Python Program to find the factorial of a number using loop.

```
n=int(input("Enter number:"))
fact=1
while(n>0):
  fact=fact*n
  n=n-1
print("Factorial of the number is: ")
print(fact)
```

```
Enter number:5
Factorial of the number is:
120
```

Python Program to reverse a number using loop

```
r=0
n=int(input("Enter a number: "))
while(n>0):
  dig=n%10
  r=r*10+dig
  n=n//10
print("The reversed no is:")
print(r)
```

```
Enter a number: 123
The reversed no is:
321
```

Write a Python program to construct the following pattern, using a nested for loop.

```
n=5;
for i in range(n):
  for j in range(i):
    print ('* ', end="")
  print('')
for i in range(n,0,-1):
```

```
  for j in range(i):
    print('* ', end="")
  print('')
```

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

Python Program to replace all occurrences of ‘a’ with ‘$’ in a string.

```
string=input("Enter string:")
string=string.replace('a','$')
string=string.replace('A','$')
print("Modified string:")
print(string)
```

```
Enter string:asdasda
Modified string:
$sd$sd$
```

Python Program to remove the nth index character from a non-empty string.

```
def remove(string, n):
  first = string[:n]
  last = string[n+1:]
  return first + last
string=input("Enter the sring:")
n=int(input("Enter the index of the character to remove:"))
print("Modified string:")
print(remove(string, n))
```

```
Enter the sring:dhdshs
Enter the index of the character to remove:3
```

Python Program to detect if two strings are anagrams.

```
s1=input("Enter first string:")
s2=input("Enter second string:")
if(sorted(s1)==sorted(s2)):
  print("The strings are anagrams.")
else:
  print("The strings aren't anagrams.")
```

```
Enter first string:abcd
Enter second string:abcd
The strings are anagrams.
```

Python Program to form a string where the first character and the last character have been exchanged.

```
def change(string):
  return string[-1:] + string[1:-1] + string[:1]
string=input("Enter string:")
print("Modified string:")
print(change(string))
```

```
Enter string:shabdsa
Modified string:
ahabdss
```

Python Program to count number of vowels from a non-empty string.

```
string=input("Enter string:")
vowels=0
for i in string:
  if(i=='a' or i=='e' or i=='i' or i=='o' or i=='u' or i=='A' or i=='E' or i=='I' or i=='O' o
    vowels=vowels+1
print("Number of vowels are:")
print(vowels)
```

```
Enter string:abced
Number of vowels are:
2
```

Program for Divide by zero error detection

```
import math
flag = True
def div(a, b):
  try:
    print("Finally the division of %d/%d is %f" % (a, b,a/b))
    global flag
    flag=False
  except ZeroDivisionError:
    print("Zero Division Error detected")
  else:
    print("Division is successful")
  finally:
    if flag is True:
      print("Try again")
    else:
      print("Thank you")
  #global flag
while flag is True:
  div(int(input("Enter numerator")),int(input("Enter denominator")))
```

```
Enter numerator23
Enter denominator20
Finally the division of 23/20 is 1.150000
Division is successful
Thank you
```

Program for ValueError error detection

```
while True:
  try:
    x = int(input("Please enter a number: "))
    print(" That was valid number. Thank you")
    break
  except ValueError:
    print("Oops! That was no valid number. Try again...")
```

```
Please enter a number: 232##$
Oops! That was no valid number. Try again...
Please enter a number: 1234
 That was valid number. Thank you
```