

Experiment 6: Fibonacci using Recursion

Aim:

To print Fibonacci series using recursion.

Algorithm:

1. Start.
2. Define recursive function fibo(n).
 - If $n==0$ return 0.
 - If $n==1$ return 1.
 - Else return $\text{fibo}(n-1)+\text{fibo}(n-2)$.
3. Read n.
4. Print first n terms.
5. Stop.

Code:

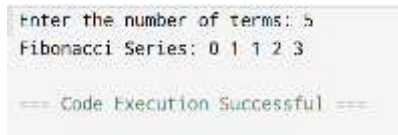
```
#include <stdio.h>
```

```
int fibo(int n) {  
    if (n == 0) return 0;  
    else if (n == 1) return 1;  
    else return fibo(n - 1) + fibo(n - 2);  
}
```

```
int main() {  
    int n, i;  
    printf("Enter number of terms: ");  
    scanf("%d", &n);  
  
    printf("Fibonacci Series: ");
```

```
    for(i = 0; i < n; i++)  
        printf("%d ", fibo(i));  
  
    return 0;  
}
```

Sample Output:



```
Enter the number of terms: 5  
Fibonacci Series: 0 1 1 2 3  
  
=== Code Execution Successful ===
```

Result:

The program generates Fibonacci series using recursion.