

Java

2. Basic Java

① you can not hold the object itself, instead, you can have a handle that refer to it.

```
String S = new String("a string");
```

所以两个对象相等实质是比较两个指针

② The keyword `this` produces the reference to the object the method has been called for.

③ constructor 内可通过 `this` 调用一个 (不可更多) 本类其他 constructor, 且必须置于开头.

④ When the garbage collector is ready to release the storage used for your object, it will first call its `finalize()`

1. Garbage collection is not destruction.

2. Your objects might not get garbage-collected.

3. Garbage is only about memory.

应总是假设基类版本的 `finalize()` 也要做某些重要的事, 因此要用 `super` 调用

⑤ Static members are members of class
Class Class and its instances

Static member is to be initialized in the loading of the class

静态块. 初始化静态成员

实例初始化子句是在 constructor 前进行

⑥ There can be only one public class in each compilation unit
package 关键字 使得别人使用当前类时必须使用 `import`

The name of the public class must exactly match the name of the file.

@Override 注解, 使用中使用后, 子类调用父类的重载会出错

3. container

① printing containers — `toString()`

② `List<Apple> apples = new LinkedList<Apple>();` `ArrayList` 向上转型为 `List`

创建具体类对象, 转型对应接口/有时派生类有 `extend method`, 就不能使用此法)

Hashing and hash codes

key object should have `hashCode()`; to use your own classes as keys in a `HashMap`, you must override both `hashCode()` and `equals()`.

③ Static members of Collections

- `max(Collection)`, `min(Collection)`

- `reverse()`

- `Copy(List dest, List src)`

- `fill(List list, Object o)`

④ Ask a container to hand you

an Iterator using a method called

`iterator()`. This Iterator will be ready

to return the first element in the

sequence on your first call to its `next()`

method

⑤ List:

`List (Interface)`

`ArrayList`

`LinkedList`

⑥ Set:

`Set (Interface)`

`HashSet`

`TreeSet`

4. Generic and Library

In general, if `Foo` is a subtype (subclass or subinterface) of `Bar`, and `G` is some generic type declaration, it is not the case the `G<Foo>` is

pitfall of wildcards

```
Collection<?> c = new ArrayList<String>();
```

```
c.add(new Object());
```

编译时会通过, 却无法保证 `Object` 能转为 `String`