

matrixAddition.c

```
1  #include <stdio.h>
2
3  // Function to add two matrices of same dimensions
4
5  int main(){
6
7      // Declaring two 2x3 matrices and a result matrix
8      int a[2][3], b[2][3], sum[2][3], i,j;
9
10     // Taking input for first matrix
11     printf("Enter elements of first matrix:\n");
12     for(i=0; i<2; i++){
13         for(j=0; j<3; j++){
14             printf("Element [%d][%d]: ", i, j);
15             scanf("%d", &a[i][j]);
16         }
17     }
18
19     // Taking input for second matrix
20     printf("Enter elements of second matrix:\n");
21     for(i=0; i<2; i++){
22         for(j=0; j<3; j++){
23             printf("Element [%d][%d]: ", i, j);
24             scanf("%d", &b[i][j]);
25         }
26     }
27
28     // Displaying the first matrix
29     printf("First matrix:\n");
30     for(i=0; i<2; i++){
31         for(j=0; j<3; j++){
32             printf("%d ", a[i][j]);
33         }
34         printf("\n");
35     }
36
37     // Displaying the second matrix
38     printf("Second matrix:\n");
39     for(i=0; i<2; i++){
40         for(j=0; j<3; j++){
41             printf("%d ", b[i][j]);
42         }
43         printf("\n");
44     }
45
46     // Adding the two matrices
47     for(i=0; i<2; i++){
48         for(j=0; j<3; j++){
49             sum[i][j] = a[i][j] + b[i][j];
50         }
51     }
```

```

52
53 // Displaying the sum
54 printf("Sum of the two matrices:\n");
55 for(i=0; i<2; i++){
56     for(j=0; j<3; j++){
57         printf("%d ", sum[i][j]);
58     }
59     printf("\n");
60 }
61
62 return 0;
63 }
64
65
66 /**
67  * *****
68  * Example Input/Output:
69  * *****
70 Enter elements of first matrix:
71 Element [0][0]: 2
72 Element [0][1]: 1
73 Element [0][2]: 3
74 Element [1][0]: 4
75 Element [1][1]: 5
76 Element [1][2]: 6
77 Enter elements of second matrix:
78 Element [0][0]: 6
79 Element [0][1]: 1
80 Element [0][2]: 9
81 Element [1][0]: 5
82 Element [1][1]: 4
83 Element [1][2]: 5
84 First matrix:
85 2 1 3
86 4 5 6
87 Second matrix:
88 6 1 9
89 5 4 5
90 Sum of the two matrices:
91 8 2 12
92 9 9 11
93 *****/

```