X

Java Week 9 : Q4

Due on 2020-04-03, 23:59 IST

A program needs to be developed which can **mirror reflect any 5 × 5 2D character array into its side-by-side reflection.** Write suitable code to achieve this transformation as shown below:

INPUT:	OUTPUT:
OOXOO	OOXOO
OOXOO	OOXOO
XXXOO	OOXXX
OOOOO	OOOOO
XOABC	CBAOX

Note the following points carefully:
1. Here, instead of X and O any character may be present.
2. The input and output array size must be of dimension 5 × 5 and nothing else.
3. Only side-by-side reflection should be performed i.e. ABC || CBA.

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status

Test Case 1	X00 0X 0X0 X0 00X 00 000 00 X00 00	X000X\n 0X0X0\n 00X00\n 00000\n 0000X	X000X\n 0X0X0\n 00X00\n 00000\n 0000X\n	Passed
Test Case 2	000 X0 00X 00 0X0 00 00X 00 000 X0	0X000\n 00X00\n 000X0\n 00X00\n 0X000	0X000\n 00X00\n 000X0\n 00X00\n 0X000\n	Passed

The due date for submitting this assignment has passed.
2 out of 2 tests passed.
You scored 100.0/100.

Assignment submitted on 2020-04-03, 21:36 IST
Your last recorded submission was :

```
1  import java.util.Scanner;
2  public class Question94{
3      public static void main(String args[]){
4          Scanner sc = new Scanner(System.in);
5  // Declare necessary variables
6
7  // Input 5x5 2D Array using Scanner Class
8
9  // Perform the reflection operation
10
11 // Output 5x5 2D Reflection Array
12
13 // Declaring 5x5 2D char array to store input
14         char original[][]= new char[5][5];
15
16         // Declaring 5x5 2D char array to store reflection
17         char reflection[][]= new char[5][5];
18
19         // Input 2D Array using Scanner Class
20         for(int line=0;line<5; line++){
21             String input = sc.nextLine();
22             char seq[] = input.toCharArray();
23             if(seq.length==5){
24                 for(int i=0;i<5;i++){
25                     original[line][i]=seq[i];
26                 }
27             }
28         }
29
30         // Performing the reflection operation
31         for(int i=0; i<5;i++){
32             for(int j=0; j<5;j++){
33                 reflection[i][j]=original[i][4-j];
```

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```
            }
        }

        // Output the 2D Reflection Array
        for(int i=0; i<5;i++){
            for(int j=0; j<5;j++){
                System.out.print(reflection[i][j]);
            }
            System.out.println();
        }
    } // The main() method ends here
} // The main class ends here
```

Sample solutions (Provided by instructor)

Select the Language . Java ▼

```
import java.util.Scanner;
public class Question94{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        // Declaring 5x5 2D char array to store input
        char original[][]= new char[5][5];

        // Declaring 5x5 2D char array to store reflection
        char reflection[][]= new char[5][5];

        // Input 2D Array using Scanner Class
        for(int line=0;line<5; line++){
            String input = sc.nextLine();
            char seq[] = input.toCharArray();
            if(seq.length==5){
                for(int i=0;i<5;i++){
                    original[line][i]=seq[i];
                }
            }
        }

        // Performing the reflection operation
        for(int i=0; i<5;i++){
            for(int j=0; j<5;j++){
                reflection[i][j]=original[i][4-j];
            }
        }

        // Output the 2D Reflection Array
        for(int i=0; i<5;i++){
            for(int j=0; j<5;j++){
                System.out.print(reflection[i][j]);
            }
            System.out.println();
        }
    } // The main() method ends here
} // The main class ends here
```