

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

```
In [4]: def factorial(num):  
        if num>1:  
            val=1  
            for i in range(2,num+1):  
                val=val*i  
  
        print("factorial of {} is {}".format(num,val))  
        return val
```

```
In [7]: factorial(5)
```

factorial of 5 is 120

```
Out[7]: 120
```

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

```
In [8]: def table(num):  
        for i in range(1,11):  
            print("{} * {} ={}".format(num,i,(num*i)))
```

```
In [9]: table(2)
```

```
2 * 1 =2  
2 * 2 =4  
2 * 3 =6  
2 * 4 =8  
2 * 5 =10  
2 * 6 =12  
2 * 7 =14  
2 * 8 =16  
2 * 9 =18  
2 * 10 =20
```

```
In [10]: table(7)
```

```
7 * 1 =7
7 * 2 =14
7 * 3 =21
7 * 4 =28
7 * 5 =35
7 * 6 =42
7 * 7 =49
7 * 8 =56
7 * 9 =63
7 * 10 =70
```

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

```
In [11]: def fibonacci(n):
          f = [0, 1]
          for i in range(2, n+1):
              f.append(f[i-1] + f[i-2])
          return f
```

```
In [12]: fibonacci(5)
```

```
Out[12]: [0, 1, 1, 2, 3, 5]
```

4. Write a Python Program to Check Armstrong Number?

```
In [20]: def arm(num):  
    a=str(num)  
    l=len(a)  
    v=0  
    for i in range(l):  
        v1=int(a[i])**l  
        v+=v1  
    if v==num:  
        print("{} is armstrong number".format(num))  
        return(v)  
    else:  
        print("{} is not an armstrong number".format(num))
```

```
In [21]: arm(1634)
```

1634 is armstrong number

```
Out[21]: 1634
```

```
In [22]: arm(1253)
```

1253 is not an armstrong number

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

```
In [41]: def arm_int(lower,upper):  
        inter=[]  
  
        for i in range(lower,upper+1):  
            a=str(i)  
            l=len(a)  
            v=0  
            for j in range(l):  
                v1=int(a[j])**l  
                v+=v1  
                #print(v)  
            if v==i:  
                inter.append(i)  
        return(inter)
```

```
In [42]: arm_int(100,2000)
```

```
Out[42]: [153, 370, 371, 407, 1634]
```

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

```
In [43]: def sum_natural(n):  
        s = 0  
        while(n > 0):  
            s+= n  
            n -= 1  
        print("The sum is",s)
```

```
In [44]: sum_natural(16)
```

The sum is 136

```
In [ ]:
```

