Python 中的类变量和实例变量

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在类设计中，经常遇到两种类型的变量：类变量和实例变量。  
简单的说，类变量（class variable）被该类的所有实例可以共享的变量；如果某个实例修改了该变量，这种变化可以被其他实例看到。  
实例变量（object variable, instance variable）属于实例私有；对实例变量的操作不会影响到其他实例对象。  
  
举个简单的例子，就很清楚了。  
#!/usr/bin/env python  
  
class   Person(object) :  
    count\_beans = 0  
  
    def \_\_init\_\_(self, name) :  
        self.name = name  
        self.count\_beans = 0  
  
    def pick(self) :  
        self.count\_beans += 1  
        Person.count\_beans += 1     #self.\_\_class\_\_.count\_beans += 1  
  
        print '%s pick a bean. He picked %d beans, and we all picked %d beans.' % (self.name, self.count\_beans, Person.count\_beans)  
  
alex = Person('Alex')  
alex.pick()  
  
mike = Person('Mike')  
mike.pick()  
alex.pick()  
  
jack = Person('Jack')  
jack.pick()  
alex.pick()  
mike.pick()  
  
运行结果：  
Alex pick a bean. He picked 1 beans, and we all picked 1 beans.  
Mike pick a bean. He picked 1 beans, and we all picked 2 beans.  
Alex pick a bean. He picked 2 beans, and we all picked 3 beans.  
Jack pick a bean. He picked 1 beans, and we all picked 4 beans.  
Alex pick a bean. He picked 3 beans, and we all picked 5 beans.  
Mike pick a bean. He picked 2 beans, and we all picked 6 beans.