In [1]:

```
print type(1)
print type([])
print type(())
print type
```

```
<type 'int'>
<type 'list'>
<type 'tuple'>
<type 'dict'>
```

In [6]:

```
class sample(object):
    pass
x=sample()
```

In [7]:

```
type(x)
```

Out[7]:

```
__main__.sample
```

In [36]:

```
class Dog(object):
    #class object
    species='Mammal'
    def __init__(self,breed,n):
        self.breed=breed
        self.name=n
```

In [38]:

```
sam=Dog(breed="lab",n='Husky')
```

In [39]:

```
sam.name
```

Out[39]:

```
'Husky'
```

In [40]:

```
sam.breed
```

Out[40]:

```
'lab'
```

In [25]:

```
sam.species
```

Out[25]:

```
'Mammal'
```

In [44]:

```
class Circle(object):
    pi=3.14 #class object attribute
    def __init__(self,r=1):
        self.radius=r
c=Circle()
c.pi
c.radius
```

Out[44]:

```
1
```

In [49]:

```python
class Circle(object):
    pi=3.14 #class object attribute
    def __init__(self,r=1):
        self.radius=r
    def area(self):
        return (self.radius**2)*Circle.pi
c=Circle(r=3.14)
c.area()
```

Out[49]:

```
30.959144000000002
```

In [75]:

```python
class Circle(object):
    pi=3.14 #class object attribute
    def __init__(self,r=1):
        self.radius=r
    def area(self):
        return (self.radius**2)*Circle.pi
    def setRadius(self,newradius):
        self.radius=newradius
    def getRadius(self):
        return self.radius
    def perimeter(self):
        return (self.radius*2)*Circle.pi
c=Circle(r=3.14)
c.area()
c.perimeter
```

Out[75]:

```
<bound method Circle.perimeter of <__main__.Circle object at 0x00000000060CF0
B8>>
```

In [70]:

```python
c.radius
```

Out[70]:

```
3.14
```

In [71]:

```python
c.setRadius(newradius=3)
```

In [72]:

```python
c.radius
```

Out[72]:

```
3
```

c.getRadius()

In [73]:

```python
c.getRadius()
```

Out[73]:

```
3
```

In [76]:

```python
c.area()
```

Out[76]:

```
30.959144000000002
```

In [77]:

```python
c.perimeter()
```

Out[77]:

```
19.7192
```

In [87]:

```
class Animal(object):
    def __init__(self):
        print "Animal Created"
    def whoamI(self):
        print "Animal"
    def eat(self):
        print "Eating"
class Dog(Animal):
    def __init__(self):
        Animal.__init__(self)
        print "Dog Created"
    def whoamI(self):
        print "Dog"
    def eat(self):
        print "Bones"
```

In [88]:

```
d=Dog()
```

```
Animal Created
Dog Created
```

In [89]:

```
d.eat()
```

```
Bones
```

In [90]:

```
d.whoamI()
```

```
Dog
```

In [91]:

```
d=Animal()
```

```
Animal Created
```

In [92]:

```
d.whoamI()
```

```
Animal
```

In [103]:

```
class Book(object):
    def __init__(self,title,author,page):
        print "Book Created"
        self.title=title
        self.author=author
        self.page=page
    def __str__(self):
        return self.title
    def __len__(self):
        return self.page
b=Book("pyhton","Aurthor",192)
b.__str__()
b.__len__()
```

```
Book Created
```

Out[103]:

```
192
```