Problem statement:

Write a program to print Fibonacci series upto n number of terms.

The term Fibonacci comes from the name of an Italian Mathematician Leonardo of Pisa, known as Fibonacci.

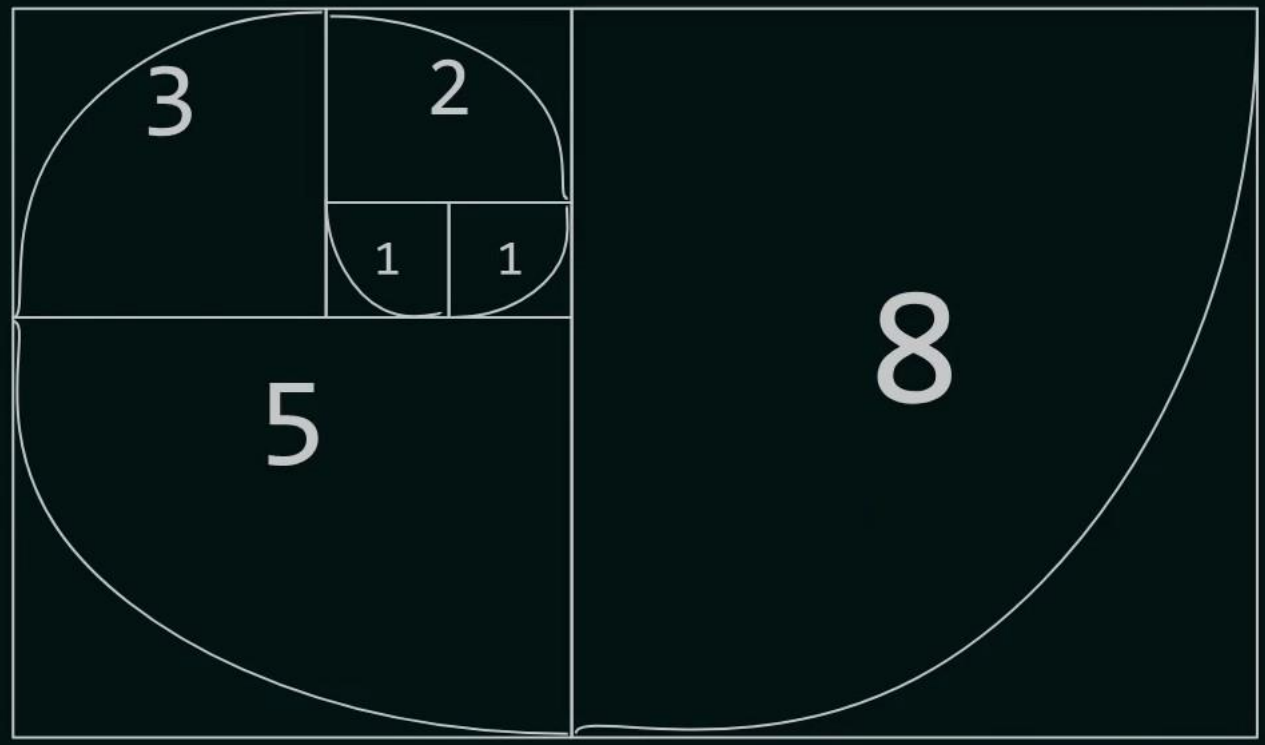
What is fibonacci series?

In fibonacci series, next term is obtained by taking sum of previous two terms

n	1	2	3	4	5	6
fib(n)	0	1	1	2	3	5

Mathematically,

fib(n) = fib(n-1) + fib(n-2)



```
a = 0;
b = 1;

for(i=1; i<=n; i++)
{
    printf("%d ", a);
    result = a + b;
    a = b;
    b = result;
}
```

