OBJECT ORIENTED PROGRAMMING LAB

Name: JUSTIN V KALAPPURA

Roll No: 10

Batch: MCA

Date: 06/04/22

Experiment No.: 1

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 matrix 2");
        rows2=s.nextInt();
        cols2=s.nextInt();
        System.out.println("Enter the elements of matrix 2");
        for(int i=0;i<rows2;i++)
        {   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("1st matrix");
            obj.Display(mat1,rows1,cols1);
            System.out.println("2nd matrix");
            obj.Display(mat2,rows2,cols2);
            System.out.println("Addition of matrix");
            obj.Display(mat3,rows1,cols1);
        }
        else
        {    System.out.println("The matrices cannot be added");
        }
}
}
```

Output Screenshot

```
C:\Users\Student\Documents\Amal Antoney\HTML\05-04-21>javac MatrixAddition.java

C:\Users\Student\Documents\Amal Antoney\HTML\05-04-21>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
1
2
3
4
1st matrix
1       2
3       4
2nd matrix
1       2
3       4
Addition of matrix
2       4
6       8
```