

write a program Armstrong number

$n = 153$

$T = n$

$S = 0$

while ($n > 0$)

$x = n \% 10$

$S = S + x * x * x$

$n = n / 10$

if ($S == T$):

It is Armstrong strong

else:

It is not Armstrong

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

A)

$a = 18$

$b = 12$ $b! = 0$

while $b! = 0$:

$a, b = b, a \% b$

print(a)

3) write a program to a perfect number

$n = 12$

$S = 0$

for i in range(1, n):

while ($n > 0$):

if $n \% i == 0$:

~~$S = S + i$~~

$S = S + i$

if ($S == n$):

print('it is perfect number')

else:

print('it is not perfect number')

Write the Program Sum of the first n natural numbers

```
n=100
i=1
s=0
while i<=n:
    s=s+i
    i+=1
```

Print(s)

Write a Program to generate Prime numbers between 1 and 100.

Sol) $p = []$

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)

Write a Program to Print Right angle triangle

$n=5$

for i in range(1, n+1):

for j in range(1, i+1):

Print('*', end='')

Print()

Write a program to check if a number is palindrome

$n = 121$

$s = 0$

while ($n > 0$)

$x = n \% 10$

$s = s \times 10 + x$

$n = n / 10$

if ($s == n$)

print ("It is palindrome")

else

print ("It is not palindrome")

Write a program to reverse a string without using built in functions

Sol $s = \text{'ganesh'}$

$x = ''$

$n = \text{len}(s) - 1$ $n = 6 - 1 = 5$ $s = 0$ ✓

while $n >= 0$: while $s >= 0$

$x += s[n]$

$x =$

$x = n + s$

$n -= 1$

$x = x + h$

$x = \text{hse nag}$

$x = h$

print(x)

$n = 4$

Write a program to calculate sum of the squares of natural numbers

Sol $n = 3$
 $s = 0$

for i in range(1, $n+1$):

$s = s + i * i$

print(s)

$n = 5$

while $s >= 0$

$x = x + s(n)$

$x = x + s$

$x = h$

$n = n - 1$

$n = 5 - 1$

$n = 4$

$x = h + (s)$

$= hs$

Write a program to print numbers in
ascending and descending order using a loop

$n = 50$

```
for i in range(1, n):  
    print(i, end = ' ')
```

```
print()
```

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

10) Write a program to calculate the sum of squares
of the first n natural numbers.

$n = 3$

$s = 0$

```
for i in range(1, n+1):
```

```
     $s = s + i * i$ 
```

```
    print(s)
```