python Lab. 11

2012.6.7
namespace

• a container for a set of identifiers (names or variables)

• scopes – local, global, built-in, etc.

• one class has one namespace
  – variables
  – methods
class

```
class MyClass:
    i = 12345

    def simple_method(self):
        return "hello world"
```

- "i" is class member
- "simple_method" is a method(function) in class

```python
>>> MyClass = MyClass()
>>> MyClass.simple_method()
'hello world'
```
instance

>>> myClass = MyClass()
>>> myClass.i
12345
>>> myClass2 = MyClass()
>>> myClass2.i
12345
>>> myClass2.i = 54321
>>> myClass.i
12345
>>> myClass2.i
54321

• a copy of class object
• different namespace (different memory)
self

• a kind of keyword
• ‘self’ indicates the current object
Constructor and destructor

• constructor is automatically called at creation of new instance
• destructor is used for exiting an instance

```python
class Rectangle:
    x, y = 0, 0

    def __init__(self, x, y):
        self.x = x
        self.y = y

    def __del__(self):
        print('bye')

    def area(self):
        return self.x * self.y

>>> rectangle = Rectangle(50, 20)
>>> rectangle.area()
1000

>>> del(rectangle)
bye
```