

**Agenda :**

1. Decorators ●
2. Static variables and methods (OOP) ●

**Decorators** : It is a function that takes another function as an argument and return a new function. It is used to enhance the functionality of the base function.



```

def add ( )
| q=1
| ① → return should be present here
| return q
②

```

```

def run ( func ) :
    def wrap ( ) :
        print( )
        func( )
        print( )
    return wrap → ①
    return run → ②
③

```

```
def add():
    print("Addition Function")
```

```
def my_func(func):
```

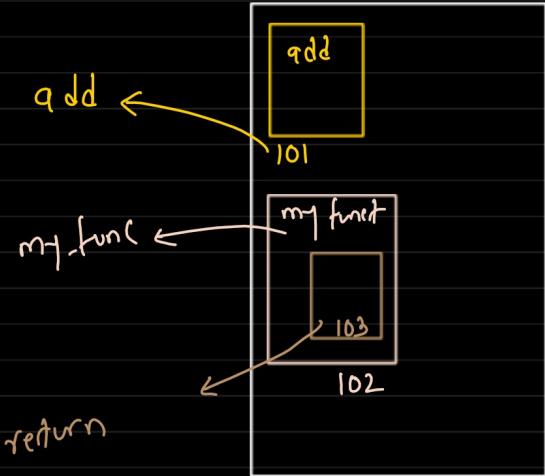
```
    def wrap():
        print("Start")
        func()
        print("End")
    return wrap
```

```
add = my_func(add)
```

add()

add

```
my_func(func)
def wrap():
    print("Start")
    func()
    print("End")
return wrap
```



add → 101

func → 101

print  
func()  
print

103

~~add~~ → 101

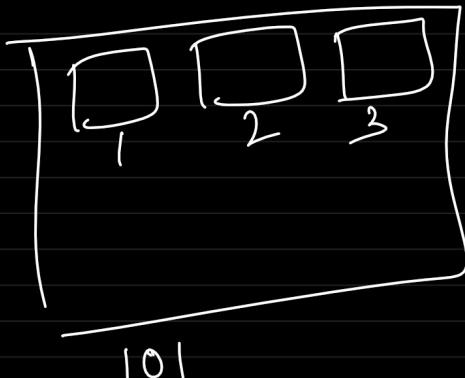
~~add~~ = my\_func(~~add~~)

add → 101

called a) wrap → 103

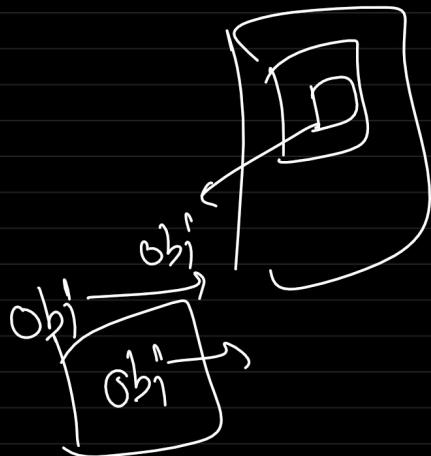
called a) ~~func~~ → 103

~~add()~~ →



101.1

101.2



## Static

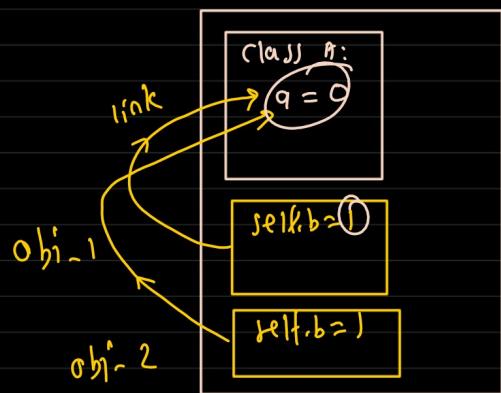
Static = belong to the class, not an object

- \* shared across all object
- \* created once
- \* not tied to any instance

static variable  $\leftarrow q = 0$       no self.

Class A:

$\underline{\underline{obj\_1 = A()}}$   
 $\underline{\underline{obj\_2 = A()}}$



static variable ← can be accessed by class name  
directly

← standard method to access static  
→ via class name

optional → object