

S.No: 9	Exp. Name: <i>Design a C program to print the sequence of numbers in which each number is the sum of the three most recent predecessors</i>	Date:2023-04-01
---------	---	-----------------

Aim:

Design a C program to print the sequence of numbers in which each number is the sum of the three most recent predecessors. Assume first three numbers as 0, 1, and 1, print the result as shown in the example.

Sample Input and Output:

```
Enter the number of terms: 7
First 7 terms in the series are:
0
1
1
2
4
7
13
```

Source Code:

first.c

```
#include<stdio.h>
int main()
{
    int t1=0,t2=1,t3=1,t4,n,i;
    printf("Enter the number of terms: ");
    scanf("%d",&n);
    printf("First %d terms in the series are:",n);
    printf("\n%d\n%d\n%d\n",t1,t2,t3);
    for(i=4;i<=n;i++)
    {
        t4=t1+t2+t3;
        printf("%d\n",t4);
        t1=t2;
        t2=t3;
        t3=t4;
    }
    return 0;
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter the number of terms: 5
First 5 terms in the series are:
0
1
1
2

4

Test Case - 2
User Output
Enter the number of terms: 7
First 7 terms in the series are:
0
1
1
2
4
7
13

Test Case - 3
User Output
Enter the number of terms: 13
First 13 terms in the series are:
0
1
1
2
4
7
13
24
44
81
149
274
504