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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 10 : Programming Assignment 02

**Due on 2023-10-05, 23:59 IST**

Write a C code to check if a 3 x 3 matrix is invertible. A matrix is not invertible if its determinant is 0.

**Your last recorded submission was on 2023-10-05, 09:39 IST**

Select the Language for this assignment. C ▾

```

1 #include<stdio.h>
2 int main()
3 {
4     int a[3][3], i, j;
5     long determinant;
6     // 9 elements of matrix is taken as input from test data
7     for(i = 0 ; i < 3; i++)
8         for(j = 0; j < 3; j++)
9             scanf("%d", &a[i][j]);
10
11 /*Use the printf statements as:
12 printf("The given matrix is not invertible");
13 printf("The given matrix is invertible");
14 */
15 determinant=a[0][0]*((a[1][1]*a[2][2])-(a[2][1]*a[1][2]))-a[0][1]*(a[1][2]*a[2][0])
16 if(determinant==0)
17     printf("The given matrix is not invertible");
18 else
19     printf("The given matrix is invertible");
20 return 0;
21 }
```

**Week 6 ()****Week 7 ()****Week 8 ()****Week 9 ()****Week 10 ()**

☐ Lecture 46:  
Bubble Sort  
(Contd.) (unit?  
unit=93&lesso  
n=94)

☐ Lecture 47:  
Use of Pointer  
in Function :  
Context  
Bubble Sort  
(unit?  
unit=93&lesso  
n=95)

☐ Lecture 48:  
Arrays at  
Strings (unit?  
unit=93&lesso  
n=96)

☐ Lecture 49:  
Data  
Representatio  
n (unit?  
unit=93&lesso  
n=97)

☒ Lecture 50:  
Bisection  
Method (unit?  
unit=93&lesso  
n=98)

☒ Quiz: Week 10  
: Assignment  
10  
(assessment?  
name=267)

☒ Week 10 :  
Programming  
Assignment  
01  
(/noc23\_cs121  
/progassignm

You may submit any number of times before the due date. The final submission will be considered for grading.

**This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.**

Save as DraftCompile & RunSubmitReset**Sample Test Cases**

|             | Input | Output                             |
|-------------|-------|------------------------------------|
| Test Case 1 | 1     | The given matrix is not invertible |
|             | 2     |                                    |
|             | 3     |                                    |
|             | 4     |                                    |
|             | 5     |                                    |
|             | 6     |                                    |
|             | 7     |                                    |
|             | 8     |                                    |
|             | 9     |                                    |
| Test Case 2 | 1     | The given matrix is invertible     |
|             | 0     |                                    |
|             | 5     |                                    |
|             | 2     |                                    |
|             | 1     |                                    |
|             | 6     |                                    |
|             | 3     |                                    |
|             | 4     |                                    |
|             | 0     |                                    |

ent?  
name=268)

☒ **Week 10 :  
Programmin  
g Assignment  
02  
(/noc23\_cs12  
1/progassign  
ment?  
name=269)**

☒ Week 10 :  
Programming  
Assignment  
03  
(/noc23\_cs121  
/progassignm  
ent?  
name=270)

☒ Week 10 :  
Programming  
Assignment  
04  
(/noc23\_cs121  
/progassignm  
ent?  
name=271)

☐ Feedback  
Form of Week  
10 (unit?  
unit=93&lesso  
n=272)

**Week 11 ()**

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VIDEOS ()**

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**Problem  
Solving  
Session -  
July 2023 ()**

