链滴

HashSet、LinkedHashSet 和 TreeSet 的排序

作者：xixiaoming
原文链接：https://ld246.com/article/1503535017967
来源网站：链滴

基本观点

- HashSet：无序
- LinkedHashSet：按插入排序
- TreeSet：按自然顺序

主要讲TreeSet的自然顺序

基本类型的自然排序

```
TreeSet tree = new TreeSet();
tree.add(12);
tree.add(63);
tree.add(34);
tree.add(45);

Iterator iterator = tree.iterator();
System.out.print("Tree set data: ");
while (iterator.hasNext()) {
    System.out.print(iterator.next() + " ");
}
```

输出结果：Tree set data: 12 34 45 63

类对象的自然排序

```
class Dog {
  int size;

  public Dog(int s) {
    size = s;
  }

  public String toString() {
    return size + "";
  }
}

import java.util.Iterator;
import java.util.TreeSet;

public class TestTreeSet {
  public static void main(String[] args) {
    TreeSet dset = new TreeSet();
    dset.add(new Dog(2));
    dset.add(new Dog(1));
    dset.add(new Dog(3));

    Iterator iterator = dset.iterator();
    while (iterator.hasNext()) {
```

```
    System.out.print(iterator.next() + " ");
    }
  }
}
```

结果

```
Exception in thread "main" java.lang.ClassCastException:
collection.Dog cannot be cast to java.lang.Comparable
at java.util.TreeMap.put(Unknown Source)
at java.util.TreeSet.add(Unknown Source)
at collection.TestTreeSet.main(TestTreeSet.java:22)
```

Dog类实现Comparable接口和compareTo方法

```
class Dog implements Comparable{
  int size;

  public Dog(int s) {
    size = s;
  }

  public String toString() {
    return size + "";
  }

  @Override
    public int compareTo(Dog o) {
      return size - o.size;
  }
}
```

输出

```
1 2 3
```