Static Variables:

- The variable which are declared with in the class outside of all methods called static variable
- For static variables the memory is allocated not with in the object rather memory is allocated for static variables outside of the Object
- For static variable only one copy of memory is created and it can shared by N.no.of.Objects of the Same
- Static fields can be referred either by using class name or by using object reference whenever you want access it from outside of the class
- Static fields must be referred by "self" or "classname" if you want access it with in the class

Example1:

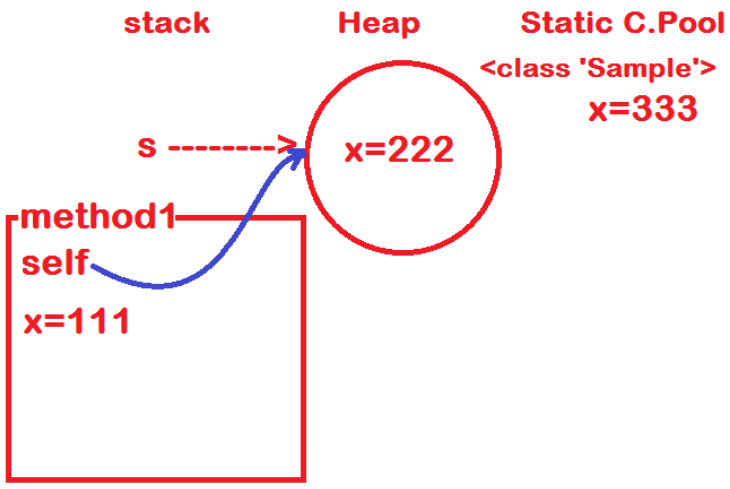
```
class Sample:
    x=111  # static variable

#calling From outside
print("x val is : ",x) #NameError
print("x val is : ",Sample.x) #111
```

Example2:

```
class Sample:
    x=333 #static variable
    def method1(self):
        x=111   #local
        self.x=222  #instance
        print("x val is : ",x)
        print("x val is : ",self.x)
        print("x val is : ",Sample.x)


#calling
s=Sample()
s.method1( )
```

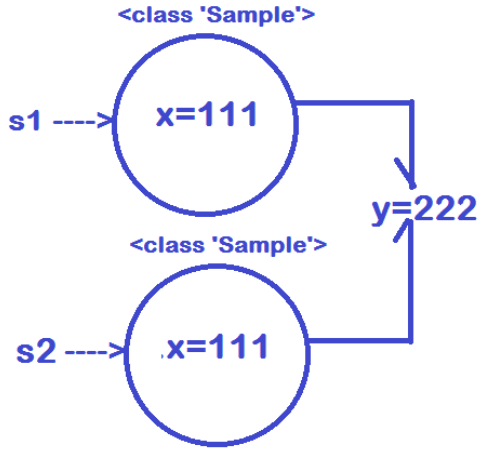


Example

```
class Sample:
    y=222  #static
    def method1(self):
        self.x=111  #instance

#calling
s1=Sample()
print("y val is : ",s1.y) //222
s2=Sample()
print("y val is : ",s2.y)//222

s1.method1()
s2.method1()
```



Note: whenever you want maintain unique memory block for every object of the same class then we have to use an “instance fields”.But if you want maintain same memory block for N.no.of.Object of same type then we have to make use of “static fields”