In [1]:

```python
#Write a program non-recursive and recursive program to calculate Fibonacci numbers and a
nalyze their time and space complexity.
#non_recursive
a=int(input("Enter the terms"))

f=0
s=1
if a<=0:
    print("series are", f)
else:
    print(f,s,end="  ")

    for x in range(2,a):
        next=f+s
        print(next,end=" ")
        f=s
        s=next
```

```
Enter the terms10
0 1  1 2 3 5 8 13 21 34
```

In [2]:

```python
#Recursive
def fib(n):
    if n<=1:
        return n
    else:
        return fib(n-1)+fib(n-2)
nterms=int(input("Enter the terms"))
print("fibo_series")
for i in range(nterms):
    print(fib(i))
```

```
Enter the terms10
fibo_series
0
1
1
2
3
5
8
13
21
34
```

In [ ]: