>>>>>>>With While Loop

1.
```
num = int(input("Enter the Number\n"))
temp = num
sum = 0
while (num!=0):
    digit = num%10
    sum += digit
    num = num //10
print("The Sum of digits of ",temp," is ",sum)
```

2.
```
num = int(input("Enter the Number\n"))
temp = num
rev = 0
while (num!=0):
    digit = num%10
    rev = rev*10 + digit
    num = num //10
print("The Reverse of ",temp," is ",rev)
```

3.
```
num = int(input("Enter the Number\n"))
temp = num
rev = 0
while(temp!=0):
    digit = temp%10
    rev = rev*10 + digit
    temp = temp//10
print("The Reverse Of ",num," is ",rev)

if rev==num:
    print("The Given Number is a Palindrome Number")
else:
    print("The Given Number is not a Palindrome Number")
```

4.
```
num = int(input("Enter the Number\n"))
rev = 0
fact = 1
c = 1
while(c<=num):
    fact = fact *c
    c = c+1
print("The Factorial of ",num," is ",fact)
```

5.
```
num = int(input("Enter the Number\n"))
temp = num
sum = 0
while (num!=0):
```

```
    digit = num%10
    sum += digit**3
    num = num //10
if temp == sum:
    print(temp," is an Armstrong Number")
else:
    print(temp," is not an Armstrong Number")
```

6.

```
num1 = int(input("Enter the 1st Number\n"))
temp1 = num1
num2 = int(input("Enter the 2nd Number\n"))
temp2 = num2

while temp1 != temp2:
    if temp1>temp2:
        temp1 = temp1-temp2
    else:
        temp2 = temp2-temp1
gcd = temp1 #it can be either temp1 or temp2
lcm = (num1*num2)//gcd

print("GCD= ",gcd)
print("LCM= ",lcm)
```

7.

```
num = int(input("Enter a Number\n"))
temp = num

if num<0:
    print("Enter a Positive Number")
else:
    sum = 0
    while(num>0):
        sum  = sum + num
        num = num-1
    print("The Sum is = ",sum)
```

8.

```
terms = int(input("How many terms do you want?\n"))

#first two terms are 0 and 1
n1=0
n2=1
count = 2

if (terms<=0):
    print("Please enter a positive number")
elif (terms == 1):
    print("Fibonacci Sequence")
    print(n1)
elif (terms == 2):
```

```
    print("Fibonacci Sequence")
    print(n1,",",n2)
else:
    print("Fibonacci Sequence")
    print(n1,",",n2,end=" ,")
    while count<terms:
        nth = n1+n2
        n1 = n2
        n2 = nth
        count += 1
        if count<terms:
            print(nth,end=" ,")
        else:
            print(nth)
```

9.

```
num = int(input("Enter the Number whose multiplication table you want:\n"))
i=1

while(i<10):
    print(num," x ",i," =\t",num*i)
    i += 1
print(num," x ",10,"=\t",num*10)
```

10.

```
num = int(input("Enter a Number: "))
c = 0   #counter variable
i = 2
if num > 1:
    while(i<num):
        if (num%i)==0:
            c += 1
        i += 1
if c==0:
    print(num," is a Prime Number")
else:
    print(num," is not a Prime Number")
```

>>>>>>>With For Loop

1.

```
num = int(input("Enter the Number\n"))
temp = num
sum = 0
for i in range(temp):
    dig = temp%10
    sum = sum + dig
    temp = temp//10
    if temp==0:
        break
```

```
print("The Sum of digits of ",num," is ",sum)
```

2.

```
num = int(input("Enter the Number\n"))
temp = num
rev = 0
for i in range(temp):
    digit = temp%10
    rev = rev*10 + digit
    temp = temp //10
    if temp==0:
        break
print("The Reverse of ",num," is ",rev)
```

3.

```
num = int(input("Enter the Number\n"))
temp = num
rev = 0
for i in range(temp):
    digit = temp%10
    rev = rev*10 + digit
    temp = temp//10
    if temp == 0:
        break
print("The Reverse Of ",num," is ",rev)

if rev==num:
    print("The Given Number is a Palindrome Number")
else:
    print("The Given Number is not a Palindrome Number")
```

4.

```
num = int(input("Enter the Number\n"))
rev = 0
fact = 1
c = 1
for i in range(c,num+1):
    fact = fact *i

print("The Factorial of ",num," is ",fact)
```

5.

```
num = int(input("Enter the Number\n"))
temp = num
sum = 0
for i in range(num):
    digit = num%10
    sum += digit**3
    num = num //10
    if num==0:
        break
```

```
if temp == sum:
   print(temp," is an Armstrong Number")
else:
   print(temp," is not an Armstrong Number")
```

6.

```
num1 = int(input("Enter the 1st Number\n"))
temp1 = num1
num2 = int(input("Enter the 2nd Number\n"))
temp2 = num2
m = max(temp1,temp2)
for i in range(0,m):
   if temp1!=temp2:
      if temp1>temp2:
         temp1 = temp1-temp2
      else:
         temp2 = temp2-temp1
   else:
      break
gcd = temp1 #it can be either temp1 or temp2
lcm = (num1*num2)//gcd

print("GCD= ",gcd)
print("LCM= ",lcm)
```

7.

```
num = int(input("Enter a Number\n"))
temp = num

if num<0:
   print("Enter a Positive Number")
else:
   sum = 0
   for i in range(num,0,-1):
      sum  = sum + i
   print("The Sum is = ",sum)
```

8.

```
terms = int(input("How many terms do you want?\n"))

#first two terms are 0 and 1
n1=0
n2=1
count = 2

if (terms<=0):
   print("Please enter a positive number")
elif (terms == 1):
   print("Fibonacci Sequence")
   print(n1)
elif (terms == 2):
   print("Fibonacci Sequence")
```

```
    print(n1,",",n2)
else:
    print("Fibonacci Sequence")
    print(n1,",",n2,end=" ,")
    for i in range(count,terms):
        nth = n1+n2
        n1 = n2
        n2 = nth
        i += 1
        if i<terms:
            print(nth,end=" ,")
        else:
            print(nth)
```

9.

```
num = int(input("Enter the Number whose multiplication table you want:\n"))


for i in range(1,10):
    print(num," x ",i," =\t",num*i)
print(num," x ",10,"=\t",num*10)
```

10.

```
num = int(input("Enter a Number: "))
c = 0   #counter variable
if num > 1:
    for i in range(2,num):
        if (num%i)==0:
            c += 1
if c==0:
    print(num," is a Prime Number")
else:
    print(num," is not a Prime Number")
```