(self, ,)

- description : (self, ,)
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(self, ,)

```python
# Section07-1
#
# Self,     ,

#       ,
#              :
#              :              ,
#              :                    ,

#     1

print("#====    1 ====")
class UserInfo:
    def __init__(self, name):
        self.name = name

    def print_info(self):
        print("Name: " + self.name)

    def __del__(self):
        print("Instance removed!")


user1 = UserInfo("Kim")
user2 = UserInfo("Park")

print(id(user1))
print(id(user2))

user1.print_info()
user2.print_info()

print('user1 : ', user1.__dict__)  #
print('user2 : ', user2.__dict__)
```

```python
print(user1.name)

print()


#     2
# self

print("#==== self        = = = =")
class SelfTest:
    def function1():
        print("function1 called!")

    def function2(self):
        print(id(self))
        print("function2 called!")


f = SelfTest()
# print(dir(f))
print(id(f))
# f.function1() #           ->   function1()    self          class          .
#                                class                    .
#               ->   SelfTest.function1()
f.function2()
print(SelfTest.function1())

print()

# print(SelfTest.function2()) #           ->   function2(self)      self
#             .
#                                                    .
#                            ->   f.function2()



#     3
#         ,
print("#= = = =            ,              = = = =")

class Warehouse:
    #
    stock_num = 0

    def __init__(self, name):
        #
        self.name = name
        Warehouse.stock_num += 1

    def __del__(self):
        Warehouse.stock_num -= 1
```

```python
user1 = Warehouse('Kim')
user2 = Warehouse('Park')

print(user1.name)
print(user2.name)
print(user1.__dict__)
print(user2.__dict__)
print(Warehouse.__dict__)   #                         ,             (    )

# Warehouse.stock_num = 50 #

print(user1.stock_num)
print(user2.stock_num)
```

```
#= = = =        1 = = = =
2190468880608
2190468882096
Name: Kim
Name: Park
user1 :  {'name': 'Kim'}
user2 :  {'name': 'Park'}
Kim

#==== self        = = = =
2190468948368
2190468948368
function2 called!
function1 called!
None

#= = = =             ,                  = = = =
Instance removed!
Instance removed!
Kim
Park
{'name': 'Kim'}
{'name': 'Park'}
{'__module__': '__main__', 'stock_num': 2, '__init__': <function
Warehouse.__init__ at 0x000001FE021F69D0>, '__del__': <function
Warehouse.__del__ at 0x000001FE021F6A60>, '__dict__': <attribute '__dict__'
of 'Warehouse' objects>, '__weakref__': <attribute '__weakref__' of
'Warehouse' objects>, '__doc__': None}
2
2
```

Tip

, [python](http://rwiki.repia.com/)