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**Batch: RMCA B**

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**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 2**

**Aim**

To read 2 matrices from the console and perform matrix addition.

**Procedure**

import java.util.Scanner;

public class MatrixAddition

{

public static void main(String[] args)

{

int p, q, m, n;

Scanner sc = new Scanner(System.in);

System.out.print("Enter the number of rows in the first matrix:");

p = sc.nextInt();

System.out.print("Enter the number of columns in the first matrix:");

q = sc.nextInt();

System.out.print("Enter the number of rows in the second matrix:");

m = sc.nextInt();

System.out.print("Enter the number of columns in the second matrix:");

n = sc.nextInt();

if (p == m && q == n)

{

int a[][] = new int[p][q];

int b[][] = new int[m][n];

int c[][] = new int[m][n];

System.out.println("Enter all the elements of first matrix:");

for (int i = 0; i < p; i++)

{

for (int j = 0; j < q; j++)

{

a[i][j] = sc.nextInt();

}

}

System.out.println("");

System.out.println("Enter all the elements of second matrix:");

for (int i = 0; i < m; i++)

{

for (int j = 0; j < n; j++)

{

b[i][j] = sc.nextInt();

}

}

System.out.println("");

System.out.println("First Matrix:");

for (int i = 0; i < p; i++)

{

for (int j = 0; j < q; j++)

{

System.out.print(a[i][j]+" ");

}

System.out.println("");

}

System.out.println("Second Matrix:");

for (int i = 0; i < m; i++)

{

for (int j = 0; j < n; j++)

{

System.out.print(b[i][j]+" ");

}

System.out.println("");

}

for (int i = 0; i < p; i++)

{

for (int j = 0; j < n; j++)

{

for (int k = 0; k < q; k++)

{

c[i][j] = a[i][j] + b[i][j];

}

}

}

System.out.println("Matrix after addition:");

for (int i = 0; i < p; i++)

{

for (int j = 0; j < n; j++)

{

System.out.print(c[i][j]+" ");

}

System.out.println("");

}

}

else

{

System.out.println("Addition not possible");

System.out.println("Try Again");

}

}

}

OUTPUT

