SEQUENCE EXPLORER

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DETAILS OF PROJECT: I'm implementing this project by using Python Programming Language.

CODE:

sequenceexplorer.py

```
def fib(n):
  if (n==0 or n==1):
    return n
  return fib(n-1)+fib(n-2)
n=int(input())
print(n)
```

INPUT AND OUTPUT:

STDIN

```
5
```

Output:

```
5
```

EXPLANATION:

In this Program I have implemented Sequence explorer which is nothing but Number Sequence Generator or nth fibinocci number.The logic behind finding the nth fibonacci number is based on the Fibonacci sequence, where each number is the sum of two preceding numbers.So to calculate the nth fibonacci numbers,the program recursively adds the (n-1)th and (n-2)th Fibonacci numbers until it reaches the base case of 0 and 1.This recursive approach helps in generating the fibonacci sequence.

*The 'fib' function takes n as input,which represents the position of fibinocci number .

*If 'n' is 0 or 1,the function returns directly n.Because the fibonacci series starts with 0 and 1.

*If 'n' is greater than 1 ,the function recursively calls itself to find nth fibinocci number.

*The program then takes n as input from the user.

*Then the function calls input and prints nth fibinocci number.

CONCLUSION:

Finally I have got the desired output of sequence Explorer as

(0 1 1 2 3 5).

Here I will get the nth fibonacci number based on the input provided by me as 5.Then the program prints output as 5.