

1. Write a Python Program to Display Fibonacci Sequence Using Recursion? ¶

In [8]:

```

1  a=[0,1]
2  def fib(n):
3      if n==1 or n==0:
4          return
5      else:
6          fib(n-1)
7          a.append(a[n-1]+a[n-2])
8
9
10 fib(40)
11 print(*a)

```

```

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765 10946
17711 28657 46368 75025 121393 196418 317811 514229 832040 1346269 2178309
3524578 5702887 9227465 14930352 24157817 39088169 63245986 102334155

```

2. Write a Python Program to Find Factorial of Number Using Recursion?

In [9]:

```

1  n=int(input())
2
3  def fact(n):
4      if n==1:
5          return 1
6      else:
7          return n*fact(n-1)
8  print(fact(n))

```

```

4
24

```

3. Write a Python Program to calculate your Body Mass Index?

In [11]:

```

1  w=int(input("enter weight in kg"))
2  h=int(input("enter height in meters"))
3  print(f"the BMI is {w/(h**2)}")

```

```

enter weight in kg70
enter height in meters2
the BMI is 17.5

```

4. Write a Python Program to calculate the natural logarithm of any number?

In [12]:

```
1 import math
2 n=int(input())
3 print(math.log(n))
```

```
4
1.3862943611198906
```

5. Write a Python Program for cube sum of first n natural numbers?

In [15]:

```
1 n=int(input())
2
3 print(f"cube sum of {n} natural numbers is {(n**2)*((n+1)**2)//4}")
```

```
3
cube sum of 3 natural numbers is 36
```