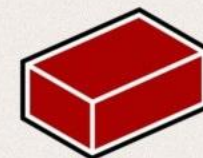


HowTo: Build a PC

They're a lot more than just a hamster in a wheel...



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Frankenstein's Monster

PC's are generally either built to a standard specification or built to a user's specification.

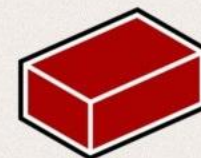
The Dells in front of you are a standardized build.

Richie's PC was built by him to his specs.

But what do they have in common?

All standard computers have:

- Power Supply
- Motherboard
- Processor
- RAM (Memory)
- Storage
- CPU

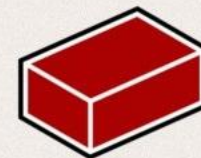


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What makes them different?

Some PCs have additional hardware that differentiates them.

- Graphics Cards
- Sound Cards
- Wireless Network Cards
- Optical Drives
- Water-Coolers
- Memory Card Reader

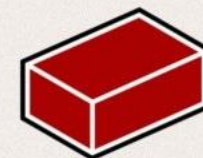


220-240v of your finest electricity please

All PCs need power, from the smallest Raspberry Pi to the biggest server

How much is enough?

How do you know?



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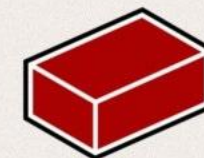
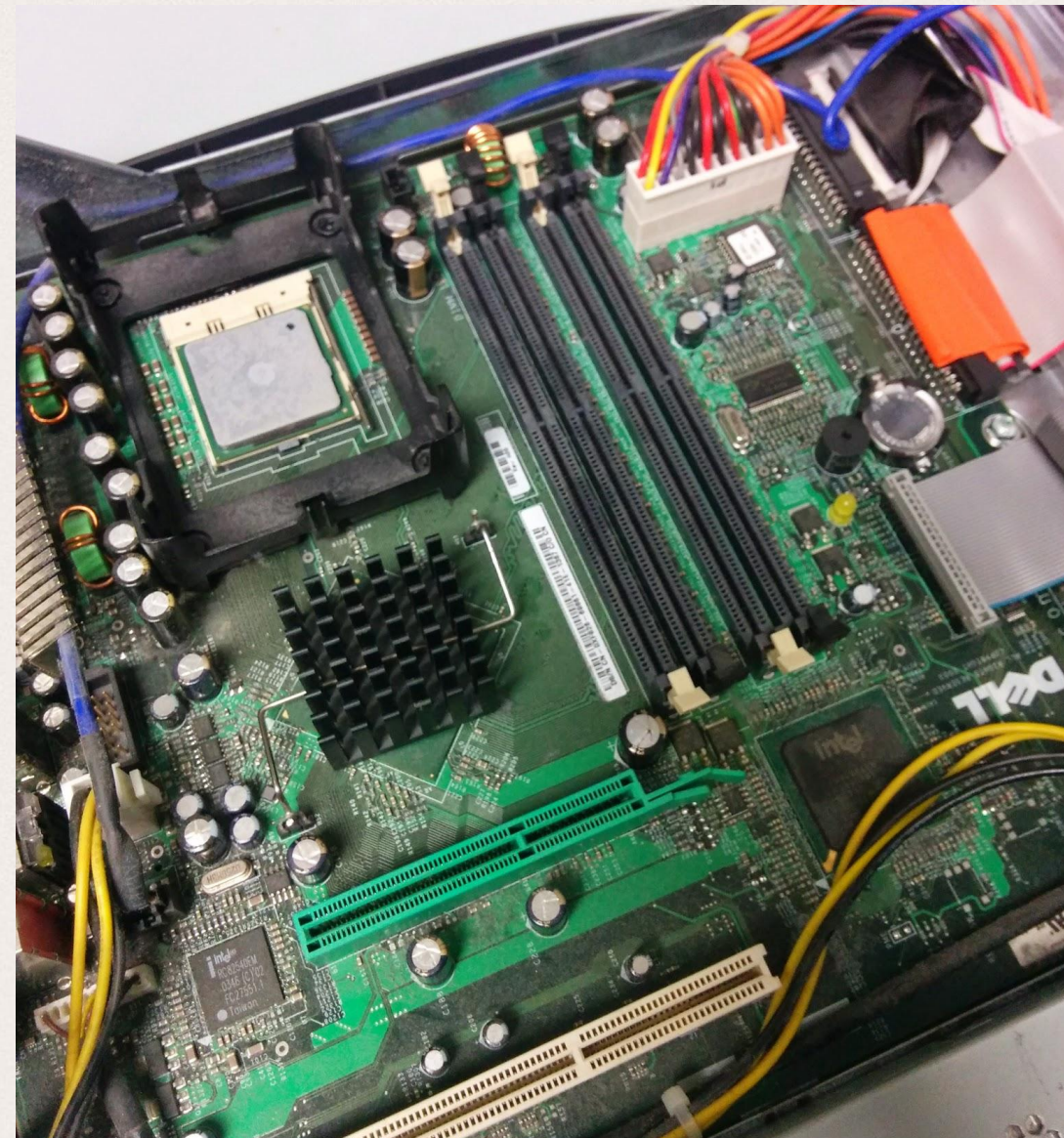
Good Foundations

