

# Assignment 6

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

```
In [1]: def recur_fibo(a):
        if a <= 1:
            return a
        else:
            return(recur_fibo(a-1) + recur_fibo(a-2))

num = int(input("Enter how many numbers you want: "))

if num <= 0:
    print("Plese enter a positive integer")
else:
    print("Fibonacci sequence:")
    for i in range(num):
        print(recur_fibo(i))
```

Enter how many numbers you want: 7  
Fibonacci sequence:  
0  
1  
1  
2  
3  
5  
8

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

```
In [7]: def factorial(b):
        if(b <= 1):
            return 1
        else:
            return(b*factorial(b-1))

b = int(input("Enter the number: "))
print("Factorial:")
print(factorial(b))
```

Enter the number: 12  
Factorial:  
479001600

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

```
In [7]: height = float(input("Enter your height(m): "))
weight = float(input("Enter your weight(kg): "))
print("Your BMI is: ", round(weight / (height * height), 2))
```

Enter your height(m): 5.7  
Enter your weight(kg): 62  
Your BMI is: 1.91

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

```
In [9]: import math

a = float(input("Enter a number here: "))
print("The log of this number is ",math.log(a))
```

Enter a number here: 56  
The log of this number is 4.02535169073515

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

```
In [10]: def nat(n):
        a = 0
        for i in range(1, n + 1):
            a += i * i*i

        return a

n = int(input("Enter the number here "))
print("Cube is ", nat(n))
```

Enter the number here 12  
Cube is 6084

```
In [ ]:
```