Example:

n = 6

Iteration 1:
0

result = 1

a = 1

b = 1

Iteration 2:
1

result = 2

a = 1

b = 2

Iteration 3:
1

result = 3

a = 2

b = 3

Iteration 4:
2

result = 5

a = 3

b = 5

Iteration 5:
3

result = 8

a = 5

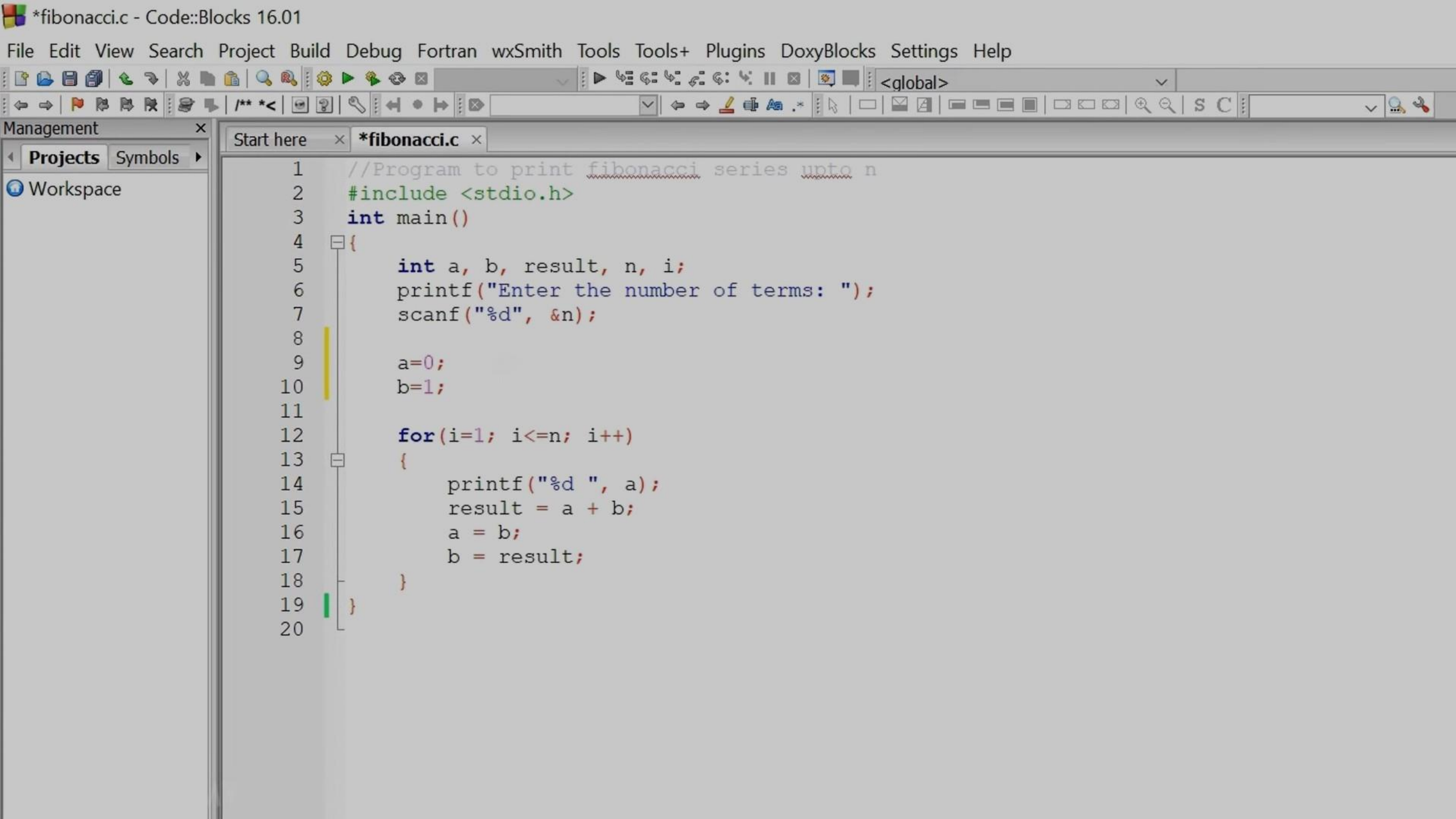
b = 8

Iteration 6:
5

result = 13

a = 8

b = 13


*fibonacci.c - Code::Blocks 16.01
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
<global>
Management
Projects Symbols
Workspace
Start here
*fibonacci.c
1 //Program to print fibonacci series upto n
2 #include <stdio.h>
3 int main()
4 {
5 int a, b, result, n, i;
6 printf("Enter the number of terms: ");
7 scanf("%d", &n);
8
9 a=0;
10 b=1;
11
12 for(i=1; i<=n; i++)
13 {
14 printf("%d ", a);
15 result = a + b;
16 a = b;
17 b = result;
18 }
19 }
20