

# Implementing hash code: integers, booleans, and doubles

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## Java library implementations

```
public final class Integer
{
    private final int value;
    ...

    public int hashCode()
    { return value; }
}
```

```
public final class Boolean
{
    private final boolean value;
    ...

    public int hashCode()
    {
        if (value) return 1231;
        else      return 1237;
    }
}
```

```
public final class Double
{
    private final double value;
    ...

    public int hashCode()
    {
        long bits = doubleToLongBits(value);
        return (int) (bits ^ (bits >>> 32));
    }
}
```

convert to IEEE 64-bit representation;  
xor most significant 32-bits  
with least significant 32-bits

Warning: -0.0 and +0.0 have different hash codes