Minesweeper

## Project Ideas / Brief

The idea of this project is to make a recreation of the simple game “minesweeper” in C#. The project will need to be broken down into it’s simple parts and created over a period.

## Creation Table

|  |  |  |  |
| --- | --- | --- | --- |
| Part: | Description: |  | Completed? |
| 1 – Visual Representation | Create a complete visual version of the game with no functionality |  |  |
| 1a - Sizing | Generate a windows forms app at the correct size |  |  |
| 1b - Buttons | Procedurally generate a grid of buttons to represent the tiles. |  |  |
| 1c - Scoring | Add a score box for the user to see their points |  |  |
| 1d - Timer | Add a timer box for the user to see their time on their current run |  |  |
| 1e – Best time | Add a timer box for the user to see their best time |  |  |
| 2 – Core functionality | Add some simple functionality that the game is based around |  |  |
| 2a – Tile click / Mine? Return | Add the ability to determine whether a tile is a mine or not when you click on it |  |  |
| 2b – Mine generation | Use random functions to determine which tiles are / aren’t mines |  |  |
| 2c – Click function | Create a function that is run when any tile is clicked |  |  |
| 2d – Click function implementation | Codes the actions that are performed when a tile is clicked |  |  |
| 2d i) Surround check | Checks the surrounding tiles to see how many of them are mines. |  |  |
| 2d ii) Display | Displays the number of surrounding mines on the clicked tile |  |  |
| 2d iii) Exceptions | Exceptions are:  if the tile has a value of 0, or if the tile is a border tile. | IF THE TILE HAS A VALUE OF 0: check bordering tiles to see if they also have a value of 0. If true also reveal that tile etc.  IF THE TILE IS A BORDER TILE: don’t check tiles that are outside the border to avoid errors. |  |
| 3 Testing | Test the program |  |  |
| 4 Improvement | Improve the program using test data |  |  |