**TITLE 20**

Write a C program to input two matrices of 5\*5 add them and output the resultant matrix

**OBJECTIVE:**

By the end of this activity we will be able to add matrices of any number of rows and columns and the output will be the sum of the matrices

**PROBLEM STATEMENT:**

In this problem we aim to input the number of rows and columns and the elements of the matrices. Input from user:

Enter the number of rows and columns of matrix:

Enter the elements of first matrix:

Enter the elements of the second matrix:

Once the data is collected and stored, the sum of the matrices is given as the output.

**ALGORITHM:**

START

Define variables: m, n, c, d, first, second, sum

INPUT: Read input from keyboard

COMPUTATION: All the elements are entered in the matrices

DISPLAY: Prints the sum of the matrices

STOP

**PROGRAM:**

#include <stdio.h>  
   
int main()  
{  
   int m, n, c, d, first[100][100], second[100][100], sum[100][100];  
   
   printf("Enter the number of rows and columns of matrix:**\n**");  
   scanf("%d%d", &m, &n);  
   printf("Enter the elements of first matrix:**\n**");  
   
   for (c = 0; c < m; c++)  
      for (d = 0; d < n; d++)  
         scanf("%d", &first[c][d]);  
   
   printf("Enter the elements of second matrix:**\n**");  
   
   for (c = 0; c < m; c++)  
      for (d = 0 ; d < n; d++)  
         scanf("%d", &second[c][d]);  
     
   printf("Sum of entered matrices:**\n**");  
     
   for (c = 0; c < m; c++) {  
      for (d = 0 ; d < n; d++) {  
         sum[c][d] = first[c][d] + second[c][d];  
         printf("%d**\t**", sum[c][d]);  
      }  
      printf("**\n**");  
   }  
   
   return 0;  
}

**CONCLUSION:**

The simulation of the above C program helped me to understand how we can input elements into a matrix and find the sum of matrices.

**OUTPUT:**

Enter the number of rows and columns of matrix:

5

5

Enter the elements of first matrix:

1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

16 17 18 19 20

21 22 23 24 25

Enter the elements of second matrix:

34 54 65 87 98

4 6 3 1 9

7 59 0 58 43

7 5 85 94 8

3 54 87 81 78

Sum of entered matrices:

35 56 68 91 103

10 13 11 10 19

18 71 13 72 58

23 13 103 113 28

24 76 110 105 103