Summarizer 0001

Notice how I wrote 1 in binary, pretty clever.

JOÃO BARATA BOOTCAMP#16

- Presentations
- Electricity and magnets
- Electric current and signal
- ANALog and Digital
- Electronic circuits
- Transistors and Integrated Circuits
- Numeral Systems

- DON’T FUCKING USE BULLET POINTS!!

Presentation: How to embarrass yourself in front of others

Some got arrested

Some jumped off a bridge

Some got their hands toasted

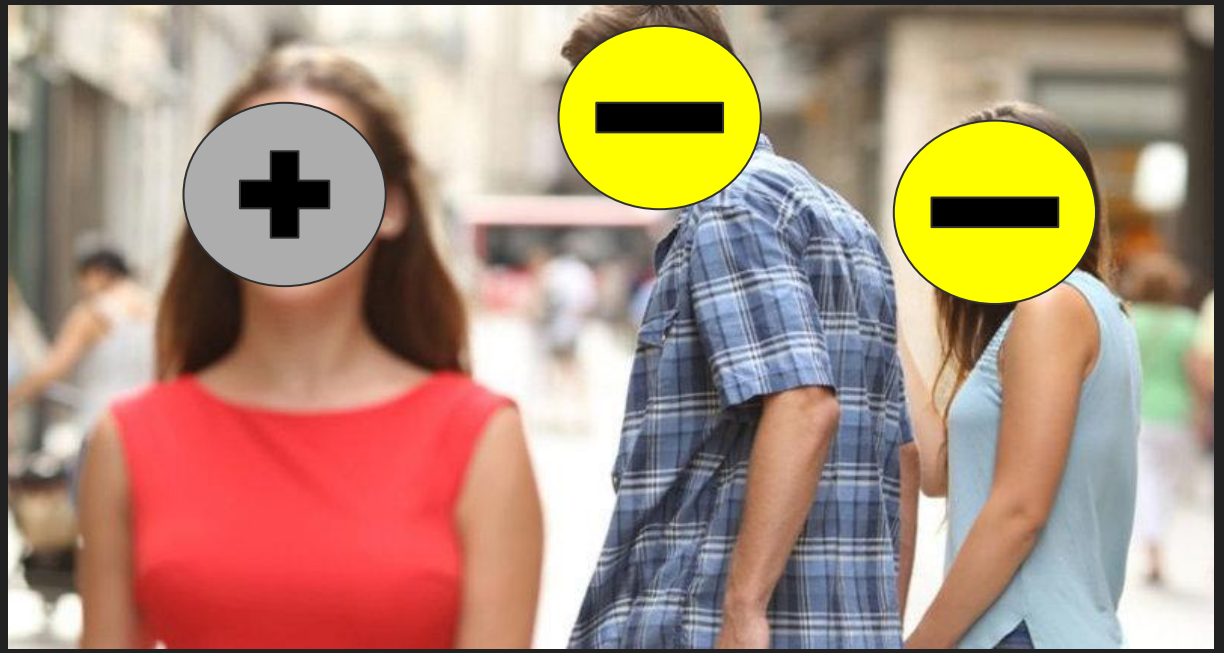
ELECTRICITY

Makes stuff work, shocking right?

MAGNETISM

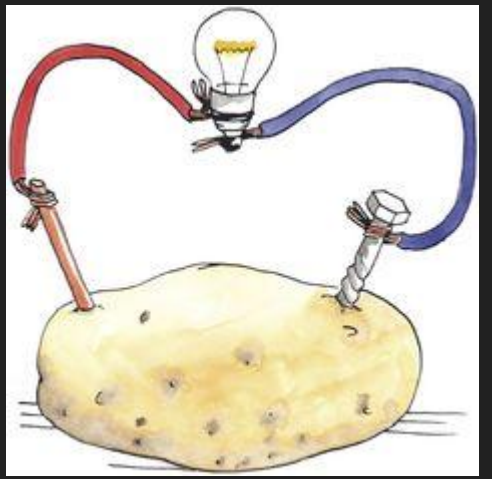
These guys (the magnets not the idiots that stuck them up their arses) can teach us how to make electricity happen!

