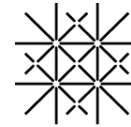


Zero is not null

The null value has a special meaning in Computer Science. It is used to declare that a value is not yet defined or known.

The specialty of null is that although it shows us that a value is missing, it is itself a value. So it is possible to compare two non existing values.

Suppose we have data about a patient; it *does* make a difference if the patient has no disease (**0**) or is not yet diagnosed (**null**).



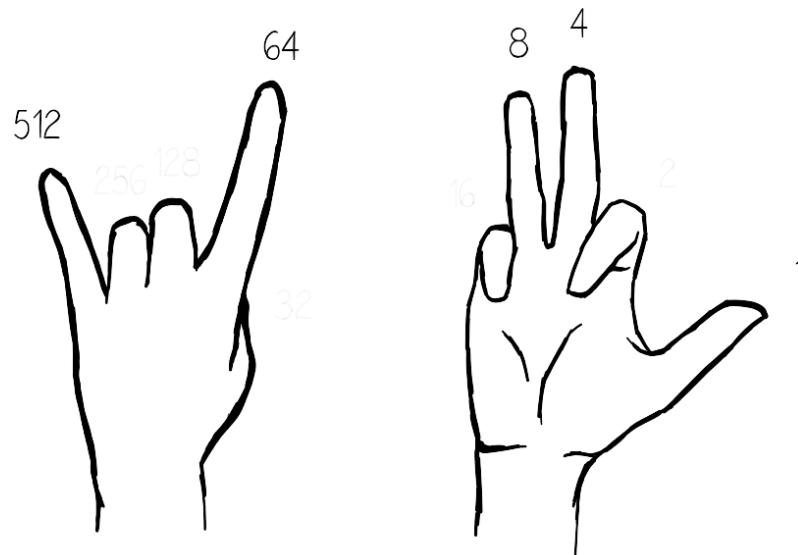
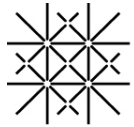
Counting to more than ten with two hands

Normally you count with your fingers by stretching them out one after another. You don't care about which ones are stretched out, but only about the amount of them. Each of them is as significant as the other.

By changing the significance in the way that the right thumb has significance 1 and the left neighbor is always twice as significant we can get **1024** different numbers:

$1+2+4+8+16+32+64+128+256+512=1023$
and **0**.

This is called binary counting and exactly the way a computer counts, but with zeros and ones instead of bent and stretched fingers.

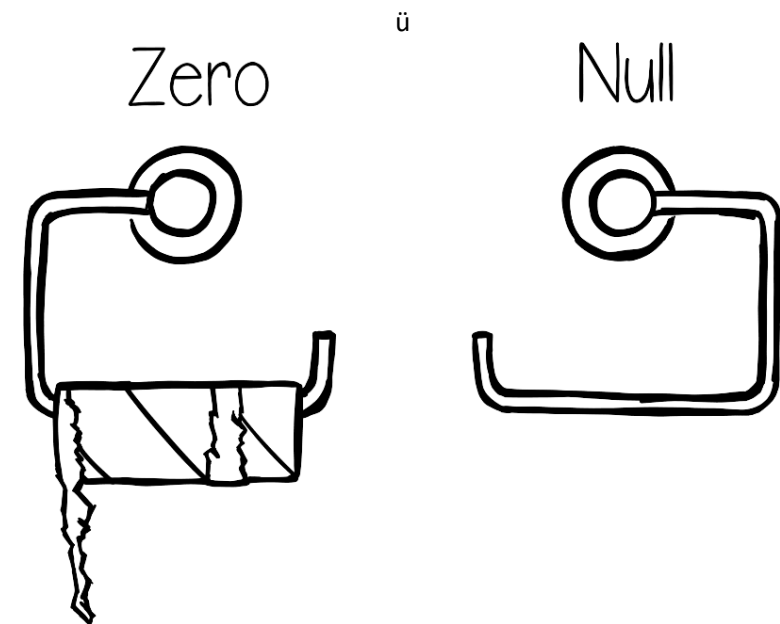
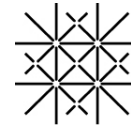


$$512 + 64 + 8 + 4 + 1 = 589$$

No. 99 of 101

Curious?

Find out more at
<https://tilics.dmi.unibas.ch/counting>



No. 7 of 101

Curious?

Find out more at
<https://tilics.dmi.unibas.ch/null>

