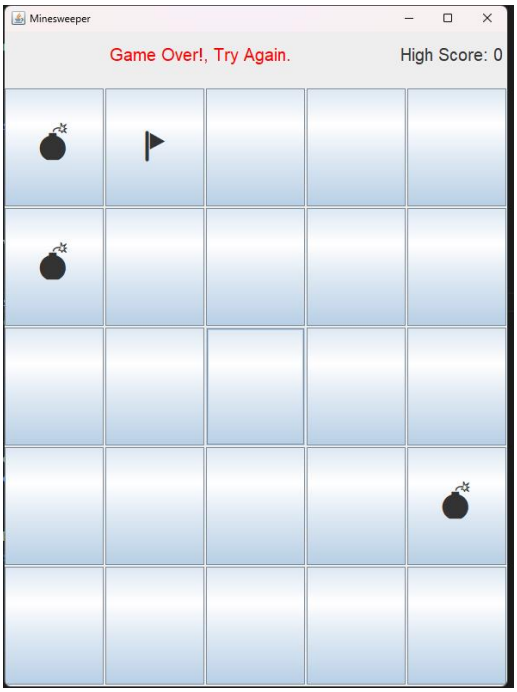
FR5: When clicked on any block that does not contain the neighboring mines, the blocks expand until the blocks that contain the neighboring mines and disable the buttons.

FR6: User can flag the block and unflag it as required, and this flagging should update the mine count label.

FR7: Update the high score if the current score is greater than high score.

User Interface Prototype:

(Include a screenshot of the user interface prototype, developed using Java SWING API)



At current the label and mine emoji and flag emoji are set as static variables need to build the logic for disabling the button and showing the count of neighboring mines (FR5) in future deliverables.

User Interface Requirements:

UIR1: Creating a menu Screen for the Game that contains different difficulty modes and lets the user execute FR1.

UIR2: When FR1 is triggered, a new screen must open with their respective mode for user to perform FR2, FR33, FR4, FR5. (To play the game).

- The difficulty of the game is based on how many mines and how many total blocks to open are present.
- This screen must contain the label of the mine count (how many mines are present).
- Current score.
- High score.
- Enabled blocks for selection.

UIR3: When FR3 is triggered, All the mines are revealed with the mines count label changing to game over! Text. And trigger FR6. And changing the block background of mines to red.

UIR4: When user wins the game, the mines count label should be updated with Congratulations, you won text by triggering FR6.

Appendix

List any sources you used to gather ideas for your application.

Project Plan

Requirement	Deliverable 1	Deliverable 2	Deliverable 3
UIR1	✅		
FR1	✅		
UIR2	✅		
FR2		✅	
UIR3		✅	
FR3		✅	
FR4		✅	
FR5			✅
FR6			✅
FR7			✅
UIR4			✅

Thank you.