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).

Sol

```
num = int(input("Enter a number : ")) # take input from user
sum = 0  # Initialise sum
temp = num  # find the sum of cube of each digit
while temp > 0
    digit = temp % 10
    sum += digit**3
    temp //= 10
if num == sum:  # for output display
    print(num, "is an Armstrong number")
else:
    print(num, "is not an Armstrong number")
```

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 preceeding two terms. This means to say the n^{th} term is the sum of $(n-1)^{th}$ & $(n-2)^{th}$ term.

Sol

```
nterms = int(input("How many terms? "))
n1, n2 = 0, 1
count = 0
if nterms <= 0:
    print("Enter a positive integer")
elif nterms == 1:
    print("Fibonnacci sequence upto", nterms).
    print(n1)
else:
    print("Fibonacci sequence:")
    while count < nterms:
        print(n1)
```

```
nth = n1 + n2
n1 = n2
n2 = nth
count += 1
```

② Output:

```
How many terms ? 7
Fibonacci sequence:
0
1
1
2
3
5
8
```

① Output:

```
Enter a number: 663
    663 is not an Armstrong number

Enter a number: 153
    153 is an Armstrong number.
```