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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Problem Solving Through Programming In C (course)

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Course outline

- **How does an NPTEL online course work? ()**
- **Week 0 : ()**
- **Week 1 ()**
- **Week 2 ()**
- **Week 3 ()**
- **Week 4 ()**
- **Week 5 ()**

Week 7 : Programming Assignment 3

Due on 2023-09-14, 23:59 IST

Write a C program to find subtraction of two matrices i.e. matrix_A - matrix_B=matrix_C.

If the given martix are

2 3 5 and 1 5 2 Then the output will be 1 -2 3

4 5 6 2 3 4 2 2 2

6 5 7 3 3 4 3 2 3

The elements of the output matrix are separated by one blank space

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status

Week 6 ()

Week 7 ()

- Lecture 31 : Linear Search (unit?unit=69&lesson=70)
- Lecture 32 : Character Array and Strings (unit?unit=69&lesson=71)
- Lecture 33 : String Operations (unit?unit=69&lesson=72)
- Lecture 34 : 2-D Array Operation (unit?unit=69&lesson=73)
- Lecture 35 : Introducing Functions (unit?unit=69&lesson=74)
- Quiz: Week 7: Assignment 7 (assessment?name=248)
- Week 7 : Programming Assignment 1 (/noc23_cs121/progassignment?name=249)
- Week 7 : Programming Assignment 2 (/noc23_cs121/progassignment?name=250)

Test Case 1	3 4 5 6 7 8 3 2 5 6 1 3 9 5 2 9 3 1 2 5 1 2 2 3 4 1	3 -3 4 7 \n 1 -3 4 4 \n -1 0 5 4	3 -3 4 7 \n 1 -3 4 4 \n -1 0 5 4 \n	Passed

The due date for submitting this assignment has passed.
1 out of 1 tests passed.
You scored 100.0/100.

Assignment submitted on 2023-09-02, 23:29 IST

Your last recorded submission was :

```c
#include <stdio.h>
int main()
{
    int matrix_A[20][20], matrix_B[20][20], matrix_C[20][20];
    int i,j,row,col;
    scanf("%d",&row); //Accepts number of rows
    scanf("%d",&col); //Accepts number of columns

    /* Elements of first matrix are accepted from test data */
    for(i=0; i<row; i++)
    {
        for(j=0; j<col; j++)
        {
            scanf("%d", &matrix_A[i][j]);
        }
    }

     /* Elements of second matrix are accepted from test data */

    for(i=0; i<row; i++)
    {
        for(j=0; j<col; j++)
        {
            scanf("%d", &matrix_B[i][j]);
        }
    }
```

- **Week 7 : Programming Assignment 3 (/noc23_cs121/progassignment?name=251)**
- Week 7 : Programming Assignment 4 (/noc23_cs121/progassignment?name=252)
- Feedback Form of Week 7 (unit?unit=69&lesson=255)
- Assignment 7 Solution (unit?unit=69&lesson=76)
- **Week 8 ()**
- **Week 9 ()**
- **Week 10 ()**
- **DOWNLOAD VIDEOS ()**
- **Books ()**
- **Text Transcripts ()**
- **Problem Solving Session - July 2023 ()**


```
27
28 /* Complete the program to get the desired output. Use printf() statement as
29     printf("%d ", matrix_C[i][j]); You can declare your own variables if requ
30 */
31 for(i=0;i<row;i++)
32 {
33 for(j=0;j<col;j++)
34   printf("%d ",matrix_A[i][j]-matrix_B[i][j]);
35   printf("\n");
36 }
37 return 0;
38 }
```

Sample solutions (Provided by instructor)

```
 1 #include <stdio.h>
 2 int main()
 3 {
 4     int matrix_A[20][20], matrix_B[20][20], matrix_C[20][20];
 5     int i,j,row,col;
 6     scanf("%d",&row); //Accepts number of rows
 7     scanf("%d",&col); //Accepts number of columns
 8
 9     /* Elements of first matrix are accepted from test data */
10     for(i=0; i<row; i++)
11     {
12         for(j=0; j<col; j++)
13         {
14             scanf("%d", &matrix_A[i][j]);
15         }
16     }
17
18      /* Elements of second matrix are accepted from test data */
19
20     for(i=0; i<row; i++)
21     {
22         for(j=0; j<col; j++)
23         {
24             scanf("%d", &matrix_B[i][j]);
25         }
26     }
27
28 /* Complete the program to get the desired output. Use printf() statement as
29     printf("%d ", matrix_C[i][j]); You can declare your own variables if requ
30 */
31 /*
32     Subtract both matrices and store the result in matrix C
33   */
34    for(i=0; i<row; i++)
35     {
36         for(j=0; j<col; j++)
37         {
38
39             matrix_C[i][j] = matrix_A[i][j] - matrix_B[i][j];
40         }
41     }
42
43      for(i=0; i<row; i++)
44     {
45         for(j=0; j<col; j++)
46         {
47             printf("%d ", matrix_C[i][j]);
48         }
49         printf("\n");
50     }
51
52     return 0;
53 }
```