In Java, the class Object has these two methods:

public int hashCode()

public boolean equals(Object obj) [very strict, must be exact reference in Object’s implementation]

When overriding equals(Object)

* Be sure to override, not overload (match Object parameter)
* If a.equals(b) is true, then b.equals(a) MUST also be true
* When implementing equals, we MUST be sure that reference passed is the exact same type (not a subclass, instanceof WON’T work)
* If you override equals(Object), you MUST also override hashCode()
* If a.equals(b) is true, then a.hashCode() MUST be the same at b.hashCode()
* If a.hashCode() == b.hashCode(), then a.equals(b) MIGHT be true or MIGHT be false

When overriding hashCode

* Keep in mind the equals rules.
* Calculate the hashCode very fast
* Desire two barely different objects have very different hashCodes.
* Every time hashCode is called, the same value must be returned (if the object hasn’t changed).
* Ideally, use the whole range of int values