Coding Fundamentals ASPIRE

(8/11 - 12/12)

Helix Charter High School
Isabelle Viraldo

Week 9 + 10 (10/6, 10/13, 10/17)

Welcome!

- Mondays: Discussion + Activity
- Fridays: Review + Programming Exercise

What do you want to learn?

What do you care about?

What do you want to accomplish?

feedback!

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Topics I hope to cover:

- GitHub (How to use and let's set one up!)
- AI (Machine Learning vs Generative AI vs Image Detection, let's break it down (and make one of our own))
- How to code! (Some practical skills, and also best practices)
- Binary (What is it? Why is it important? Who cares?)
- Robotics (What do you need to get a robot working?)
- How does your computer work? (What do computers do when you're not looking?
- What do you want to learn?

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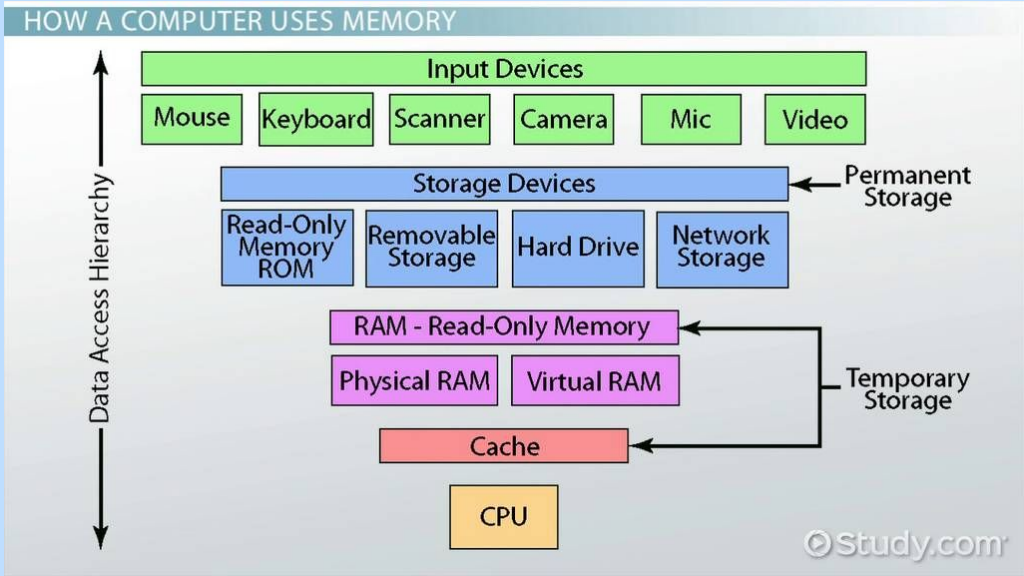
How does a computer work?

4 main parts:

- CPU (Central Processing Unit)
- Memory (cache or RAM)
- Storage (Disks or SSD)
- I/O (Input/Output)



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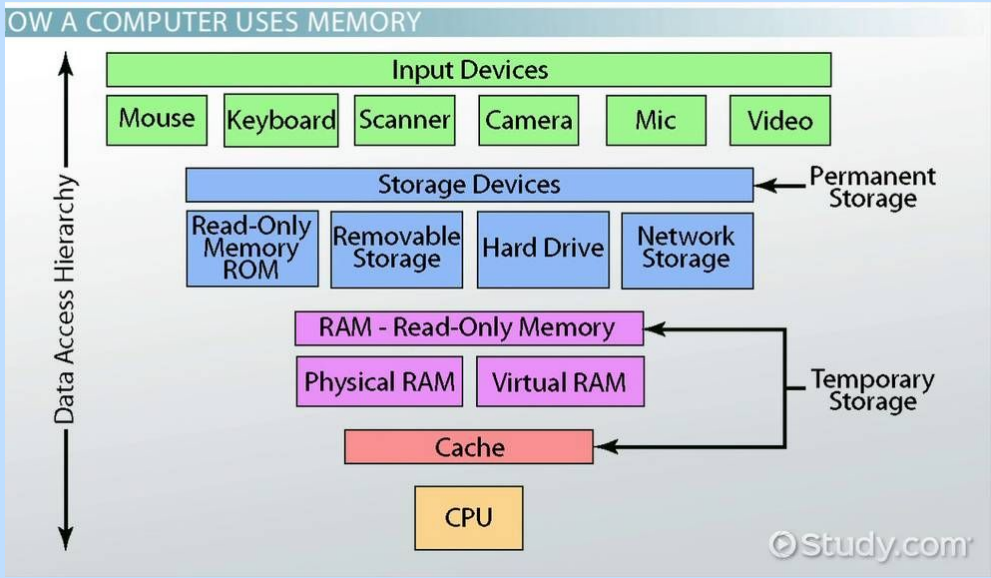
CPU (Central Processing Unit)

