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## Course outline

How does an NPTEL online course work?

Week 0 :

Week 1 :

Week 2 :

Week 3 :

Week 4 :

Week 5 :

Week 6 :

Week 7 :

Week 8 :

Week 9 :

● Lecture 41 :  
Demonstration-

## Java Week 9 : Q5

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

Write suitable code to develop a **2D Flip-Flop Array with dimension  $5 \times 5$ , which replaces all input elements with values 0 by 1 and 1 by 0**. An example is shown below:

INPUT:

```
00001
00001
00001
00001
00001
```

OUTPUT:

```
11110
11110
11110
11110
11110
```

**Note the following points carefully:**

1. Here, the input must contain only 0 and 1.
2. The input and output array size must be of dimension  $5 \times 5$ .
3. Flip-Flop: If 0 then 1 and vice-versa.

**Private Test cases used for evaluation**

| Input | Expected Output | Actual Output | Status |
|-------|-----------------|---------------|--------|
|-------|-----------------|---------------|--------|

XV (unit?  
unit=10&lesson=55)

- Lecture 42 :  
AWT  
Programming--  
III (unit?  
unit=10&lesson=56)

Test Case 1

- Lecture 43 :  
Swing—I  
(unit?  
unit=10&lesson=57)

- Lecture 44 :  
Swing—II  
(unit?  
unit=10&lesson=58)

The due date for submitting this assignment has passed.

1 out of 1 tests passed.

You scored 100.0/100.

- Lecture 45 :  
Demonstration-  
XVI (unit?  
unit=10&lesson=59)

**Assignment submitted on 2020-04-03, 21:37 IST**

Your last recorded submission was :

- Quiz :  
Assignment 9  
(assessment?  
name=104)

- Java Week 9 :  
Q1  
(/noc20\_cs08/progassign  
name=167)

- Java Week 9 :  
Q2  
(/noc20\_cs08/progassign  
name=168)

- Java Week 9 :  
Q3  
(/noc20\_cs08/progassign  
name=169)

- Java Week 9 :  
Q4  
(/noc20\_cs08/progassign  
name=170)

- Java Week 9 :  
Q5  
(/noc20\_cs08/progassign  
name=171)

- Feedback For  
Week 9 (unit?  
unit=10&lesson=178)

**Week 10 :**

111  
11  
100  
01  
100  
01  
100  
01  
111  
11

00000\n  
01110\n  
01110\n  
01110\n  
00000

00000\n  
01110\n  
01110\n  
01110\n  
00000\n

Pass  
ed

```

1 import java.util.Scanner;
2 public class Question95{
3     public static void main(String args[]){
4         Scanner sc = new Scanner(System.in);
5         // Declare the 5X5 2D array to store the input
6
7         // Input 2D Array using Scanner Class and check data validity
8
9         // Perform the Flip-Flop Operation
10        // Declare the 5X5 2D array to store the input
11        char original[][]= new char[5][5];
12
13        // Input 2D Array using Scanner Class and check data validity
14        for(int line=0;line<5; line++){
15            String input = sc.nextLine();
16            char seq[] = input.toCharArray();
17            if(seq.length==5){
18                for(int i=0;i<5;i++){
19                    if(seq[i]=='0' || seq[i]=='1'){
20                        original[line][i]=seq[i];
21                        if(line==4 && i==4)
22                            flipflop(original);
23                    }
24                    else{
25                        System.out.print("Only 0 and 1 supported.");
26                        break;
27                    }
28                }
29            }
30            else{
31                System.out.print("Invalid length");
32                break;
33            }
34        }
35    }
36    static void flipflop(char[][] flip){
37        // Flip-Flop Operation
38        for(int i=0; i<5;i++){
39            for(int j=0; j<5;j++){
40                if(flip[i][j]=='1')
41                    flip[i][j]='0';
42                else
43                    flip[i][j]='1';
44            }
45        }
46
47        // Output the 2D FlipFlopped Array
48        for(int i=0; i<5;i++){
49            for(int j=0; j<5;j++){
50                System.out.print(flip[i][j]);

```

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## Assignment Solution

## Books

## Live Interactive Session

```

51         }
52         System.out.println();
53     }
54 // Output the 2D Flip-Flop Array
55 } // The main() ends here
56 } // The main class ends here

```

Sample solutions (Provided by instructor)

Select the Language . Java ▼

```

1  import java.util.Scanner;
2  public class Question95{
3      public static void main(String args[]){
4          Scanner sc = new Scanner(System.in);
5          // Declare the 5X5 2D array to store the input
6          char original[][]= new char[5][5];
7
8          // Input 2D Array using Scanner Class and check data validity
9          for(int line=0;line<5; line++){
10             String input = sc.nextLine();
11             char seq[] = input.toCharArray();
12             if(seq.length==5){
13                 for(int i=0;i<5;i++){
14                     if(seq[i]!='0' || seq[i]!='1'){
15                         original[line][i]=seq[i];
16                         if(line==4 && i==4)
17                             flipflop(original);
18                     }
19                     else{
20                         System.out.print("Only 0 and 1 supported.");
21                         break;
22                     }
23                 }
24             }else{
25                 System.out.print("Invalid length");
26                 break;
27             }
28         }
29     }
30 }
31 static void flipflop(char[][] flip){
32     // Flip-Flop Operation
33     for(int i=0; i<5;i++){
34         for(int j=0; j<5;j++){
35             if(flip[i][j]=='1'){
36                 flip[i][j]='0';
37             }
38             else
39                 flip[i][j]='1';
40         }
41     }
42     // Output the 2D FlipFlopped Array
43     for(int i=0; i<5;i++){
44         for(int j=0; j<5;j++){
45             System.out.print(flip[i][j]);
46         }
47         System.out.println();
48     }
49 } // The main() ends here
50 } // The main class ends here

```

