Project 1 Requirements

1. Game Grid Specifications

● Grid must be 10 cells by ten cells.
● Rows must be numbered **1 to 10**.
● Columns must be numbered **A to J.**
● All cells must be covered and unflagged(described below) initially.
● Grid must contain between **10 to 20** mines. The user must specify this quantity.

2. Mine-related Requirements

● Mine placement must be randomly generated.
● **The first cell selected by the user must not contain a mine.**

3. Basic Gameplay Requirements

● Players must be able to select(click or type) a cell to uncover.
● The game must end when a cell with a mine is selected (**Loss**).
    ○ **In this event, all mines must be revealed.**
● Uncovering a cell with no mine must display the number of adjacent mines.
    ○ If there are zero adjacent mines, all adjacent cells must also be uncovered. The process repeats if any of those have no adjacent mines.
    ○ **Original Requirement:** A cell should not be uncovered more than once.
● Users must be able to place a flag(see below) on a covered cell to signify a suspected mine.
● The game must end once all cells without mines are uncovered (**Victory**).

4. Flag-related Requirements

● Users must have the ability to insert a flag **ONLY** on covered cells.
● Users must be required to remove a flag **before** uncovering a cell.

5. User Interface Requirement

● Users must be able to view the current grid.
    ○ The grid must specify cells that are covered, flagged, and uncovered.
● Uncovered cells must display one of two options:
    ○ A number denoting the amount of adjacent mines.
    ○ **Blank, if there are zero adjacent mines.**
● Users must be able to view the number of flags they have available.
    ○ specified as the total number of mines minus the number of placed flags.
● Users must be able to view the number of remaining mines.
    ○ specified as total mines minus placed flags.

- Users must be able to view the current status of their game as:
  - "**Playing**": If the game is in progress.
  - "**Game Over: Loss**": If a **Loss**(see above) has occurred.
  - "**Victory**": If a **Victory**(see above) has occurred.
- **Users should be able to play this game through the terminal.**
- Users should receive a brief introduction to the game upon startup.
- Users should always be able to see a hint message explaining game commands.
- Users should be able to monitor their time in seconds as they play the game.