

ASSIGNMENT 6

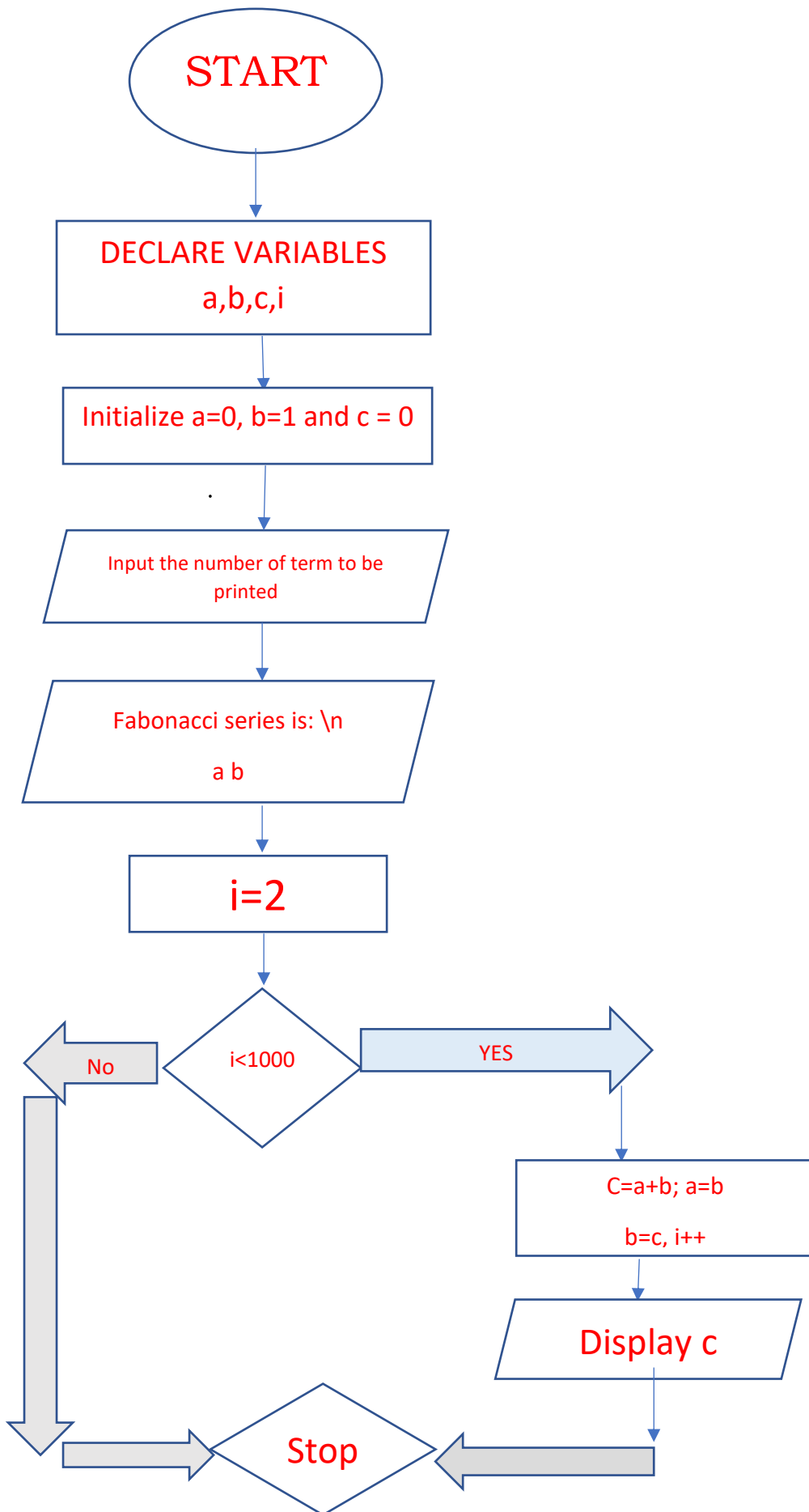
AIM-

Write a C program to print Fibonacci series up to n terms(for loop)

ALGORITHM

1. Start
2. Declare variables a,b,n,i
3. Print the statement which asks user to enter terms of Fibonacci series and use scanf for the user to input the terms
4. Initialize variables a=0, b=1
5. If $i < n$, which satisfies condition $n=1000$
6. Display Fibonacci series till terms ≤ 1000
7. Display value of c when
8. $a=b$
9. $b=n$
10. $n=a+b$
11. increase value of i each time by 1
12. End

FLOWCHART



Program

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int a,b,n,i;
```

```
    a=0;
```

```
    b=1;
```

```
    printf("The Fibonacci series till terms less than  
equal to 1000 is \n\n");
```

