```c
#include <stdio.h>

int main() {
    int row, col;

    // Define the dimensions of the matrices
    printf("Enter the number of rows: ");
    scanf("%d", &row);
    printf("Enter the number of columns: ");
    scanf("%d", &col);

    // Define the two matrices
    int matrix1[row][col];
    int matrix2[row][col];
    int result[row][col];

    // Input elements for the first matrix
    printf("Enter elements for the first matrix:\n");
    for (int i = 0; i < row; i++) {
        for (int j = 0; j < col; j++) {
            printf("Enter element for matrix1[%d][%d]: ", i, j);
            scanf("%d", &matrix1[i][j]);
        }
    }

    // Input elements for the second matrix
    printf("Enter elements for the second matrix:\n");
    for (int i = 0; i < row; i++) {
        for (int j = 0; j < col; j++) {
            printf("Enter element for matrix2[%d][%d]: ", i, j);
            scanf("%d", &matrix2[i][j]);
        }
    }

    // Add the matrices
    for (int i = 0; i < row; i++) {
        for (int j = 0; j < col; j++) {
            result[i][j] = matrix1[i][j] + matrix2[i][j];
        }
    }

    // Display the result matrix
    printf("Resultant matrix after addition:\n");
    for (int i = 0; i < row; i++) {
        for (int j = 0; j < col; j++) {
            printf("%d ", result[i][j]);
        }
        printf("\n");
    }

    return 0;
}
```