# **PRACTICAL 07**

### Working with Multi-Dimensional Arrays

01)

#include <stdio.h>

#define ROWS 3

#define COLS 3

void matrixSum(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] =

{

{2, 2, 2},

{2, 7, 9},

{3, 1, 4}

};

int matrix2[ROWS][COLS] =

{

{0, 5, 8},

{9, 1, 7},

{4, 8, 4}

};

int sumMatrix[ROWS][COLS];

matrixSum(matrix1, matrix2, sumMatrix);

printf("Matrix 1:\n");

displayMatrix(matrix1);

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

displayMatrix(matrix2);

printf("\nMatrix Sum:\n");

displayMatrix(sumMatrix);

return 0;

}