Motherboards are the foundation on which you build your PC.

Everything connects to it (eventually)

There are many different shapes and sizes with different components.

Biggest difference is the processor supported

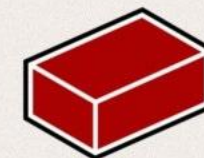
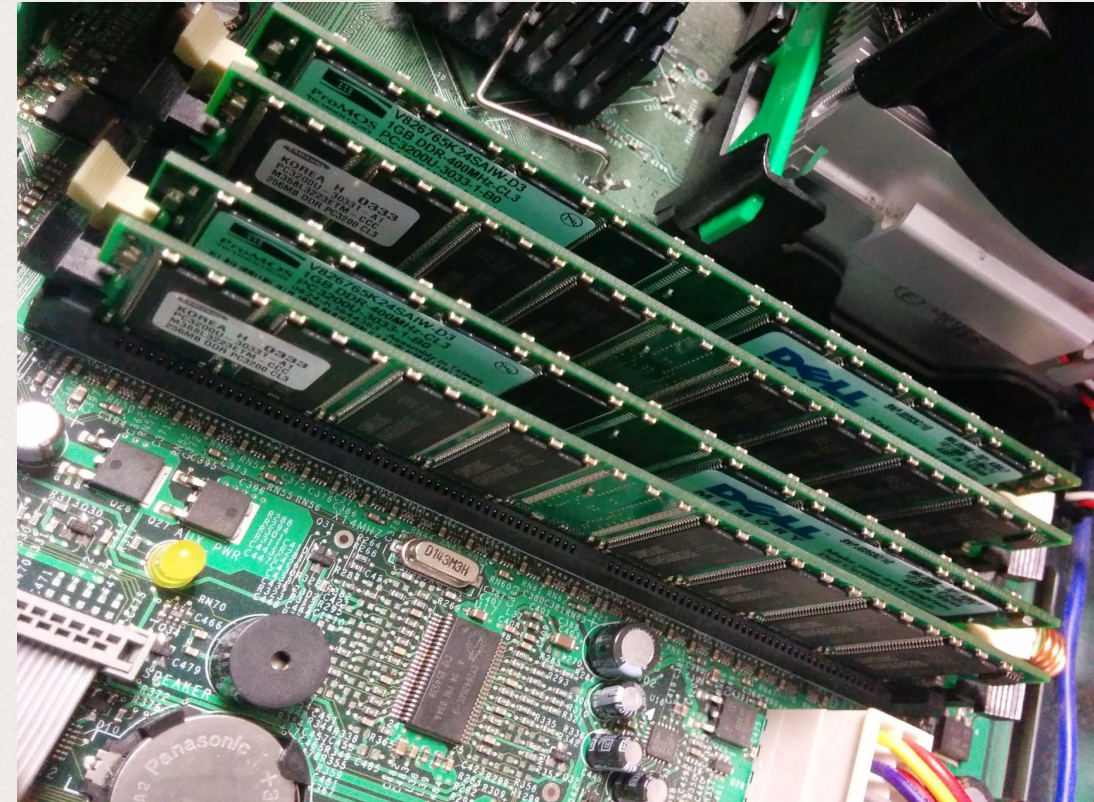


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RAM – Not the kind that goes Baaa

Memory is where information is stored for frequent immediate use by the processor.

