What is the use of hashcode in Java?

hashCode() is used for bucketing in Hash implementations like HashMap, HashTable, HashSet, etc.

The value received from hashCode() is used as the bucket number for storing elements of the set/map. This bucket number is the address of the element inside the set/map.

When you do contains() it will take the hash code of the element, then look for the bucket where hash code points to. If more than 1 element is found in the same bucket (multiple objects can have the same hash code), then it uses the equals() method to evaluate if the objects are equal, and then decide if contains() is true or false, or decide if element could be added in the set or not.

In Java obj.hashcode() returns some value. What is the use of this hash code in programming?

A hashcode is a number generated from any object. This is what allows objects to be stored/retrieved quickly in a Hashtable.

Imagine the following simple example: On the table in front of you you have nine boxes, each marked with a number 1 to 9. You also have a pile of wildly different objects to store in these boxes, but once they are in there you need to be able to find them as quickly as possible. What you need is a way of instantly deciding which box you have put each object in. It works like an index; you decide to find the cabbage so you look up which box the cabbage is in, then go straight to that box to get it.

Now imagine that you don't want to bother with the index, you want to be able to find out immediately from the object which box it lives in.

In the example, let's use a really simple way of doing this - the number of letters in the name of the object. So the cabbage goes in box 7, the pea goes in box 3, the rocket in box 6, the banjo in box 5 and so on. What about the rhinoceros, though? It has 10 characters, so we'll change our algorithm a little and "wrap round" so that 10-letter objects go in box 1, 11 letters in box 2 and so on. That should cover any object. Sometimes a box will have more than one object in it, but if you are looking for a rocket, it's still much quicker to compare a peanut and a rocket, than to check a whole pile of cabbages, peas , banjos and rhinoceroses. That's a hash code. A way of getting a number from an object so it can be stored in a Hashtable. In Java a hash code can be any integer, and each object type is responsible for generating its own. Lookup the "hashCode" method of Object.