```java
/*Transpose of Matrix  */
import java.util.Scanner;
public class Common{
    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter number of rows: ");
        int rows = sc.nextInt();

        System.out.print("Enter number of columns: ");
        int cols = sc.nextInt();

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

        System.out.print("Enter matrix elements:");
        for (int i = 0; i < rows; i++) {
            for (int j = 0; j < cols; j++) {
                matrix[i][j] = sc.nextInt();
            }
        }

        for (int i = 0; i < rows; i++) {
            for (int j = 0; j < cols; j++) {
                transpose[j][i] = matrix[i][j];
            }
        }

        System.out.println("Transpose of the matrix:");
        for (int i = 0; i < cols; i++) {
            for (int j = 0; j < rows; j++) {
                System.out.print(transpose[i][j] + " ");
            }
            System.out.println();
        }
    }
}
```
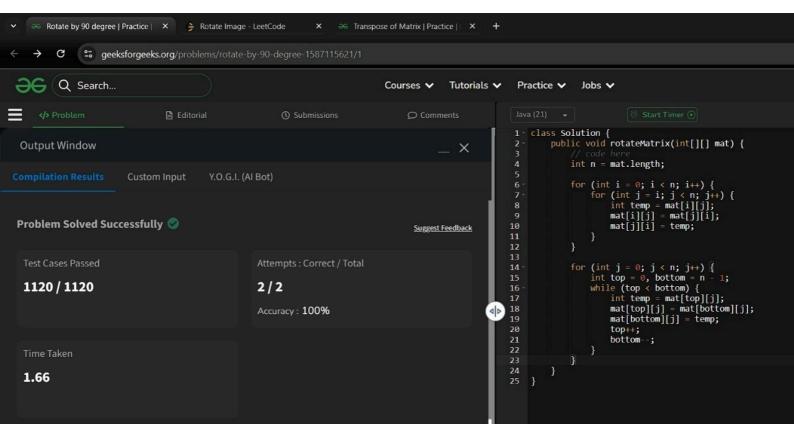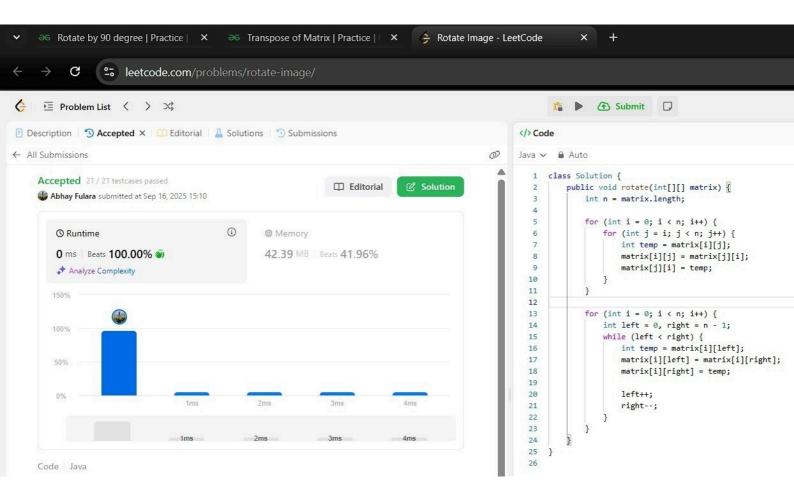
```java
/*Transpose of matrix without using new matrix */
import java.util.Scanner;
public class Common {
    Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        int n = sc.nextInt();

        int[][] matrix = new int[n][n];

        System.out.println("Enter elements:");
        for (int i = 0; i < n; i++) {
            for (int j = 0; j < n; j++) {
                matrix[i][j] = sc.nextInt();
            }
        }

        for (int i = 0; i < n; i++) {
            for (int j = i + 1; j < n; j++) {
                int temp = matrix[i][j];
                matrix[i][j] = matrix[j][i];
                matrix[j][i] = temp;
            }
        }

        System.out.println("Transpose of matrix:");
        for (int i = 0; i < n; i++) {
            for (int j = 0; j < n; j++) {
                System.out.print(matrix[i][j] + " ");
            }
            System.out.println();
        }

    }
}
```

