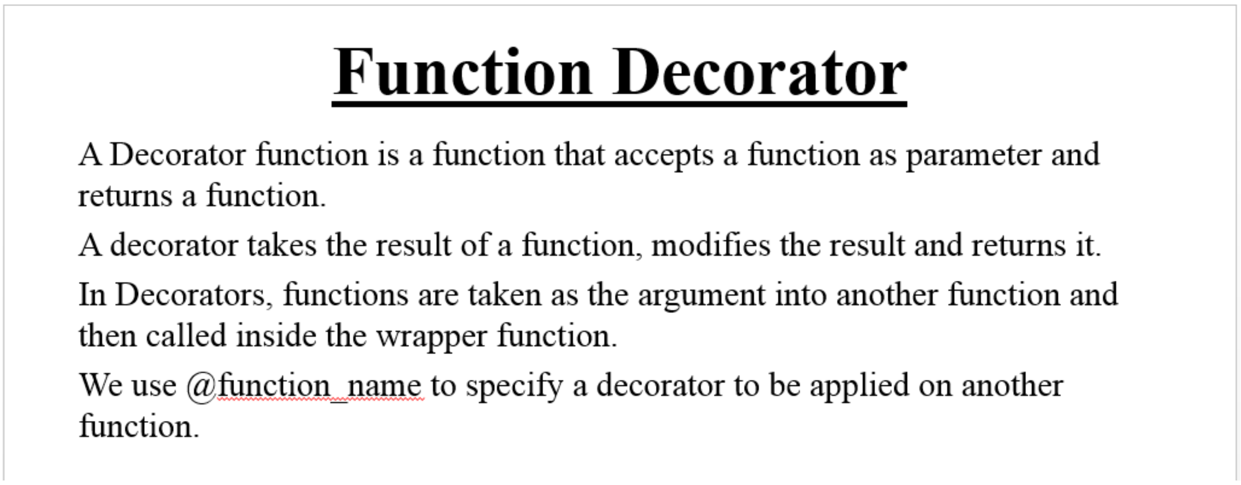

Function Decorator

A Decorator function is a function that accepts a function as parameter and returns a function.

A decorator takes the result of a function, modifies the result and returns it.

In Decorators, functions are taken as the argument into another function and then called inside the wrapper function.

We use @function_name to specify a decorator to be applied on another function.

```
Example-1
def decor(xyz):
   def abc():
      print("Line - 3")
      print("line - 4")
      xyz()
   return abc

@decor
def num():
   print("line - 1")
   print("line - 2")

num()
```

Example – 2

```
def fun1(num):
   def inner():
      num()
      print("Inner Function: Before enhancing Function")
      print("Inner Function: After enhancing Function")
   return inner

def fun2(fun):
   def inner():
      print("line 3")
      print("Line 4")
      fun()
      print("Line 5")
   return inner

def fun3(fun):
   def inner():
      print("line 1")
      print("Line 2")
```

```
        fun()
        print("Line 5")
        print("Line 6")
        print("Line 7")
    return inner

@fun3
def num():
    print("num line 1")
    print("Num line 2")

num()
```

Generator

Generators are functions that return a sequence of values. We use yield statement to return the value from function.

Yield Statement

Yield statement returns the elements from a generator function into a generator object.

Ex:- yield a

next ( ) Function

This function is used to retrieve element by element from a generator object.

Syntax:- next(gen_obj)

```
Example 1
def disp(a,b):
   yield a
   yield b

x,y = disp(10, 20)
print(x)
print(y)
print()

Example 2
def disp(a,b):
   yield a
   yield b

result = disp(10, 20)
print(result)
print(type(result))
# converting to list
lst = list(result)
print(lst)
print(type(lst))


l = list('python')
print(l)


Example - 3
def disp(a, b):
    yield a
    yield b

result = disp(10, 20)
print(next(result))
print(next(result))

Example - 4
def show(a,b):
   while a<=b :
      yield a
      a+=1

result = show(1, 20)
# print(next(result))
# print(next(result))
# print(next(result))
# print(next(result))
# print(next(result))
for i in result:
   print(i)
```