Magnets how do they work?



Opposites attract (unless you’re stupid and ugly).

Electric Current



Positive pole is missing electrons.

Negative pole has way too many electrons.

If we connect both poles we have a circuit!

An electrical current is nothing more than electrons migrating from one pole to another.

Electric Signal

If we push the electrons a bit harder/softer we can change the voltage. This variation is how we represent Information. We call it an Electric Signal.

ANALog vs Digital

The signal can be split into two types.

Analog - It’s continuous and susceptible to noise.

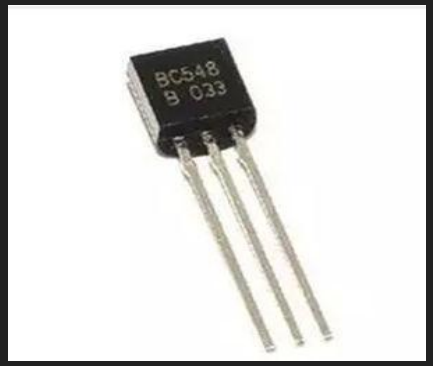
Digital - Discrete and limited to only two values of voltage, but it’s sort of immune to noise!!

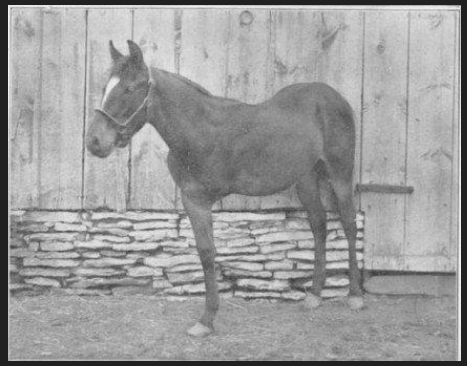
Electronic Circuits

Tiny little cities composed by components that perform multiple tasks. These components are connected by a grid that serves as a highway for all the information to travel.

But in order to do that we need something else...

Transistors and Integrated Circuits



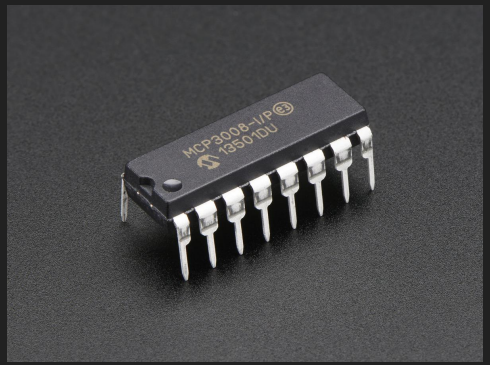


Electrically activated switches or amplifiers!

