

OBJECT ORIENTED PROGRAMMING LAB**Experiment No.: 2****Aim**

Read 2 matrices from the console and perform matrix addition.

Procedure**Source Code**

```
import java.util.Scanner;

public class Matrixaddition {
    public void Display(int [][] arr,int row,int col){
        for(int i=0;i<row;i++){
            for(int j=0;j<col;j++){
                System.out.print(arr[i][j]+"\\t");
            }
            System.out.println();
        }
    }
}

public static void main(String[] args) {
    int[][] mat1=new int[5][5];
    int[][] mat2=new int[5][5];
    int[][] mat3=new int[5][5];
    int rows1, cols1, rows2, cols2;

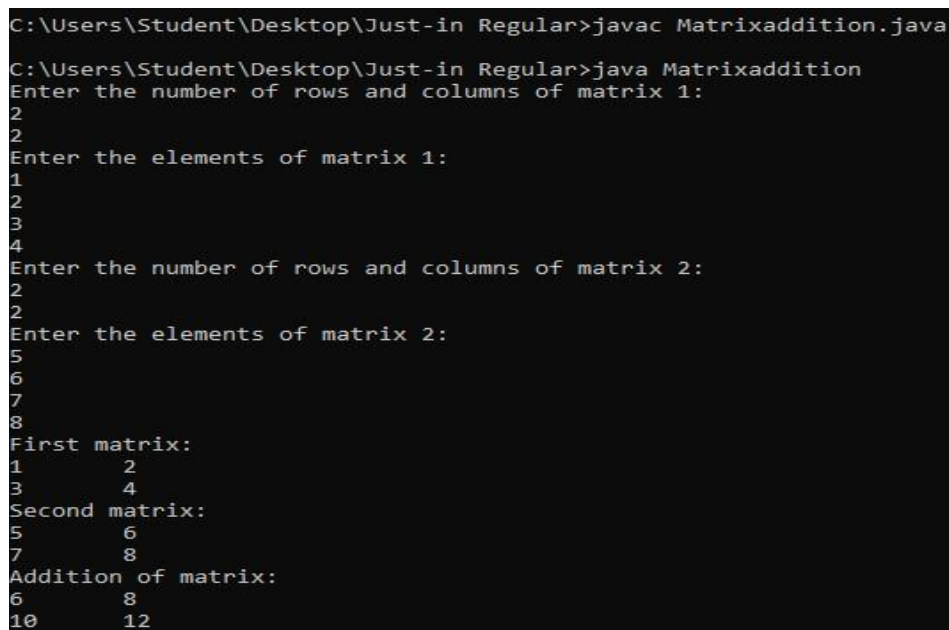
    Matrixaddition obj=new Matrixaddition();
    Scanner s=new Scanner(System.in);
    System.out.println("Enter the number of rows and columns of matrix 1:");
    rows1=s.nextInt();
    cols1=s.nextInt();
    System.out.println("Enter the elements of matrix 1:");
    for(int i=0;i<rows1;i++)
    {
        for(int j=0;j<cols1;j++)
        {
            mat1[i][j]=s.nextInt();
        }
    }
    System.out.println("Enter the number of rows and columns of matrix2:");
    rows2=s.nextInt();
    cols2=s.nextInt();
    System.out.println("Enter the elements of matrix 2:");
    for(int i=0;i<rows2;i++)
    {
```

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```
        for(int j=0;j<cols2;j++)
        {
            mat2[i][j]=s.nextInt();
        }
    }
    if(rows1==rows2 && cols1==cols2)
    {
        for(int i=0;i<rows1;i++)
        {
            for(int j=0;j<cols1;j++)
            {
                mat3[i][j]=mat1[i][j]+mat2[i][j];
            }
        }

        System.out.println("First matrix:");
        obj.Display(mat1,rows1,cols1);
        System.out.println("Second matrix:");
        obj.Display(mat2,rows2,cols2);
        System.out.println("Addition of two matrix:");
        obj.Display(mat3,rows1,cols1);
    }
    else
    {
        System.out.println("The matrices cannot be added.");
    }
}
}
```

Output Screenshot



```
C:\Users\Student\Desktop\Just-in Regular>javac Matrixaddition.java
C:\Users\Student\Desktop\Just-in Regular>java Matrixaddition
Enter the number of rows and columns of matrix 1:
2
2
Enter the elements of matrix 1:
1
2
3
4
Enter the number of rows and columns of matrix 2:
2
2
Enter the elements of matrix 2:
5
6
7
8
First matrix:
1      2
3      4
Second matrix:
5      6
7      8
Addition of matrix:
6      8
10     12
```