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</> Problem   📄 Editorial   🕐 Submissions   💬 Comments

Java (21) ⌄   ⏱ Start Timer ▶

Output Window   — ✕

Compilation Results   Custom Input   Y.O.G.I. (AI Bot)

Problem Solved Successfully ✅   Suggest Feedback

Test Cases Passed

1120 / 1120

Attempts : Correct / Total

2 / 2

Accuracy : **100%**

Time Taken

1.66

```java
class Solution {
    public void rotateMatrix(int[][] mat) {
        // code here
        int n = mat.length;

        for (int i = 0; i < n; i++) {
            for (int j = i; j < n; j++) {
                int temp = mat[i][j];
                mat[i][j] = mat[j][i];
                mat[j][i] = temp;
            }
        }

        for (int j = 0; j < n; j++) {
            int top = 0, bottom = n - 1;
            while (top < bottom) {
                int temp = mat[top][j];
                mat[top][j] = mat[bottom][j];
                mat[bottom][j] = temp;
                top++;
                bottom--;
            }
        }
    }
}
```

Problem List ‹ › ⤭

▶ ⬆ Submit

Description | 🕘 Accepted ✕ | 📖 Editorial | 🧪 Solutions | 🕘 Submissions

← All Submissions

Accepted 21 / 21 testcases passed

📖 Editorial | ✏ Solution

Abhay Fulara submitted at Sep 16, 2025 15:10

🕐 **Runtime** ⓘ

0 ms | Beats **100.00%** ✋

✦ Analyze Complexity

⚙ **Memory**

42.39 MB | Beats **41.96%**

150%

100%

50%

0%

1ms   2ms   3ms   4ms

1ms   2ms   3ms   4ms

Code | Java

```java
class Solution {
    public void rotate(int[][] matrix) {
        int n = matrix.length;

        for (int i = 0; i < n; i++) {
            for (int j = i; j < n; j++) {
                int temp = matrix[i][j];
                matrix[i][j] = matrix[j][i];
                matrix[j][i] = temp;
            }
        }

        for (int i = 0; i < n; i++) {
            int left = 0, right = n - 1;
            while (left < right) {
                int temp = matrix[i][left];
                matrix[i][left] = matrix[i][right];
                matrix[i][right] = temp;

                left++;
                right--;
            }
        }
    }
}
```

```java
import java.util.Scanner;


public class Wave{
    //Run | Debug
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        int N = sc.nextInt();
        int M = sc.nextInt();

        int[][] matrix = new int[N][M];
        for (int i = 0; i < N; i++) {
            for (int j = 0; j < M; j++) {
                matrix[i][j] = sc.nextInt();
            }
        }

        for (int j = 0; j < M; j++) {
            if (j % 2 == 0) {
                for (int i = 0; i < N; i++) {
                    System.out.print(matrix[i][j] + " ");
                }
            } else {

                for (int i = N - 1; i >= 0; i--) {
                    System.out.print(matrix[i][j] + " ");
                }
            }
        }

        sc.close();
    }
}
```

```java
import java.util.Scanner;

public class Spiral{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        int N = sc.nextInt();
        int M = sc.nextInt();

        int[][] matrix = new int[N][M];
        for (int i = 0; i < N; i++) {
            for (int j = 0; j < M; j++) {
                matrix[i][j] = sc.nextInt();
            }
        }

        int rowBegin = 0;
        int rowEnd = N - 1;
        int colBegin = 0;
        int colEnd = M - 1;

while (rowBegin <= rowEnd && colBegin <= colEnd) {

    for (int j = colBegin; j <= colEnd; j++) {
        System.out.print(matrix[rowBegin][j] + " ");
    }
    rowBegin++;

    for (int i = rowBegin; i <= rowEnd; i++) {
        System.out.print(matrix[i][colEnd] + " ");
    }
    colEnd--;

    if (rowBegin <= rowEnd) {
        for (int j = colEnd; j >= colBegin; j--) {
            System.out.print(matrix[rowEnd][j] + " ");
        }
        rowEnd--;
    }

    if (colBegin <= colEnd) {
        for (int i = rowEnd; i >= rowBegin; i--) {
            System.out.print(matrix[i][colBegin] + " ");
        }
        colBegin++;
    }

}
}
}
```