Mixed static and non-static features

* count the number of objects created
* assign a unique serial number to each object
* control the number of instances of the class that are created (singleton)
* one instance per class

One instance per class: For any object with distinct data, only one object with that data is permitted

Suppose a and b are objects of a type with one instance per state … then,

If a.equals(b) == true, then a == b

String is an object type that enforces one instance per state

String a = “Hello”;

String b = “Hello”;

System.out.println(a == b);

// prints “true”

In one instance per state, you have to keep track of all the objects of that type that you have ever created

We will use Map

* Maps assign keys to unique objects
* The keys can be of any object type

A map is a table:

|  |  |
| --- | --- |
| Keys | Rectangle(w,h) |
| 781935 | (4,5) |
| 6586221 | (12,18) |

You can’t use two different objects with the same key – the keys all have to be unique