main.c

Share Run

```c
//DAY 37
//Q73
#include <stdio.h>
int main() {
    int rows, cols, i, j;
    printf("Enter number of rows: ");
    scanf("%d", &rows);
    printf("Enter number of columns: ");
    scanf("%d", &cols);

    int matrix[rows][cols];
    int rowSum[rows];
    printf("Enter elements of the matrix:\n");
    for (i = 0; i < rows; i++) {
        for (j = 0; j < cols; j++) {
            printf("Enter element [%d][%d]: ", i, j);
            scanf("%d", &matrix[i][j]);
        }
    }
    for (i = 0; i < rows; i++){
        rowSum[i] = 0;
        for (j = 0; j < cols; j++) {
            rowSum[i] += matrix[i][j];
        }
    }
    printf("\nThe entered matrix is:\n");
    for (i = 0; i < rows; i++) {
        for (j = 0; j < cols; j++) {
            printf("%d\t", matrix[i][j]);
        }
        printf("\n");
    }
    printf("\nSum of each row:\n");
    for (i = 0; i < rows; i++) {
        printf("Row %d sum = %d\n", i + 1, rowSum[i]);
    }
    return 0;
```

Output

```
Enter number of rows: 3
Enter number of columns: 2
Enter elements of the matrix:
Enter element [0][0]: 3
Enter element [0][1]: 2
Enter element [1][0]: 5
Enter element [1][1]: 3
Enter element [2][0]: 2
Enter element [2][1]: 3

The entered matrix is:
3   2
5   3
2   3

Sum of each row:
Row 1 sum = 5
Row 2 sum = 8
Row 3 sum = 5


=== Code Execution Successful ===
```

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//DAY 37
//Q74
#include <stdio.h>
int main() {
    int rows, cols, i, j;
    printf("Enter number of rows: ");
    scanf("%d", &rows);
    printf("Enter number of columns: ");
    scanf("%d", &cols);

    int matrix[rows][cols], transpose[cols][rows];

    printf("Enter elements of the matrix:\n");
    for (i = 0; i < rows; i++) {
        for (j = 0; j < cols; j++) {
            printf("Enter element [%d][%d]: ", i, j);
            scanf("%d", &matrix[i][j]);
        }
    }
    for (i = 0; i < rows; i++) {
        for (j = 0; j < cols; j++) {
            transpose[j][i] = matrix[i][j];
        }
    }
    printf("\nThe original matrix is:\n");
    for (i = 0; i < rows; i++) {
        for (j = 0; j < cols; j++) {
            printf("%d\t", matrix[i][j]);
        }
        printf("\n");
    }
    printf("\nThe transpose of the matrix is:\n");
    for (i = 0; i < cols; i++) {
        for (j = 0; j < rows; j++) {
            printf("%d\t", transpose[i][j]);
        }
        printf("\n");
```

Output

```
Enter number of rows: 2
Enter number of columns: 3
Enter elements of the matrix:
Enter element [0][0]: 2
Enter element [0][1]: 8
Enter element [0][2]: 2
Enter element [1][0]: 4
Enter element [1][1]: 6
Enter element [1][2]: 2

The original matrix is:
2   8   2
4   6   2

The transpose of the matrix is:
2   4
8   6
2   2


=== Code Execution Successful ===
```