In [3]:

```
#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:2
Factorial of the number is:
2
```

In [4]:

```
#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: 2
The reversed no is:
2
```

In [15]:

```
#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(" ")
```

```
  File "<ipython-input-15-96d8013d4f6c>", line 6
    print (' * ', end'')
                     ^
SyntaxError: invalid syntax
```

In [12]:

```
#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:1
Modified string:
1
```

In [16]:

```
#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:2
Enter the index of the character to remove:2
Modified string:
2
```

In [17]:

```
#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&#39;t anagrams.')
```

```
Enter first string:2
Enter second string:2
The strings are anagrams.
```

In [19]:

```
#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:2
Modified string:
22
```

In [22]:

```
#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=='U'):
        vowels=vowels+1
print('Number of vowels are:')
print(vowels)
```

```
Enter string:2
Number of vowels are:
0
```

In [24]:

```
#Program for Divide by zero error detection
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 numerator2
Enter denominator5
Finally the division of 2/5 is 0.400000
Division is successful
Thank you
```

In [26]:

```
#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: 22
 That was valid number. Thank you
```

In [ ]:

```
1
```