

Working with Multi-Dimensional Arrays (Matrix)

```
#include <stdio.h>

#define ROWS 3
#define COLS 3

void matrixAddition(int mat1[ROWS][COLS], int mat2[ROWS][COLS], int result[ROWS][COLS]) {
    for (int i = 0; i < ROWS; i++) {
        for (int j = 0; j < COLS; j++) {
            result[i][j] = mat1[i][j] + mat2[i][j];
        }
    }
}

void displayMatrix(int mat[ROWS][COLS])
{
    for (int i = 0; i < ROWS; i++) {
        for (int j = 0; j < COLS; j++) {
            printf("%d ", mat[i][j]);
        }
        printf("\n");
    }
}

int main() {
    int matrix1[ROWS][COLS] = {
        {3, 2, 4},
        {2, 6, 3},
        {5, 8, 7}
    };
}
```

```
int matrix2[ROWS][COLS] = {  
    {1, 4, 6},  
    {4, 3, 2},  
    {5, 7, 8}  
};  
  
int resultMatrix[ROWS][COLS];  
  
matrixAddition(matrix1, matrix2, resultMatrix);  
  
printf("Matrix 1:\n");  
  
displayMatrix(matrix1);  
  
printf("\nMatrix 2:\n");  
  
displayMatrix(matrix2);  
  
printf("\nMatrix Sum:\n");  
  
displayMatrix(resultMatrix);  
  
return 0;  
}
```

~C:\Users\E bay\Desktop\New folder\PRACTICAL\bin\Debug\PRACTICAL.exe"

Matrix 1:

3 2 4
2 6 3
5 8 7

Matrix 2:

1 4 6
4 3 2
5 7 8

Matrix Sum:

4 6 10
6 9 5
10 15 15

Process returned 0 (0x0) execution time : 0.032 s
Press any key to continue.