

SudokuReader.java

```

1 package edu.ics211.h09;
2
3 import java.io.FileInputStream;
4
5
6
7 /**
8  * Represents a SudokuReader.
9  * Reads sudoku puzzles from text files into 2D java int arrays.
10 * @author Billy Troy Wooton
11 *
12 */
13 public class SudokuReader {
14
15     /**
16      * Takes in the name of a text file containing a sudoku puzzle, of arbitrary dimension.
17      * Reads the contents of the file and returns the puzzle as a 2D array.
18      * Works with any sudoku puzzle, of n x n dimension.
19      * @param filename The name of the file containing the puzzle to be read.
20      * @param dimension The dimension of the width/height of the sudoku puzzle being read.
21      * @return A 2D array of int containing the sudoku puzzle.
22      */
23     public static int[][] readSudoku(String filename, int dimension) {
24         try {
25             Scanner scan = new Scanner(new FileInputStream(filename));
26
27             int[][] sudoku = new int[dimension][];
28
29             for (int i = 0; i < sudoku.length; i++) {
30                 sudoku[i] = new int[dimension];
31             }
32
33             int row = 0;
34             int col = 0;
35
36             while (scan.hasNext()) {
37                 String nextLine = scan.nextLine();
38                 String[] tokens = nextLine.split("\\s+");
39
40                 for (String token : tokens) {
41                     if (token.equals("*")) {
42                         sudoku[row][col] = -1;
43                     } else if (Character.isDigit(token.charAt(0))) {
44                         try {
45                             sudoku[row][col] = Integer.parseInt(token) - 1;
46                         } catch (NumberFormatException e) {
47                             e.printStackTrace();
48                         }
49                     }
50
51                     col += 1;
52
53                     if (col == dimension) {
54                         row += 1;
55                         col = 0;
56                     }
57                 }
58
59             }
60             scan.close();
61             return sudoku;

```

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```
62     } catch (IOException e) {  
63         e.printStackTrace();  
64         return null;  
65     }  
66 }  
67  
68 }  
69
```