

Answer on Question #47549, Programming, Java | JSP | JSF

Problem.

Minesweeper : This question is expected to be quite time-consuming. You may consider skipping it if you don't have enough time.

Write a program that let you play customized minesweeper. The program will first let user enter a number N, and then a map in N * N size will be created. Also, N mines will be randomly spreaded on the map.

Solution.

Code (Minesweeper.java)

```
import java.util.Random;

public class Minesweeper {
    /**
     * The size of the board
     */
    private int size;

    /**
     * The number of bombs in adjacent cells.
     */
    public int[][] bombsNumber;

    /**
     * The bombs positions.
     */
    public int[][] bombsPosition;

    /**
     * Create game.
     *
     * @param size the size of board
     */
    public Minesweeper(int size) {
        this.size = size;
        bombsNumber = new int[size + 2][size + 2];
        bombsPosition = new int[size + 2][size + 2];

        for (int i = 0; i < size + 2; i++) {
            for (int j = 0; j < size + 2; j++) {
                bombsNumber[i][j] = 0;
                bombsPosition[i][j] = 0;
            }
        }

        for (int i = 0; i < size; i++) {
            Random rand = new Random();
            boolean isNew = false;
            while (!isNew) {
                int number = rand.nextInt(size * size) + 1;
                int x = number / size + 1;
                int y = number - size * (x - 1);
                if (bombsPosition[x][y] == 0) {
                    bombsPosition[x][y] = 1;
                    isNew = true;
                }
            }
        }

        for (int i = 1; i < size + 1; i++) {
            for (int j = 1; j < size + 1; j++) {
```

```

        bombsNumber[i][j] = bombsPosition[i][j]
            + bombsPosition[i - 1][j] + bombsPosition[i +
1][j]
            + bombsPosition[i][j - 1] + bombsPosition[i][j +
1]
            + bombsPosition[i + 1][j + 1] + bombsPosition[i -
1][j - 1];
    }
}

/**
 * Print the puzzle.
 */
public void print() {
    for (int i = 1; i < size + 1; i++) {
        for (int j = 1; j < size + 1; j++) {
            System.out.format(" %3d", bombsNumber[i][j]);

        }
        System.out.println();
    }
}
}

```

Code (Main.java)

```

import java.util.Scanner;

public class Main {
    private static Scanner myScanner = new Scanner(System.in);

    public static void main(String[] args) {
        int size = myScanner.nextInt();
        Minesweeper game = new Minesweeper(size);
        game.print();
    }
}

```

Result

```

5
2  3  2  1  0
2  3  2  1  0
2  3  2  1  0
2  2  2  0  0
2  2  2  0  0

```