Assignment-I:

1. **Python program to check Armstrong Number?**

   HINT : 153 = 1*1*1+5*5*5+3*3*3 // 153 is an Armstrong number.

   Program:

```
num = int(input('Enter a number: '))
num_original =num2=num
sum1 = 0
count=0
while(num>0):
        count=count+1
        num=num//10
while num2>0:
   rem = num2% 10
   sum1 += rem ** count
   num2//= 10
 if(num_original==sum1):
    print('Armstrong!!')
 else:
    print('Not Armstrong!')
```

Output:

```
Enter a number: 153
Armstrong!!
```

```
Enter a number: 420
Not Armstrong!
```

2. **Python program for how to check if a given number is Fibonacci number?**
   HINT : A Fibonacci sequence is the integer sequence of 0,1,1,2,3,5,8…
   The first two terms are 0 and 1.
   All other terms are obtained by adding the preceding two terms.
   This means to say the nth term is the dum of (n-1) and (n-2)th term.

   Program:

```
n=int(input("Enter the number: "))
c=0
a=1
b=1
if n==0 or n==1:
    print("Fibonacci Number")
else:
    while c<n:
        c=a+b
        b=a
        a=c
    if c==n:
```

```
        print("Fibonacci Number")
    else:
        print("Not a Fibonacci Number")
```

Output:

```
Enter the number: 55
Fibonacci Number
```

```
Enter the number: 66
Not a Fibonacci Number
```