02-05-2025

1) write a program to check if a number is a armstrong numbers.

A/

```
n = 153
T = n
S = 0
while (n>0):
        r = n % 10
        S = S + r*r*r
        n = n//10
if S == T:
    print ("Armstrong numbers")
else:
```

2) write a program to find the greatest common divisor (GCD) of two numbers.

A)
```
a = 12
b = 18
while b!=0:
    a,b = b, a%b
print(a)
```

3) write a program to check if a number is a perfect number.

A)
```
n = 12
s = 0
for i in range (1, n):
    if n%i ==0:
        s = s+i
if s==n:
    print ("It is perfect number")
else:
    print ("It is not perfect")
```

4) write a program to check and find the sum of the first n natural numbers

A)
```
n = 100
i = 1
s = 0
while i<=n:
    s = s+i
    i+=1
print (s)
```

5) write a program to generate prime numbers from 1 to 100.

```
P = [ ]
for i in range (100):
    c = 0
    for j in range (2, i):
        if i % j == 0:
            c = c + 1
            break
    if c == 0:
        P.append(i)
print (P)
```

6) write a program to generate ~~prime~~ by print a right-angled triangle pattern using stars (*).

A)

```
n = 5
for i in range (n):
    for j in range (i+1):
        print ('*', end = ' ')
    print ( )
```

7) write a program to reverse a string without using built in functions.

A)

```
s = "Manideep"
r = ''
n = len(s) - 1
while n >= 0:
    r += s[n]
    n -= 1
```

print (r)

8) write a program to check if number is palindrom

A)
```
n = 121
t = n
s = 0
while n>0:
    r = n%.10
    s = s*10 +r
    n = n//10
if s==T:
    Print ("It is palindrome")
else:
    print ("It is not palindrome")
```

9) write a program to print numbers in ascending and descending order using a loop.

A)
```
n = 50
for i in range (1,n):
    print (i,end=' ').
print ()
for J in range (n,0,-1):
    print (J,end=' ')
```

10) write a program to calculate the sum of squares of first n natural number

A)
```
n = 3
s=0
for i in range (1,n+1):
    s = s+i*i
```

Point (5)