

```
public boolean equals(Object o) {  
    if (o == null) return false; // Step 1  
    if (o == this) return true; // Step 2  
    if (!(o instanceof Pen)) return false; // Step 3  
    // Now its safe to cast  
    Pen oo = (Pen) o; // Step 4  
    // Step 5 → compare members of oo with this.  
    if (this.Color == oo.Color && this.Volume == oo.Volume) {  
        return true;  
    } else {  
        return false;  
    }  
}
```

this.Color.equals(oo.Color)

The **instanceof** operator has this general form:

class
object instanceof type

Here, *object* is an instance of a class, and *type* is a class type. If *object* is of the specified type or can be cast into the specified type, then the **instanceof** operator evaluates to **true**.

Otherwise, its result is **false**. Thus, **instanceof** is the means by which your program can obtain run-time type information about an object.

Strings

~~Strings~~

equals()

`n.o.p (a == b) ;` `n.o.p ("Fadel" == "Fadel") ;` `n.o.p (a.equals(b)) ;` `n.o.p (new("Fadel").equals(new("Fadel"))) ;`

`n.o.p (a.equals(b)) ;` \Rightarrow `False` `n.o.p (new("Fadel").equals(new("Fadel"))) ;` \Rightarrow `True`