

## Assignment Number – 05

**Aim:** Write a C++ Program to print Fibonacci series up to n terms

**Objective:**

- 1) To understand concept of editor and compiler.
- 2) To understand different components of a basic C++ Program.
- 3) To understand concept of for loop
- 4) Understanding of Fibonacci series

**Algorithm:**

Step 1. START

Step 2: Declare int i, n, n1, n2, term

Step 3: Initialize n1=0, n2=1

Step 4: set value of term = n1 + n2

Step 5: Enter the number of terms of Fibonacci series to be printed (n)

Step 6: print first two terms of the series (n1 , n2)

Step 7: Loop through following steps until i<=n

Step I: print term, i.e for first loop is n1+n2

Step II: n1 =n2

Step III: n2 = term

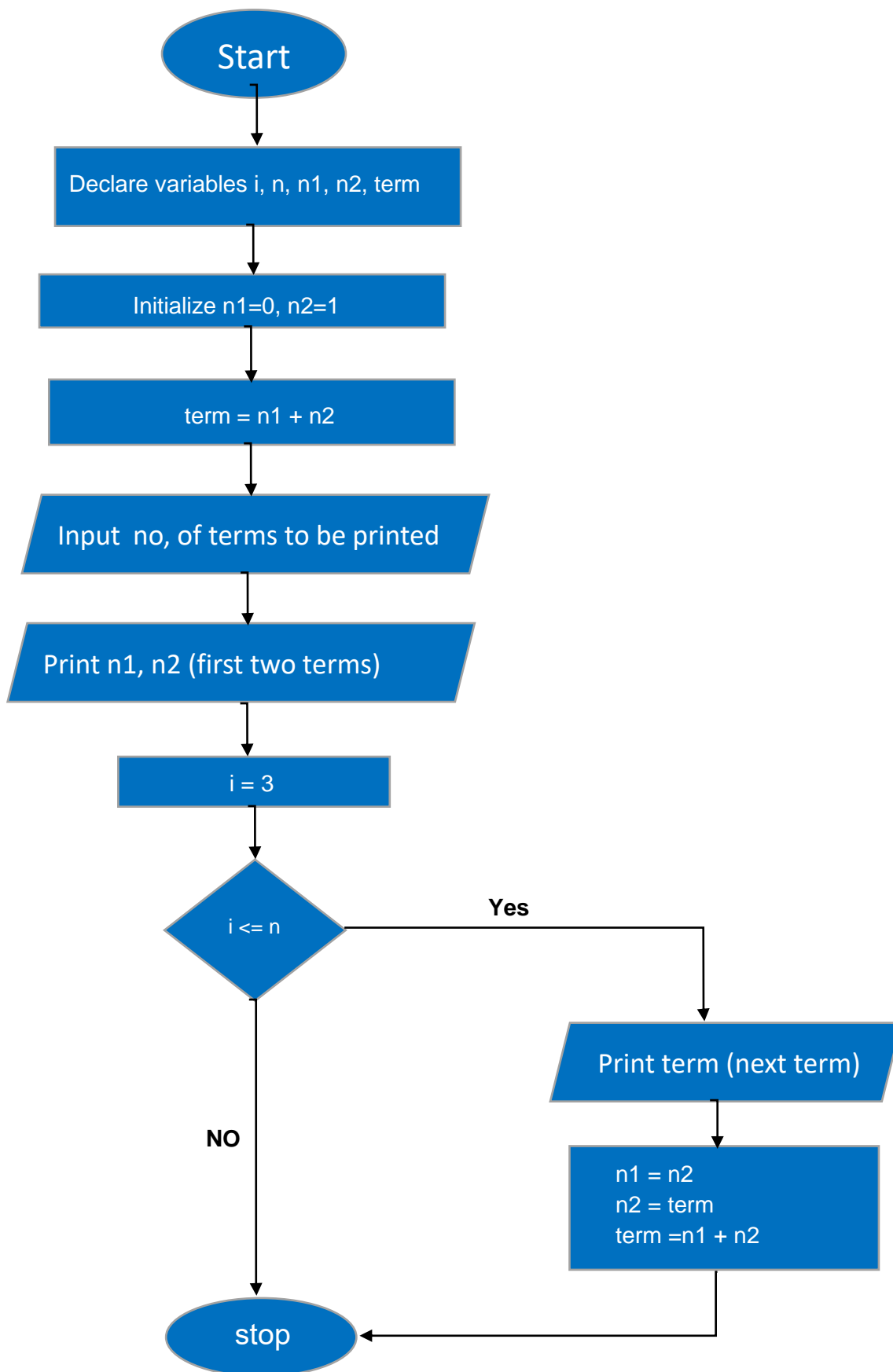
Step IV: term = n1 + n2

Step V: i = i + 1

Step 8: Stop

//flowchart on next page.

**Flowchart:**



```
1 #include <iostream>
2 #include <bits/stdc++.h>
3 using namespace std;
4
5 int main()
6 {
7     int i, n;
8     int n1 = 0, n2 = 1;
9     int Term = n1 + n2; // term =1
10    cout << "Enter the number of terms: " << endl;
11    cin >> n;
12    cout << "Series is: " << endl;
13    cout << n1 << " ", << n2 << " ";
14
15    for (i = 3; i <= n; ++i)
16    {
17        cout << Term << " ";
18        n1 = n2;
19        n2 = Term;
20        Term = n1 + n2;
21    }
22
23    return 0;
24 }
```

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\Work\Skills\Programming\C & C++\CollegeWork> cd "d:\Work\Skills\Programming\C & C++\CollegeWork\FP\" ; if ($?) { g++ fibo2.cpp -o fibo2 } ; if ($?) { .\fibo2 }
Enter the number of terms:
10
Series is:
0, 1, 1, 2, 3, 5, 8, 13, 21, 34,
PS D:\Work\Skills\Programming\C & C++\CollegeWork\FP>
```

## output:

Enter the number of terms: 10

Series is: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34,

## Conclusion:

Thus we have successfully written the C++ program to print Fibonacci series. In this program we have used the int variable 'i', 'n', 'n1', 'n2'. Where n is no. of terms in Fibonacci series. In this program we for loop and condition to loop and print n terms. Also, used 'cin' and 'cout' built-in function to get the input from user and to display the result on screen/ monitor respectively. Thus we have successfully executed the code in VScode