Executes instructions fast, in order

Fetch, decode, execute

Works directly with cache

Fastest data handler in the computer



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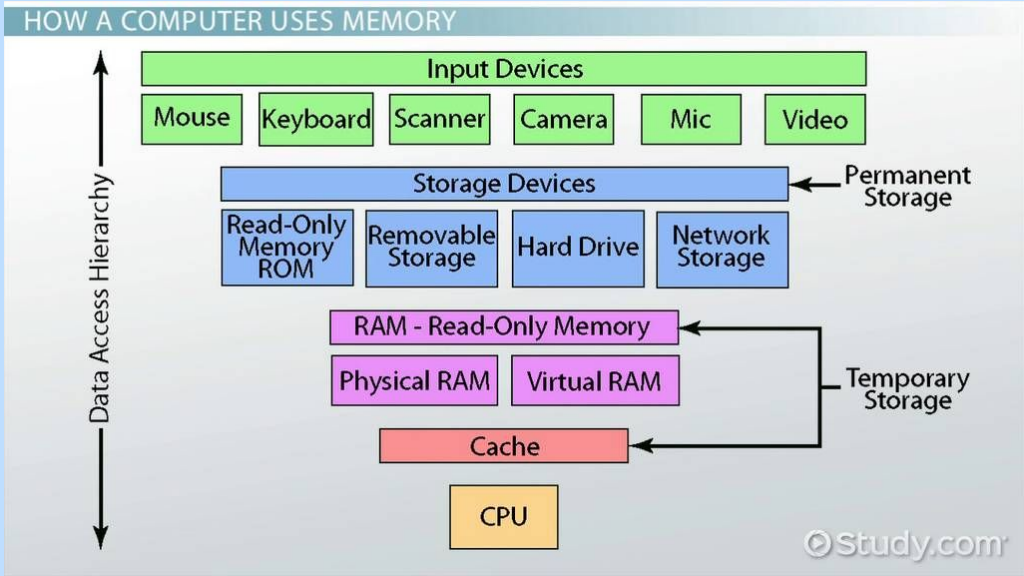
Memory (Temporary Storage)

Cache

RAM (Random Access Memory)

Holds the data the cpu needs FAST and NOW

Very fast at sending data



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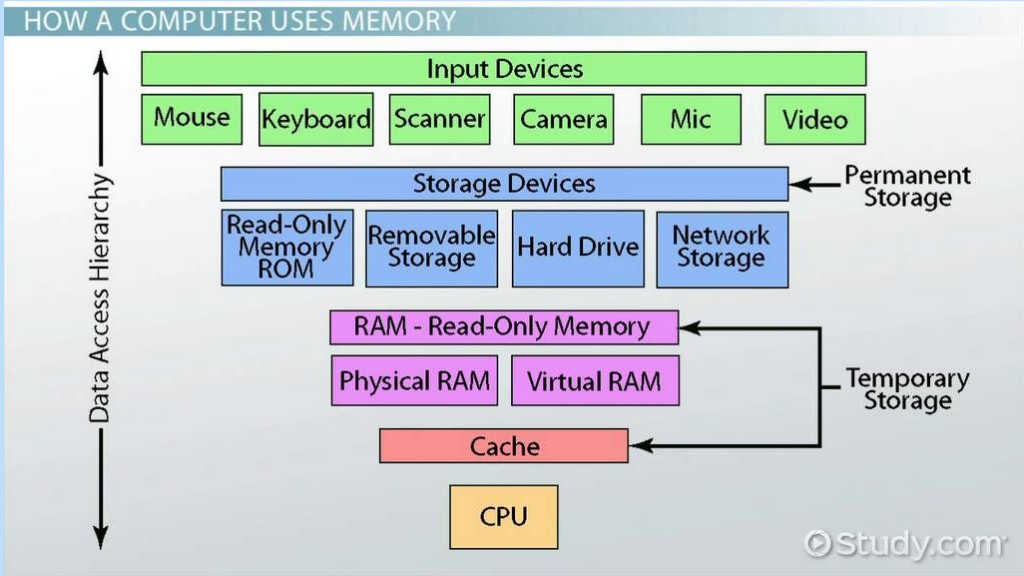
Permanent Storage

Disks

SSD (Solid State Drive)

