

/ 6. Write a C program to find Fibonacci series using Recursion */*

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

```
int Fibonacci(int);
```

```
int main()
```

```
{
```

```
    int n, i = 0, c;
```

```
    scanf("%d",&n);
```

```
    printf("Fibonacci series\n");
```

```
    for ( c = 1 ; c <= n ; c++ )
```

```
    {
```

```
        printf("%d\n", Fibonacci(i));
```

```
        i++;
```

```
    }
```

```
    return 0;
```

```
}
```

```
int Fibonacci(int n)
```

```
{
```

```
    if ( n == 0 )
```

```
        return 0;
```

```
    else if ( n == 1 )
```

```
        return 1;
```

```
    else
```

```
        return ( Fibonacci(n-1) + Fibonacci(n-2) );
```

```
}
```

The screenshot shows the Dev-C++ IDE with a C program for finding the Fibonacci series using recursion. The code is as follows:

```
1  /* 6. Write a C program to find Fibonacci series using Recursion */
2  #include<stdio.h>
3
4  int Fibonacci(int);
5
6  int main()
7  {
8      int n, i = 0, c;
9
10     scanf("%d",&n);
11
12     printf("Fibonacci series\n");
13
14     for ( c = 1 ; c <= n ; c++ )
15     {
16         printf("%d\n", Fibonacci(i));
17         i++;
18     }
19
20     return 0;
21 }
22
23 int Fibonacci(int n)
24 {
25     if ( n == 0 )
26         return 0;
27     else if ( n == 1 )
28         return 1;
29     else
30         return ( Fibonacci(n-1) + Fibonacci(n-2) );
31 }
```

The program is executed, and the output is displayed in a separate window titled "D:\data structures lab\Fibonacci series using recursion.exe". The output shows the Fibonacci series for n=15:

```
15
Fibonacci series
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
.....
Process exited after 7.236 seconds with return value 0
Press any key to continue . . .
```