

Main

Implements all other classes, calls all of the GUIs where necessary. Should not have any of the minesweeper logic or functionality, which should be handled by the other classes.

Constructor:

Creates objects of all other classes (Board board = new Board(), etc) and adds them to a JFrame.

Main:

Draws the window. Allows the user to enter commands from the command line to specify things like board size. Should prompt the user initially to load a previous game or start a new one before any board is actually created.

Board

Creates an 3D array defined by the size of n passed to it that stores whether each place in the array contains a bomb or not. Randomly places bombs (the number of which is placed is determined by the size of the board) throughout the array.

Constructor:

Receives arguments for height and width.

Sets up the amount of bombs based on an algorithm (bigger the board, more bombs there are).

Creates an array storing info on each slot.

Pseudorandomly places bombs throughout the array.

Functions:

Returns info about a part of the array when requested.

Reset the board and create a new one.

BoardUI

Implements Board as a GUI.

Constructor:

Creates a new Board.

Creates an array of buttons of appropriate size in gridlayout.

Functions:

Handles the user interacting with the board. For example, setting flags, the user clicking the buttons, etc.

Location

Contains functions for returning whether or not a bomb exists in a location, as well as returning the number that should belong there (i.e. a 1, 2, or 3)

For examples of what Location should do, see Crystal's Location.java.

TopPanelUI

Contains the main functions at the top that counts score, remaining bomb count, and time, as well as having a button to reset the game. This also does the logic for each of these functions, since the class is otherwise very simple.

Constructor:

Should start a new timer, set the remaining bomb count to whatever Board returns, have a formula for calculating score, etc. It should also create a menu bar with options to reset the game, start a new game, save the game, etc.

Functions:

Should have all the functions necessary to do the stuff – i.e. a function for saving a game, a function for loading a game, a function for resetting the game, etc.