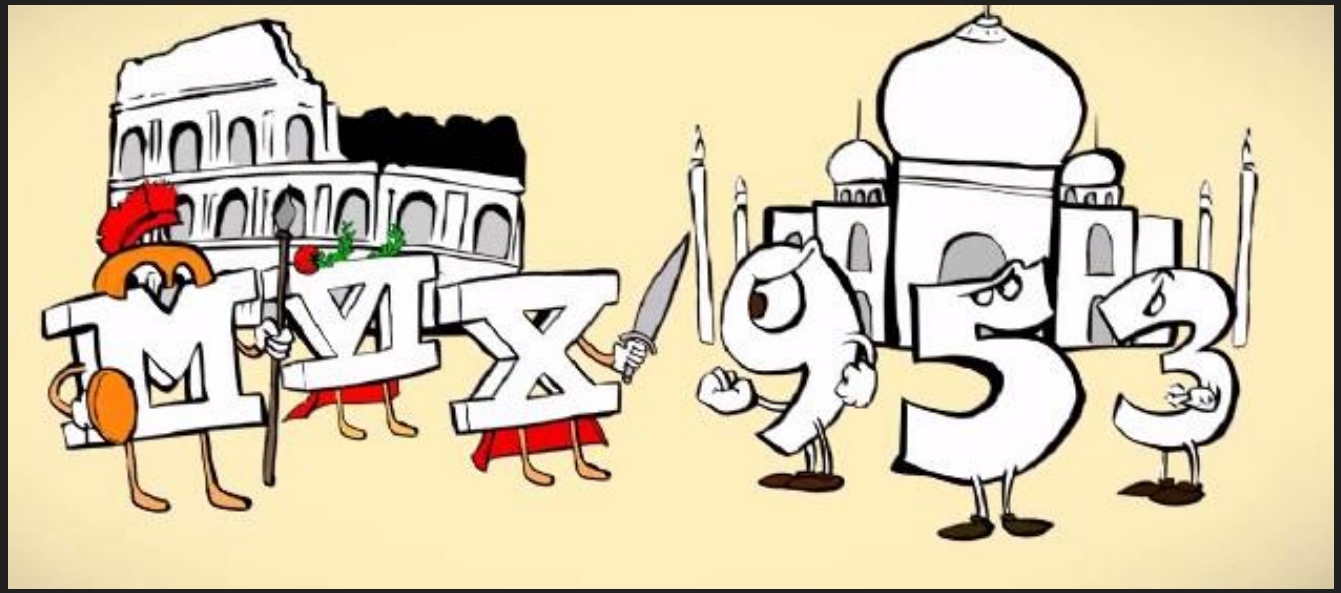
These guys connect and disconnect the source of energy between the components.

The quintessential building block to every modern equipment.

Integrated circuits have millions, billions or even perhaps quadragintillions of Transistors in them!



Numeral Systems



Stuff we use to count other stuff.

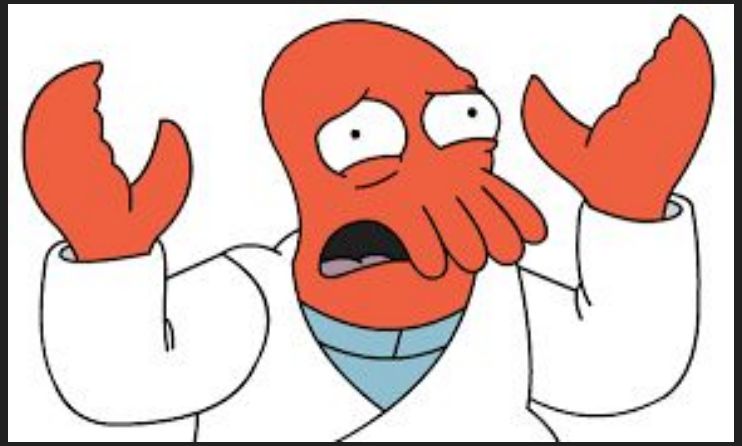
Numeral Systems

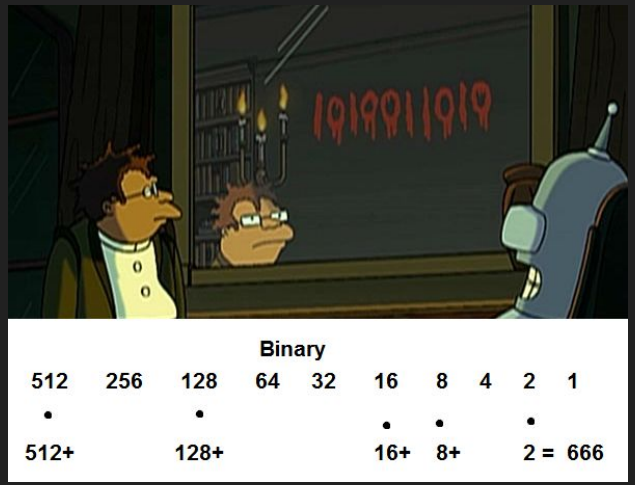
Muḥammad ibn Mūsā al-Khwārizmī

Aka Mr. Algorism, was bored and decided to come up with the number zero.

With this came the positional system. Meaning that the same digit represented a different quantity based on its position.

This makes it easy for everyone to count up to any size! Even Lobsters or Computers! Regardless of the amount of digits available to you, all the same rules apply.





THANK YOU!