

MULTIPLICATION OF TWO MATRICES

```
#include <stdio.h>

#define ROW_SIZE 3
#define COL_SIZE 3

void multiplyMatrices(int mat1[ROW_SIZE][COL_SIZE], int mat2[ROW_SIZE][COL_SIZE], int
result[ROW_SIZE][COL_SIZE]) {
    int i, j, k;
    for (i = 0; i < ROW_SIZE; i++) {
        for (j = 0; j < COL_SIZE; j++) {
            result[i][j] = 0;
            for (k = 0; k < COL_SIZE; k++) {
                result[i][j] += mat1[i][k] * mat2[k][j];
            }
        }
    }
}

void displayMatrix(int matrix[ROW_SIZE][COL_SIZE]) {
    int i, j;
    for (i = 0; i < ROW_SIZE; i++) {
        for (j = 0; j < COL_SIZE; j++) {
            printf("%d\t", matrix[i][j]);
        }
        printf("\n");
    }
}

int main() {
    int matrix1[ROW_SIZE][COL_SIZE] = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};
    int matrix2[ROW_SIZE][COL_SIZE] = {{9, 8, 7}, {6, 5, 4}, {3, 2, 1}};
    int result[ROW_SIZE][COL_SIZE];

    multiplyMatrices(matrix1, matrix2, result);

    printf("Matrix 1:\n");
    displayMatrix(matrix1);

    printf("\nMatrix 2:\n");
    displayMatrix(matrix2);

    printf("\nResultant Matrix (Matrix1 * Matrix2):\n");
    displayMatrix(result);

    return 0;
}
```


programiz.com


(4) WhatsApp

Rajendran certificates - Google Drive


(1) Notifications | LinkedIn

C Array and Pointer Examples


Programiz
C Online Compiler



LEARN PYTHON
Learn More

LOOKING TO LEARN PROGRAMMING?
Start your programming journey with Programiz **AT NO COST.**



C Certification >

main.c



Save

Run

Output

Clear

```
1 #include <stdio.h>
2
3 #define ROW_SIZE 3
4 #define COL_SIZE 3
5
6 void multiplyMatrices(int mat1[ROW_SIZE][COL_SIZE], int
  mat2[ROW_SIZE][COL_SIZE], int result[ROW_SIZE][COL_SIZE]) {
7     int i, j, k;
8     for (i = 0; i < ROW_SIZE; i++) {
9         for (j = 0; j < COL_SIZE; j++) {
10             result[i][j] = 0;
11             for (k = 0; k < COL_SIZE; k++) {
12                 result[i][j] += mat1[i][k] * mat2[k][j];
13             }
14         }
15     }
16 }
17
18 void displayMatrix(int matrix[ROW_SIZE][COL_SIZE]) {
19     int i, j;
20     for (i = 0; i < ROW_SIZE; i++) {
21         for (j = 0; j < COL_SIZE; j++) {
22             printf("%d\t", matrix[i][j]);
23         }
24         printf("\n");
25     }
26 }
27
28 int main() {
29     int matrix1[ROW_SIZE][COL_SIZE] = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}};
```

```
//tmp/z1PCQ09P0E.o
Matrix 1:
1  2  3
4  5  6
7  8  9

Matrix 2:
9  8  7
6  5  4
3  2  1

Resultant Matrix (Matrix1 * Matrix2):
30 24 18
84 69 54
138 114 90
```