TRANSPOSE IN MATRICES

#include <stdio.h>

#define MAX 10

void transpose(int matrix[MAX][MAX], int transposed[MAX][MAX], int rows, int cols) {

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

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

transposed[j][i] = matrix[i][j];

}

}

}

void printMatrix(int matrix[MAX][MAX], int rows, int cols) {

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

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

printf("%d ", matrix[i][j]);

}

printf("\n");

}

}

int main() {

int matrix[MAX][MAX], transposed[MAX][MAX];

int rows, cols;

printf("Enter the number of rows and columns: ");

scanf("%d %d", &rows, &cols);

printf("Enter the elements of the matrix:\n");

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

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

scanf("%d", &matrix[i][j]);

}

}

transpose(matrix, transposed, rows, cols);

printf("\nOriginal Matrix:\n");

printMatrix(matrix, rows, cols);

printf("\nTransposed Matrix:\n");

printMatrix(transposed, cols, rows);

return 0;

}

