**Project planning**

**Game :**  
I chose ***Minesweeper*** for my project

**Pseudocode:**

1.   have 3 difficulty level: easy, medium , hard.

2.   Set total mines based on the difficulty:

Easy: 10 x 10, 100 cells total.

totalMines = 15

Medium: 20 x 20, 400 cells total.

totalMines = 60

Hard: 40 x 40,1600 cells total.

totalMines = 240

3.   For Each cell set :

isMine = false

isRevealed = false

adjacentMines = 0

4.   Randomly pick cells to place mines and set isMine = true for those cells until all totalMines are placed.

5.   Check each cells:If a neighboring cell has a mine, each mines increase the adjacentMines +=1  for that cell.

6.   Add user click event to picking cell.

7.   If isMine === true for that cell, the game shows a loss and ends.

      If the cell has no mine, show the number of adjacentMines on that cell.

      If adjacentMines === 0, automatically reveal all neighboring cells by using recursion.

then Keep revealing empty cells until the neighboring cells’ adjacentMines !== 0.

**Additional project planning requirements :**

**Recursion**

**What is this?**

Recursion is when a function calls itself to solve smaller pieces of a problem.

**How it works?**

It has a base case to stop the function and a recursive case that keeps calling itself until it stops.

**Why it’s used?**

Recursion makes it easier to handle repeating tasks, like revealing empty spaces in Minesweeper.