

OBJECT ORIENTED PROGRAMMING LAB**Name: ATHUL VINAYAKUMAR****Roll No:5****Batch: MCA B****Date:06/04/2022****Experiment No.: 4****Aim**

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

Procedure

```
import java.util.*;

public class Symetric {

static void checkSymmetric(int mat[][], int row,int col)

{

int i, j, flag = 1;

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

for (i = 0; i < row; i++) {

for (j = 0; j < col; j++) {

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

}

System.out.println("");

}

int[][] transpose = new int[row][col];

for (i = 0; i < row; i++) {

for (j = 0; j < col; j++) {

transpose[j][i] = mat[i][j];

}

}

if (row == col) {

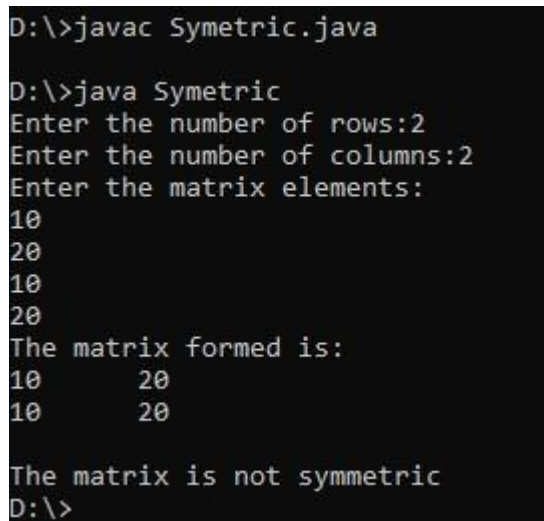
for (i = 0; i < row; i++) {

for (j = 0; j < col; j++) {
```

```
if (mat[i][j] != transpose[i][j]) {  
    flag = 0;  
    break;  
}  
}  
  
if (flag == 0) {  
    System.out.print("\nThe matrix is not symmetric");  
    break;  
}  
}  
  
if (flag == 1) {  
    System.out.print("\nThe matrix is symmetric");  
}  
}  
  
else {  
    System.out.print("\nThe matrix is not symmetric");  
}  
}  
  
public static void main(String args[])  
{  
    Scanner sc = new Scanner(System.in);  
    int i, j, row, col, flag = 1;  
    System.out.print("Enter the number of rows:");  
    row = sc.nextInt();  
    System.out.print("Enter the number of columns:");  
    col = sc.nextInt();  
    int[][] mat = new int[row][col];  
    System.out.println("Enter the matrix elements:");  
    for (i = 0; i < row; i++) {
```

```
for (j = 0; j < col; j++) {  
    mat[i][j] = sc.nextInt();  
}  
}  
checkSymmetric(mat, row, col);  
}  
}
```

Output Screenshot



The screenshot shows a command prompt window with the following text:

```
D:\>javac Symetric.java  
  
D:\>java Symetric  
Enter the number of rows:2  
Enter the number of columns:2  
Enter the matrix elements:  
10  
20  
10  
20  
The matrix formed is:  
10      20  
10      20  
  
The matrix is not symmetric  
D:\>
```