Que:-1 Write a Python Program to Display Fibonacci Sequence Using Recursion?

In [8]:
```
#solution:-

def fibonacci(a):
    if a<=1:
        return a
    else:
        return (fibonacci(a-1) + fibonacci(a-2))
number = int(input("enter the value:-"))

if number<=0:
    print("Provide the positive value")

else:
    for i in range(0,number):
        print(fibonacci(i),end=" ")


```

```
enter the value:-9
0 1 1 2 3 5 8 13 21
```

Que:-2 Write a Python Program to Find Factorial of Number Using Recursion? ¶

In [2]:
```
#solution:-

def factorial(num):
    if num == 0:
        return 1
    else:
        return (num*factorial(num-1))

num = int(input("Enter a number:-"))
factorial(num)
```

```
Enter a number:-5
```

Out[2]:
```
120
```

Que:-3 Write a Python Program to calculate your Body Mass Index?

In [6]:
```
#solution:-

def bms(w,h):
    if w== 0 and h==0:
        print("Enter the number greater then zero")
    else:
        BMS = w/(h**2)
        print("BMS is:-",BMS)
w=float(input("Enter the weight in K.G:-"))
h= float(input("Enter the height in Feet:-"))
bms(w,h)
```

```
Enter the weight in K.G:-56.8
Enter the height in Feet:-5.2
BMS is:- 2.100591715976331
```

Que:-4 Write a Python Program to calculate the natural logarithm of any number?

In [11]:
```
#solution:-

import math
def nat_log():
    a = eval(input("Enter the number:-"))
    b = math.log(a)
    print(f"The Natural Log of {a} is {b}")

nat_log()
```

```
Enter the number:-10
The Natural Log of 10 is 2.302585092994046
```

Que:-5 Write a Python Program for cube sum of first n natural numbers?

In [16]:
```
#solution:-

def cube():
    a = int(input("Enter the number:-"))
    sum = 0
    for i in range(1,a+1):

        sum = sum + i**3
    print(f"The cube sum of {a} natural number is {sum}")
cube()

```

```
Enter the number:-5
The cube sum of 5 natural number is 225
```