```
    for(i = 0; i<1000; i++)
```

```
    {
```

```
        if (i <= 1)
```

```
        n = 1;
```

```
        else
```

```
        {
```

```
            n = a+b;
```

```
            a=b;
```

```
            b=n;
```

```
            if (n > 1000)
```

```
            {
```

```
                break;
```

```
            }
```

```
    }
```

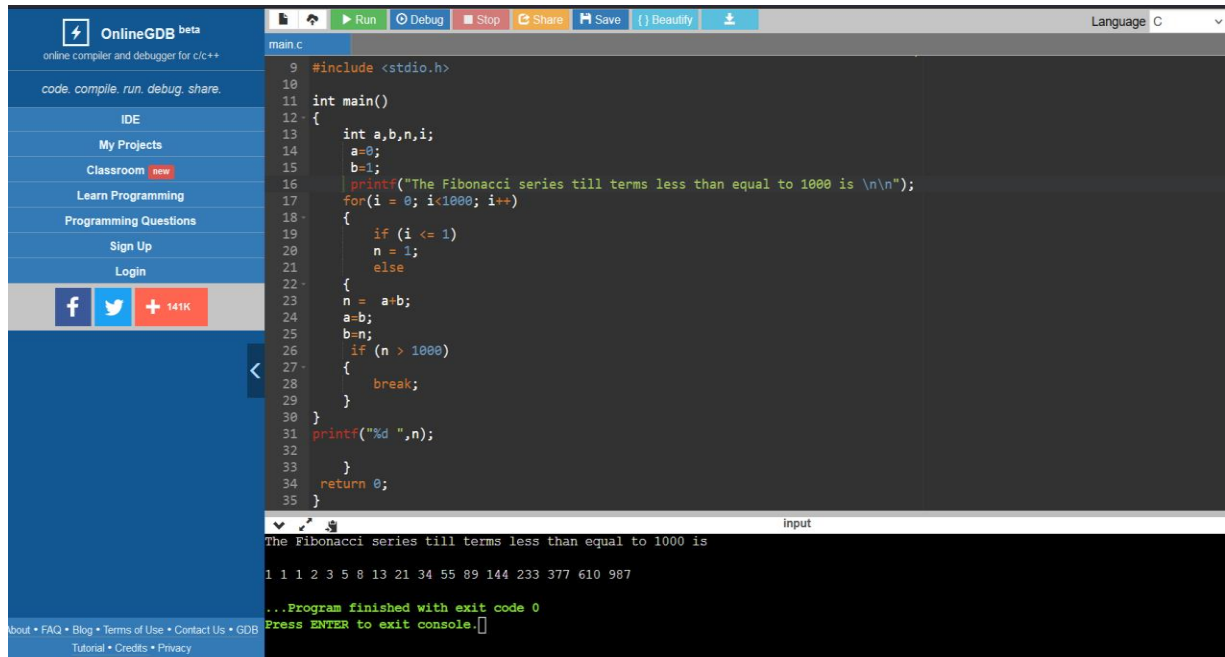
```
    printf("%d ",n);
```

```
    }
```

```
    return 0;
```

```
}
```

Output



The screenshot shows the OnlineGDB beta IDE interface. The left sidebar contains navigation links: IDE, My Projects, Classroom (new), Learn Programming, Programming Questions, Sign Up, and Login. Below these are social media icons for Facebook, Twitter, and a '+ 141K' button. The main editor area displays a C program named 'main.c' with the following code:

```
9 #include <stdio.h>
10
11 int main()
12 {
13     int a,b,n,i;
14     a=0;
15     b=1;
16     printf("The Fibonacci series till terms less than equal to 1000 is \n\n");
17     for(i = 0; i<1000; i++)
18     {
19         if (i <= 1)
20             n = i;
21         else
22         {
23             n = a+b;
24             a=b;
25             b=n;
26             if (n > 1000)
27             {
28                 break;
29             }
30         }
31         printf("%d ",n);
32     }
33     return 0;
34 }
```

The output window at the bottom shows the program's execution results:

```
The Fibonacci series till terms less than equal to 1000 is
1 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987
...Program finished with exit code 0
Press ENTER to exit console.
```

Conclusion

Thus we have successfully written the C program to print Fibonacci Series using for loop. In this program we have used variable a,b,n,i to store the value and variable. In this we have used for loop. Also, used 'scanf' to get input from user. Also, used 'printf' built-in function to display 'Number of terms and Fibonacci Terms greater than or equal to 1000' result on screen. We have successfully executed code on online C compiler

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