- Memory comes in different speeds and densities.
- The speed of memory you get depends on the processor and motherboard
- Modern Desktops use DIMMs



Storage – Spinnin' Disks or Tiny Chips

Storage is important: It's where your OS lives, where your files reside when they're not being worked on. It's all about I/O

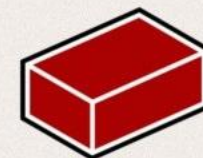
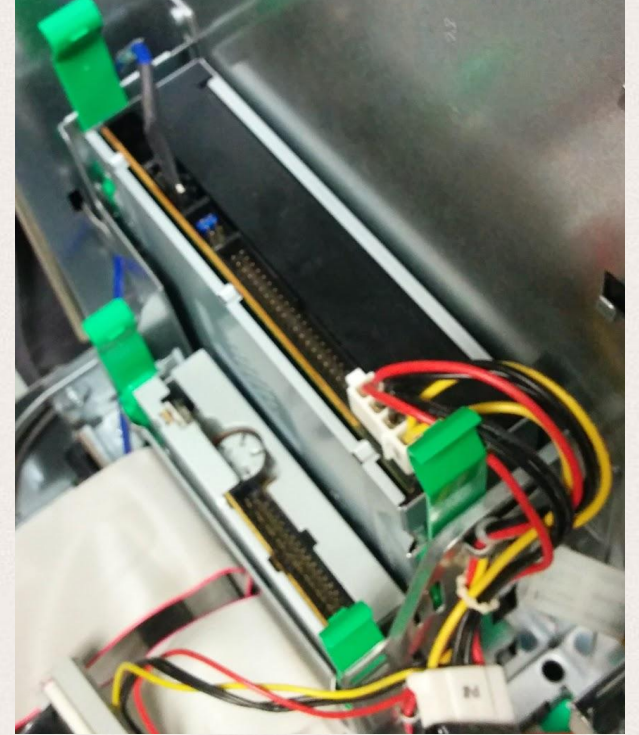
How much is enough? How much do you need?

SSDs are more and more popular

BUT

HDDs are cheaper and have higher capacity.

Why not get both?



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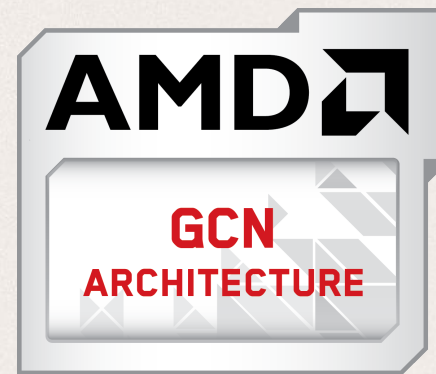
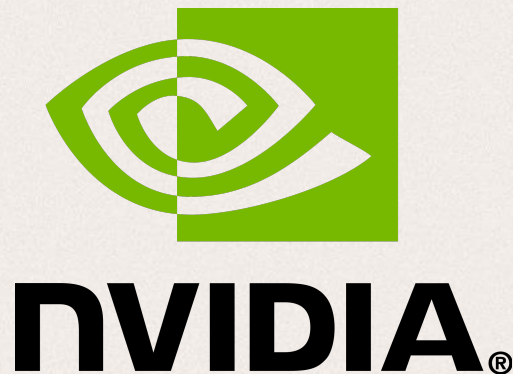
Pretty, Pretty Pixel Pushers

Graphics cards take the maths that's spewed out by your favourite game and displays it on your monitor(s)

To do this they need a lot of power and some hefty cooling.

