

# General Computer Architecture

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*I write code by hand ☐, but dream of managing coders by head 🤖*

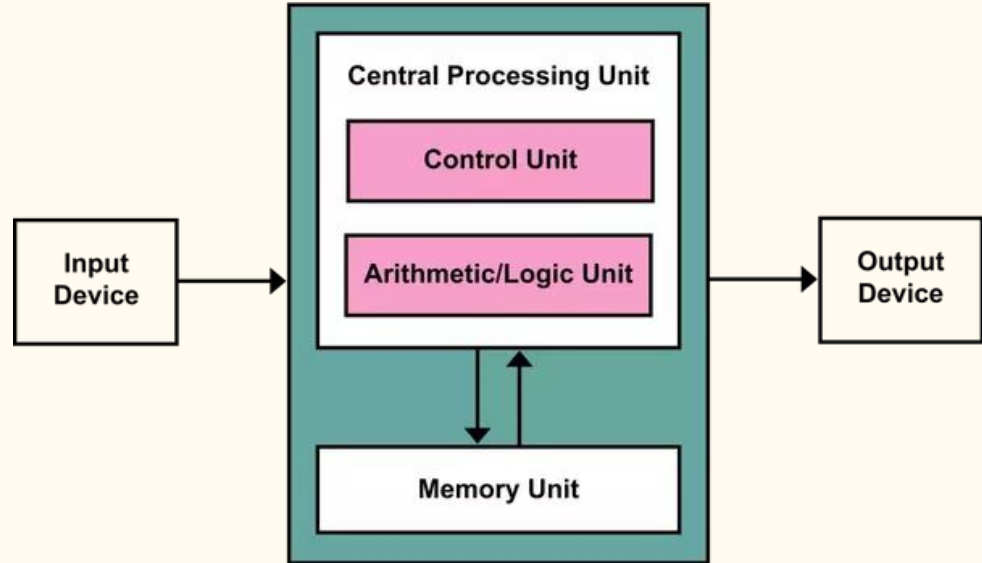
# What the computer is and how they appeared?

*The most beautiful slide in whole lecture. Enjoy as much as you can! 🥰*



# von Neumann Architecture

- Memory holds data and instructions.
- Central processing unit (CPU) fetches instructions from memory.
- CPU registers help out: program counter (PC), instruction register (IR), general purpose registers, etc



# Architecture of a modern computer

The last boring slide in lecture 😞

- CPU (Central Processing Unit)
  - RAM (Random Access Memory)
    - Really random?
  - HDD (Hard Disk Drive)
  - SSD (Solid-state drive)
  - I/O (Input/Output Devices)
    - Keyboard, mouse
    - Printer, Display
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# What about Graphics Processing Unit?

*Slide for you if you like games. Personally I like CS GO and Fifa* 

Now let's pick an  
ideal laptop for  
you

*Just shut up and give your money to Apple 🍏*

# Operating Systems

And why developers hate Windows 🙄

— Operating system controls everything

## Types

- Unix Based
    - Linux
      - Android
  - Windows
  - MacOS
    - iOS
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# Stop! But what about clouds?

*Just computers somewhere else? Like google drive? 🖥️*



# Cloud vs Traditional Infrastructure

Raise hand if you are bored with my stories about telegram 🙋

And read "Durov's Code" by Nikolay Kononov

Depends on

- Project size
- Privacy and Security
- Team and skills

# Cloud Infrastructure

Sadly, there are tons of them 😊

Fortunately, developers should care about it 😞

## Infrastructure

- AWS (Amazon Web Services)
  - ◆ S3 (Storage)
  - ◆ Cognito (Authentication)
  - ◆ SNS (Notifications)
- GCP (Google Cloud Platform)
  - ◆ Firebase
- Microsoft Azure

## Frontend

- Vercel
  - Netlify
  - Firebase
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Let's pick infrastructure  
for our application using  
aws pricing calculator...

*Sadly, sometimes it costs a lot of money! Fortunately, companies' *

# Our experience at ACA

Actually, also yours 🐱

## Infrastructure

### → Backend

#### ◆ AWS

- EC2
- S3
- Lambda
- Amazon RDS

### → Frontend

#### ◆ Vercel

#### ◆ Firebase

What is a  
terminal, how to  
use it and why  
UX matters?

I create files. You pretend like it's interesting 🤖

# Q & A

I prepare for this. Hopefully, you are not !?