

# SEQUENCE EXPLORER

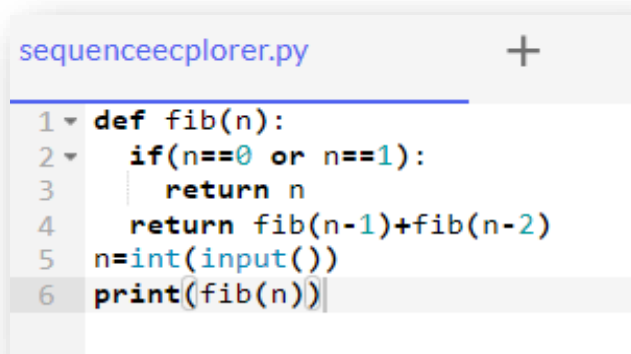
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**Details of project:** I'm implementing this project by using python programming language

**Code:**



```
sequenceexplorer.py +
1 def fib(n):
2     if(n==0 or n==1):
3         return n
4     return fib(n-1)+fib(n-2)
5 n=int(input())
6 print(fib(n))
```

**Input and Output:**

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STDIN

5

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Output:

5

**Explanation:**

In this program I have implemented Sequence Explorer which is nothing but generating the Fibonacci series to a given number of  $n^{\text{th}}$  term using recursion, in which I have taken **5** as an input from user and I used functions in this I have used if condition ( **$n==0$  or  $n==1$** ) that means if one of the expression is true it will return  $n$  value means 5 otherwise it will go to return  **$\text{fib}(n-1)+\text{fib}(n-2)$**  means  **$\text{fib}(5-1)+\text{fib}(5-2)$**  again we have to run the same function until it becomes  **$n==0$  or  $n==1$**  then we have to add one  **$\text{fib}(n-1)$  to  $\text{fib}(n-2)$**  to display the output of  **$\text{fin}(n)$** .

## **Conclusion:**

Finally I have got the desired output  **$5^{\text{th}}$**  term of the Fibonacci is **5**, by how the Fibonacci of **5** is **0 1 1 2 3 5**. Here we have to print the  **$n^{\text{th}}$**  Fibonacci so our  $n$  value is **5** so, the  **$5^{\text{th}}$**  term is **5** that's why we got the output as **5**.