# Class variable and instance variable, instance method, instantiation

class one:

    name**=**'mahmud' *#class variable*

**def** \_\_init\_\_(*self*):  *#init method*

        print('hello')  *#instance variable*

**def** fun(*self*):       *#instance method*

        print('i am instance method')

lol**=**one()  *#instantiation*

lol.fun()   *#object*

*#access and chance class variable*

class one:

    name**=**'mahmud' *#class variable*

**def** \_\_init\_\_(*self*):  *#init method*

        print('hello')  *#instance variable*

**def** fun(*self*):       *#instance method*

        print('i am instance method')

lol**=**one()  *#instantiation*

one.name**=**'hossain' *#dynamically chance class variable*

print(one.name) *#access class variable*

lol.fun()   *#object*

#class variable value change korte chile must class name.variable value setup korte hobe, Jodi object.variable value kore tahole class variable change hobe na sudo sey object er value change hobe ,class value change hobe na.

class one:

    name**=**'mahmud' *#class variable*

**def** \_\_init\_\_(*self*):  *#init method*

        print('hello')  *#instance variable*

**def** fun(*self*):       *#instance method*

        print('i am instance method')

lol1**=**one()  *#instantiation*

lol2**=**one()

one.name**=**'hossain' *#dynamically chance class variable*

print(lol1.name) *#access class variable*

print(lol2.name)

lol1.fun()   *#object*

lol2.fun()

# global and local variable

*#global and local variable , if we define a variable ouside function is global variable*

*#if we define a variable inside function is local variable*

*#global called from ouside fuction but local is not*

name**=**'mahmud' *#global variable*

**def** fun(**x**): *#local variable*

    y**=**2  *#local variable*

    sum**=**x**+**y

fun(1)

print(name) *#call global variable outer function*

print(sum) *#call local variable outer funtion*

*#global and local in a class*

class one:

    name**=**'mahmud' *#global variable*

**def** fun(*self*,**x**,**y**): *#local variable*

*self*.x**=**x

*self*.y**=**y  *#local variable*

        sum**=**x**+**y

lol**=**one()

lol.fun(1,2)

print(one.name) *#call global variable outer function*

print(sum) *#call local variable outer funtion*

# About setter and getter method?

# How to define a class, method

class one:

**def** fun(*self*,**x**,**y**):

*self*.x**=**x

*self*.y**=**y

        print(*self*.x**+***self*.y)

        print(x**+**y)

lol**=**one()

lol.fun(2,2)

class two:

**def** \_\_init\_\_(*self*,**x**,**y**):

*self*.x**=**x

*self*.y**=**y

**def** fun3(*self*):

        print(*self*.x**+***self*.y)

        print(*self*.x**+***self*.y)  *#this line not work,cause of the x,y parameter come from another funtion*

lol**=**two(2,2)

lol.fun3()

# Nested class

*#example how to make and call nested class*

class one:

**def** \_\_init\_\_(*self*):

*self*.name**=**'mahmd'

*self*.cool**=***self*.two()

**def** fun1(*self*):

        print('name is:',*self*.name)

    class two:                   *#nested class*

**def** \_\_init\_\_(*self*):

*self*.name**=**'hossain'

*self*.roll**=**6789

*self*.city**=**'rajshahi'

**def** fun2(*self*):

                print(*self*.name, *self*.roll,*self*.city)

lol**=**one()

print(lol.name)

lol.fun1()

print(lol.cool.name) *#call nested class*

sos**=**lol.cool            *#another way to call nested class*

print(sos.name)

print(sos.roll)

print(sos.city)

# what is class method ,how to create class method and how to access it

*#simple decoretor mathod*

class one:

    name**=**'mahmd' *#class variable*

    roll**=**12345

**def** \_\_init\_\_(*self*):

        print('hello')

    @classmethod *# class instance, it use above method must*

**def** fun(*cls*): *#cls is alter of self, it also mandatory*

        print(*cls*.name) *#print class variable*

lol**=**one()

lol.fun()

# Class method, static method, instance method

Class variable and static variable both are same but class method and static method are difference

## Class method

Simple class method example

class one:

    name**=**'mahmud'

**def** \_\_init\_\_(*self*):

        print('i am init')

    @classmethod #make class method by using decorator

**def** fun1(*cls*):

        print(*cls*.name)

lol**=**one()

lol.fun1()

## Static method

# Class variable