Lab CAT

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Reg. No.: 18BCE2261
Course Name: Java Programming
Course Code: CSE1007
Slot: L9+L10

12-10-2021:

1) Write a Java program to create a jagged array and perform the following.

Ruhan Lakshan

Thejaswini Tanishwar Ramya

Aruna

(i) Reverse each position string.

(ii) Display the string in each row having greatest length.

1) **Program:**

```
import java.util.*;

public class LabCat18BCE2261
{
    //Displaying the details of the jagged array
    public static void display(String[][] arr)
    {
        int n=arr.length;
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<arr[i].length;j++)
            {
                System.out.print(arr[i][j]+" ");
            }
            System.out.println();
        }
    }

    //(i) Reversing each string inputted
    public static void reverse(String[][] rev)
    {
        int n=rev.length;
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<rev[i].length;j++)
            {
                String input= rev[i][j];
                StringBuffer sbr = new StringBuffer(input);
                rev[i][j]=sbr.reverse().toString();
```

```
            }
        }
    }

    //(ii) Finding maxlength of a string in a given array
    public static void findmaxlength(String[][] arr)
    {
        System.out.println();
        System.out.println("Max lengths");
        for(int i=0;i<arr.length;i++)
        {
            String max=arr[i][0];
            int maxlen=max.length();
            for(int j=1;j<arr[i].length;j++)
            {
                if(arr[i][j].length()>maxlen)
                {
                    max=arr[i][j];
                    maxlen=arr[i][j].length();
                }
            }
            System.out.println(max);
        }
    }

    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Sanjoi Sethi (18BCE2261)");
        System.out.println("Enter the no of rows:");
        int n=sc.nextInt();
        String[][] arr=new String[n][];
        String[][] rev=new String[n][];

        //Creating columns for array and inputting the array
        for(int i=0;i<n;i++)
        {
            System.out.println("Enter the no of columns for "+(i)+" row:");
            int m=sc.nextInt();
            arr[i]=new String[m];
            rev[i]=new String[m];
        }
        sc.nextLine();
        for(int i=0;i<n;i++)
        {
            for(int j=0;j<arr[i].length;j++)
            {
                System.out.println("Enter row "+(i+1)+" and column
"+(j+1)+" value:");
                arr[i][j]=sc.nextLine();
                rev[i][j]=arr[i][j];
            }
        }
        System.out.println();
        System.out.println("Original array:");
        display(arr);
        reverse(rev);
        System.out.println();
        System.out.println("After reversing:");
        display(rev);
        findmaxlength(arr);
```

```
    }
}
```

Output for Sample Input:

```
C:\Users\SanJoi\Java Programming Lab>java LabCat18BCE2261
Sanjoi Sethi (18BCE2261)
Enter the no of rows:
3
Enter the no of columns for 0 row:
2
Enter the no of columns for 1 row:
3
Enter the no of columns for 2 row:
1
Enter row 1 and column 1 value:
Ruhan
Enter row 1 and column 2 value:
Lakshan
Enter row 2 and column 1 value:
Thejaswini
Enter row 2 and column 2 value:
Tanishwar
Enter row 2 and column 3 value:
Ramya
Enter row 3 and column 1 value:
Aruna

Original array:
Ruhan Lakshan
Thejaswini Tanishwar Ramya
Aruna

After reversing:
nahuR nahskaL
iniwsajehT rawhsinaT aymaR
anurA

Max lengths
Lakshan
Thejaswini
Aruna
```

Output for other Input:

```
C:\Users\SanJoi\Java Programming Lab>javac LabCat18BCE2261.java

C:\Users\SanJoi\Java Programming Lab>java LabCat18BCE2261
Sanjoi Sethi (18BCE2261)
Enter the no of rows:
3
Enter the no of columns for 0 row:
2
Enter the no of columns for 1 row:
3
Enter the no of columns for 2 row:
2
Enter row 1 and column 1 value:
Sanjoi
Enter row 1 and column 2 value:
Kabir
Enter row 2 and column 1 value:
Riya
Enter row 2 and column 2 value:
Shivansh
Enter row 2 and column 3 value:
Anant
Enter row 3 and column 1 value:
Yash
Enter row 3 and column 2 value:
Sakshi

Original array:
Sanjoi Kabir
Riya Shivansh Anant
Yash Sakshi

After reversing:
iojnaS ribaK
ayiR hsnavihS tnanA
hsaY ihskaS

Max lengths
Sanjoi
Shivansh
Sakshi
```