They are usually one of the most expensive additions to a PC

They come from two major manufacturers



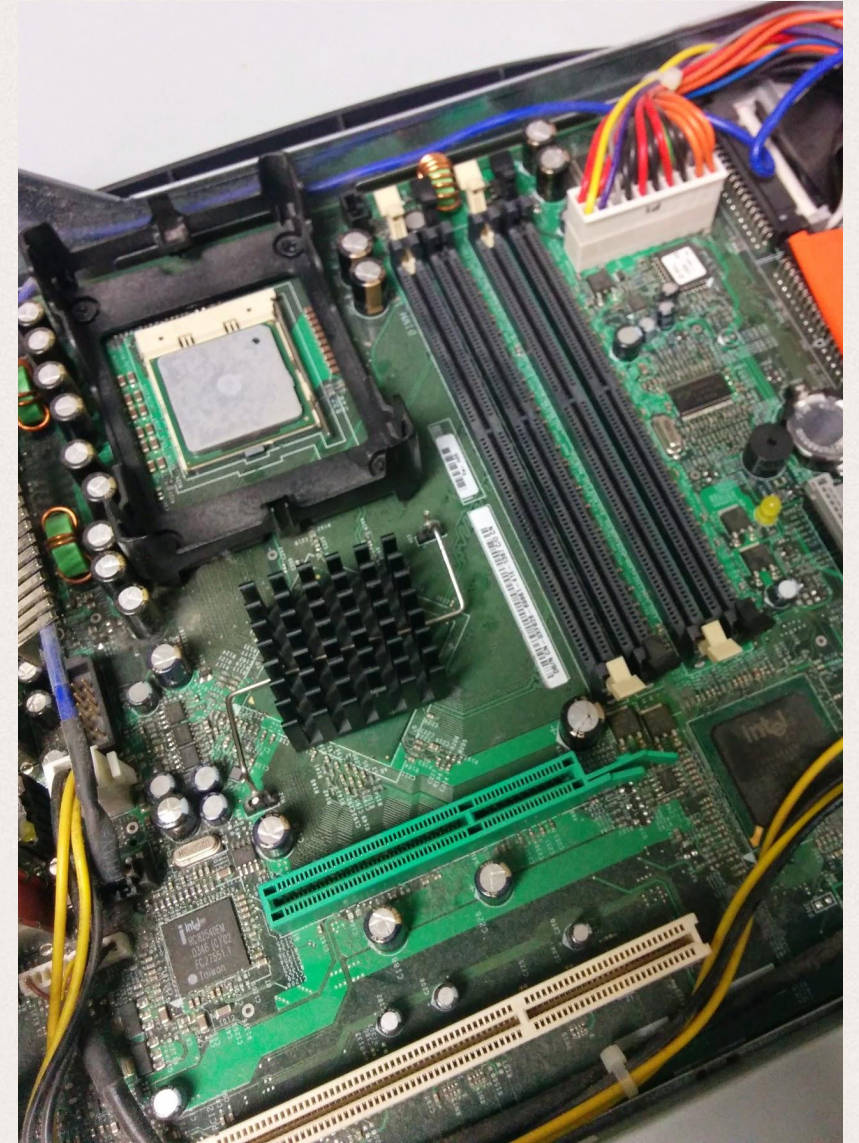
Cables, manage them

AirFlow

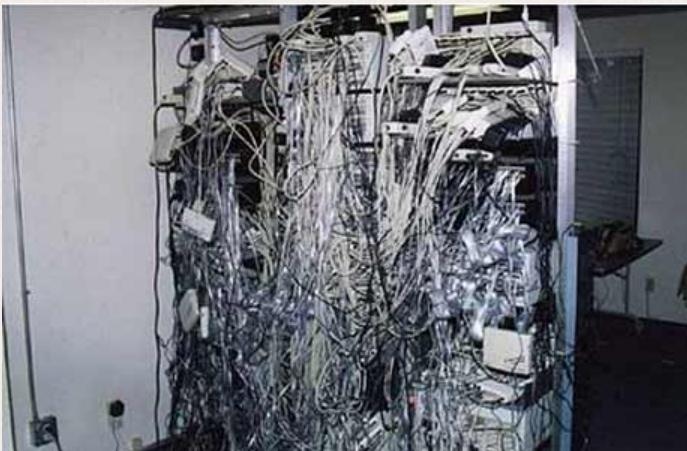
Managing cables:

- Zip ties
- Labels
- minimum amount of cables

THIS!!!!



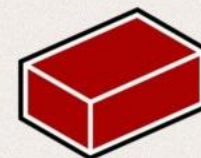
NOT THIS!!!!

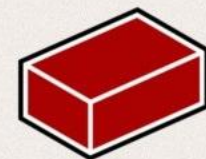


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Break it down now

- Be Careful (We don't own these machines)
 - Ground Yourself - We don't have anti-static wrist bands.
 -
- Be Gentle
 - Don't force anything out/in.
 - Try not to bend/break pins on CPU.





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