

Instructions:

The code was written in C# in VS2015. My simple Minesweeper game was created as a windows form application. Therefore, in the solution path ("your path\MineSweeper\MineSweeper") you can see several main files:

1. Minesweeper.cs – contains all of the functions which generate the game UI and the logic functions.
2. Program.cs – main method is in this file.
3. Minesweeper.Designer.cs – automatically generate when you create solution by using VS2015. Contains the initialized functions for your UI form.

Basic design and idea:

I used two 2-D arrays to store the basic information about the every game. One array is to store all of the buttons which will be generated on the board. Another array is used as a map to find which cell contains a mine and which cell is safe. Every time a click action is done, the program will go ahead and check all surrounding cells in order to get an accurate state of the clicked cell. And when the mine cell is clicked, game ends there and shows the entire map on the UI.

Compile the code: You can use any editor such as notepad++ on windows or sublime on Mac to read the code. If you want to build the project, you will need to install VS2015 from [Microsoft website](#). After you install VS2015, you can click Minesweeper.sln to launch the entire project and rebuild the project.

Run the application:

The program needs to be run on Windows 7, windows 8, windows 8.1 or windows 10. Double click the runnable exe file: Minesweeper\MineSweeper\bin\Release\MineSweeper.exe

Then you can start your game. Use the drop down selectable lists to select your game size. And then make sure to type in a reasonable number of mines. There is little timer to keep track your time for each game. New Game button will clear current game. Start button will start your new game.

1. "*" means mine. When your move hit a cell contains this, Gameover!
2. " " means safe move! No any mines is near this cell.
3. "2" means 2 mines are surrounding this cell. But you don't know which 2.