OBJECT ORIENTED PROGRAMING LAB

Experiment No.: 2

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Roll No : 46

Batch : B

Date : 06-04-22

Aim

Read 2 matrices from the console and perform matrix addition.

Source Code

```
import java.util.*;

class MatrixAddition{

        public static void main(String[] args){

                int row, col;

                Scanner sc= new Scanner(System.in);

                System.out.print("Enter the number of rows for the Matrices : ");
                row= sc.nextInt();
                System.out.print("Enter the number of columns for the Matrices : ");
                col= sc.nextInt();

                int[][] matrixA= new int[row][col];
                int[][] matrixB= new int[row][col];
                int[][] matrixSum= new int[row][col];

                System.out.println("Enter the elements for the Matrix A : ");
                for(int i=0;i<row;i++){
                        for(int j=0;j<col;j++){
                                matrixA[i][j]= sc.nextInt();
                        }
                }
                System.out.println("\n");

                System.out.println("Enter the elements for the Matrix B : ");
                for(int i=0;i<row;i++){
                        for(int j=0;j<col;j++){
```

```java
                        matrixB[i][j]= sc.nextInt();
                }
        }
        System.out.println("\n");

        System.out.println("Matrix A is : ");
        for(int i=0;i<row;i++){
                for(int j=0;j<col;j++){
                        System.out.print(matrixA[i][j]+"   ");
                }
                System.out.println("\n");
        }

        System.out.println("Matrix B is : ");
        for(int i=0;i<row;i++){
                for(int j=0;j<col;j++){
                        System.out.print(matrixB[i][j]+"   ");
                }
                System.out.println("\n");
        }

        for(int i=0;i<row;i++){
                for(int j=0;j<col;j++){
                        matrixSum[i][j]= matrixA[i][j] + matrixB[i][j];
                }
        }

        System.out.println("Resultant of the Matrix Addition is : ");
        for(int i=0;i<row;i++){
                for(int j=0;j<col;j++){
                        System.out.print(matrixSum[i][j]+"   ");
                }
                System.out.println("\n");
        }
    }
}
```

Output Screenshot

```
D:\Swetha\Java>javac MatrixAddition.java

D:\Swetha\Java>java MatrixAddition
Enter the number of rows for the Matrices : 3
Enter the number of columns for the Matrices : 3
Enter the elements for the Matrix A :
1
2
3
4
5
6
7
8
9


Enter the elements for the Matrix B :
5
6
7
8
9
4
3
2
1


Matrix A is :
1    2    3

4    5    6

7    8    9

Matrix B is :
5    6    7

8    9    4

3    2    1

Resultant of the Matrix Addition is :
6    8    10

12    14    10

10    10    10
```