Java Week 9 : Q4

Due on 2020-11-19, 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:

```
OOX●●
OOX●●
XXX●●
OOO●●
XOABC
```

OUTPUT:

```
●●X●●
●●X●●
●●XXX
●●●●●
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	XOOOX OXOXO OOXOO OOOOO XOOOO	XOOOX\n OXOXO\n OOXOO\n OOOOO\n OOOOX	XOOOX\n OXOXO\n OOXOO\n OOOOO\n OOOOX\n	Passed
Test Case 2	OOOXO OOXOO OXOOO OOXOO OOOXO	OXOOO\n OOXOO\n OOOXO\n OOXOO\n OXOOO	OXOOO\n OOXOO\n OOOXO\n OOXOO\n OXOOO\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 2020-11-10, 22:58 IST

Your last recorded submission was :

```java
import java.util.Scanner;
public class Question94{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
// Declare necessary variables

// Input 5x5 2D Array using Scanner Class

// Perform the reflection operation

// Output 5x5 2D Reflection Array
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
```

Sample solutions (Provided by instructor)

```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
```