

```
#include <stdio.h>

int main() {
    int rows, cols;

    // Input size of matrix
    printf("Enter number of rows: ");
    scanf("%d", &rows);
    printf("Enter number of columns: ");
    scanf("%d", &cols);

    int matrix[100][100], transpose[100][100];

    // Input matrix elements
    printf("Enter elements of the matrix:\n");
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < cols; j++) {
            printf("Element [%d][%d]: ", i, j);
            scanf("%d", &matrix[i][j]);
        }
    }

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

```
// Print the original matrix
printf("\nOriginal Matrix:\n");
for (int i = 0; i < rows; i++) {
    for (int j = 0; j < cols; j++) {
        printf("%d\t", matrix[i][j]);
    }
    printf("\n");
}

// Print the transposed matrix
printf("\nTransposed Matrix:\n");
for (int i = 0; i < cols; i++) {
    for (int j = 0; j < rows; j++) {
        printf("%d\t", transpose[i][j]);
    }
    printf("\n");
}

return 0;
```

Enter number of rows: 2

Enter number of columns: 2

Enter elements of the matrix:

Element [0][0]: 21

Element [0][1]: 22

Element [1][0]: 22

Element [1][1]: 22

Original Matrix:

|    |    |
|----|----|
| 21 | 22 |
|----|----|

|    |    |
|----|----|
| 22 | 22 |
|----|----|

Transposed Matrix:

|    |    |
|----|----|
| 21 | 22 |
|----|----|

|    |    |
|----|----|
| 22 | 22 |
|----|----|