链滴

double 类型判断是否相等

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背景

使用了"=="和"！="来判断duble类型，使用sonar等代码规范扫描会报如下错误：Floating poin math is imprecise because of the challenges of storing such values in a binary representation. Even worse, floating point math is not associative; push a float or a double through a series of simple mathematical operations and the answer will be different based on the order of those peration because of the rounding that takes place at each step.

原因

duble类型只可以判断大小，不可以判断是否相等，这样会失去精度，使判断没有意义。

解决方案

为两个duble类型的值设置误差，通过判断大小来判断是否相等，代码演示如下：

```
public static void main(String[] args) {

    double preErrorKey=1e-6; //1*10的-6次方即0.000001
    double key1=0.0000001d;
    double key2=0d;
    System.out.println(key1==key2); //结果是flase
    System.out.println(Math.abs(key1-key2)<preErrorKey);   //允许一定的误差范围，判断结果
true
    }
```