

Programming Assignment_4

1. Write a Python Program to Find the Factorial of a Number?

```
In [11]: n=int(input("Enter any number: "))
fact=1
for i in range(2,n+1):
    fact=fact*i
print("Factorial of {} is {}".format(n,fact))
```

Enter any number: 7
Factorial of 7 is 5040.

2. Write a Python Program to Display the multiplication Table?

```
In [14]: n=int(input("Display multiplication table of? "))
for i in range(1,11):
    print("{}x{}={}".format(n,i,n*i))
```

Display multiplication table of? 19
19x1=19
19x2=38
19x3=57
19x4=76
19x5=95
19x6=114
19x7=133
19x8=152
19x9=171
19x10=190

3. Write a Python Program to Print the Fibonacci sequence?

```
In [21]: n=int(input("How many elements of fibonacci sequence to show? "))
n1,n2=0,1
if(n<=0):
    print("Enter a valid integer greater than 0.")
elif(n==1):
    print(n1)
else:
    for i in range(n):
        print(n1)
        n3=n1+n2
        n1=n2
        n2=n3
```

How many elements of fibonacci sequence to show? 10

0
1
1
2
3
5
8
13
21
34

4. Write a Python Program to Check Armstrong Number?

```
In [33]: n=int(input("Enter any number: "))
order=len(str(n))
sum=0
n1=n
for i in range(order):
    sum+=(n1%10)**order
    n1//=10
if(n==sum):
    print(n,"IS AN ARMSTRONG NUMBER")
else:
    print(n,"IS NOT AN ARMSTRONG NUMBER")
```

Enter any number: 95
95 IS NOT AN ARMSTRONG NUMBER

5. Write a Python Program to Find Armstrong Number in an Interval?

```
In [39]: a,b=[int(ele) for ele in input("Enter the range separated by space ").split()]
for i in range(a,b+1):
    n=i
    order=len(str(n))
    sum=0
    n1=n
    for j in range(order):
        sum+=(n1%10)**order
        n1//=10
    if(n==sum):
        print(n)
```

Enter the range separated by space 100 200
153

6. Write a Python Program to Find the Sum of Natural Numbers?

```
In [41]: n=int(input("Enter any number: "))
if(n>0):
    sum=0
    for i in range(n):
        sum+=i
    print("Sum of {} natural numbers is {}".format(n,sum))
else:
    print("Enter a valid natural number greater than zero")
```

Enter any number: 10

Sum of 10 natural numbers is 45