Holds onto data for long term saves

Can hold onto data long term, slow



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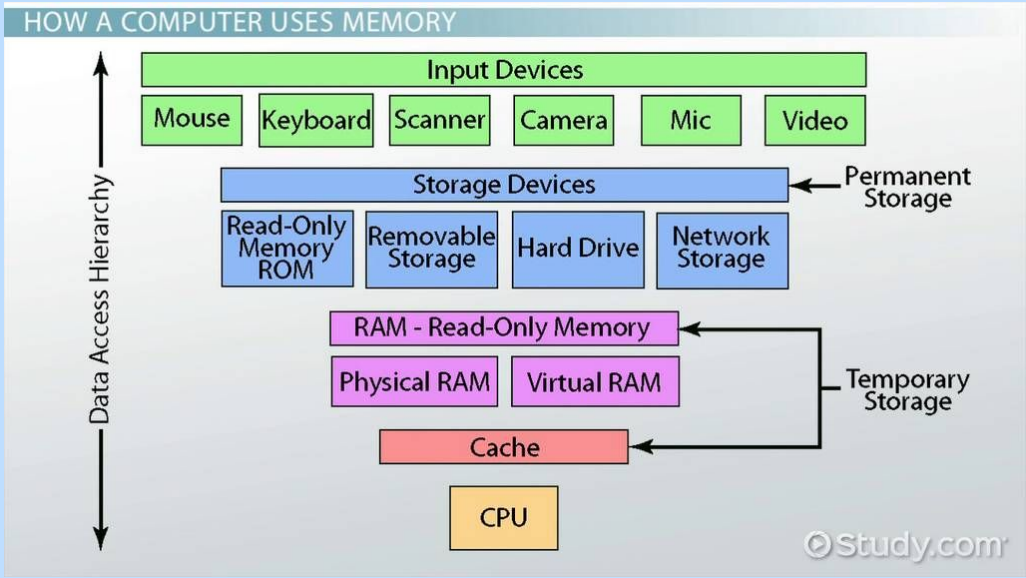
I/O Devices (Input/Output)

Keyboards, screens, wifi, network sensors, everything you interact with as a user



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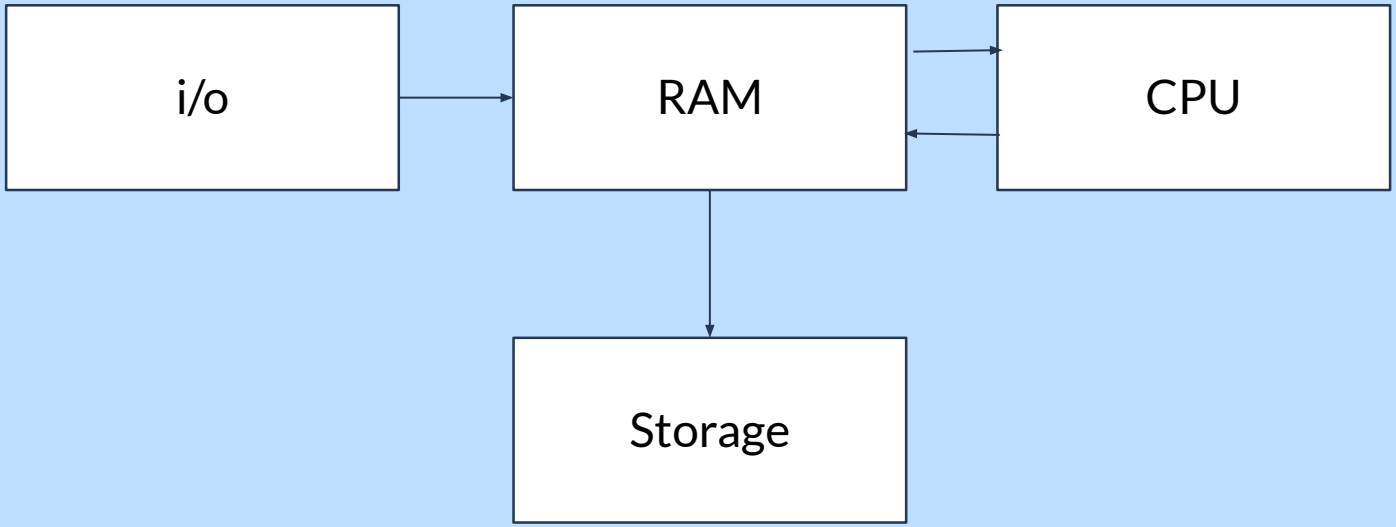

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Coding activity! Get out your Chromebooks!

Everyone look up:

python online compiler

Or

Go to: https://tinyurl.com/yc4w9mdh

feedback!

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