**Why does 128==128 return false but 127==127 return true when converting to Integer wrappers?**

class D {

public static void main(String args[]) {

Integer b2=128;

Integer b3=128;

System.out.println(b2==b3);

}

}

Output:

false

class D {

public static void main(String args[]) {

Integer b2=127;

Integer b3=127;

System.out.println(b2==b3);

}

}

Output:

true

Note: Numbers between -128 and 127 are true.

**Answer:**

Actually, java doesn’t create objects from integer -128 to 128.

It cached these values and doesn’t create objects for such small values because creating objects, autoboxing and unboxing is bit costly operations and to avoid that like String, Integer objects ranging between -128 to 128 gets cached values from cache only.

Integer b2=127;

Integer b3=127;

**b2**

here we can see that b2 and b3 is pointing

**b3**

**X001**

**127**

to the same object in cached memory

and pointing to the same memory location.

That’s why

**Cached Memory**

b2==b3 is true.

Integer b2=128;

Integer b3=128;

**b3**

**b2**

**128**

**X001**

Here we can see that b2 and b3 is pointing

to the different objects in cached memory

**X002**

**128**

**Heap Memory**

and pointing to the different memory

location.

that’s

b2==b3 is false.