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**Batch:S2RMCA-B**

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**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No: 4**

**Aim**

Read a matrix from the console and check whether it is symmetric or not.

**Procedure**

import java.util.Scanner;

public class Symmetric

{

public static void main(String[] args )

{

Scanner skill = new Scanner( System.in);

System.out.println( "Enter the number of rows :");

int rows = skill.nextInt();

System.out.println("Enter the number of columns :");

int cols = skill.nextInt();

int matrix[][] = new int[rows][cols];

System.out.println("Enter the elements :");

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

{

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

{

matrix[i][j] = skill.nextInt();

}

}

System.out.println("The input matrix is :");

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

{

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

{

System.out.print(matrix[i][j]+"\t");

}

System.out.println();

}

if ( rows != cols )

{

System.out.println("The given matrix is not a square matrix, so it can't be symmetric.");

}

else

{

boolean symmetric = true;

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

{

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

{

if ( matrix[i][j] != matrix[j][i] )

{

symmetric = false;

break;

}

}

}

if ( symmetric)

{

System.out.println("The given matrix is symmetric.");

}

else

{

System.out.println("The given matrix is not symmetric.");

}

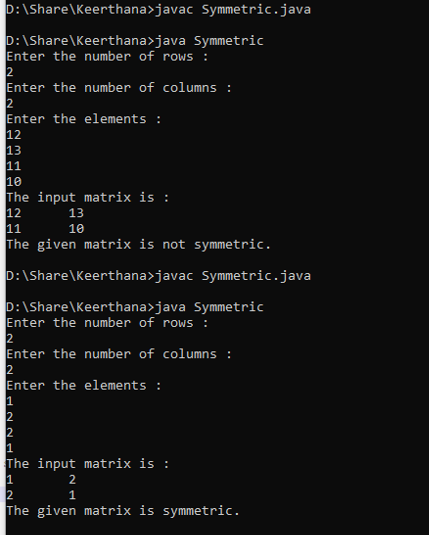
}

skill.close();

}

}

**Output Screenshot**

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