

# PC hardware and x86 programming

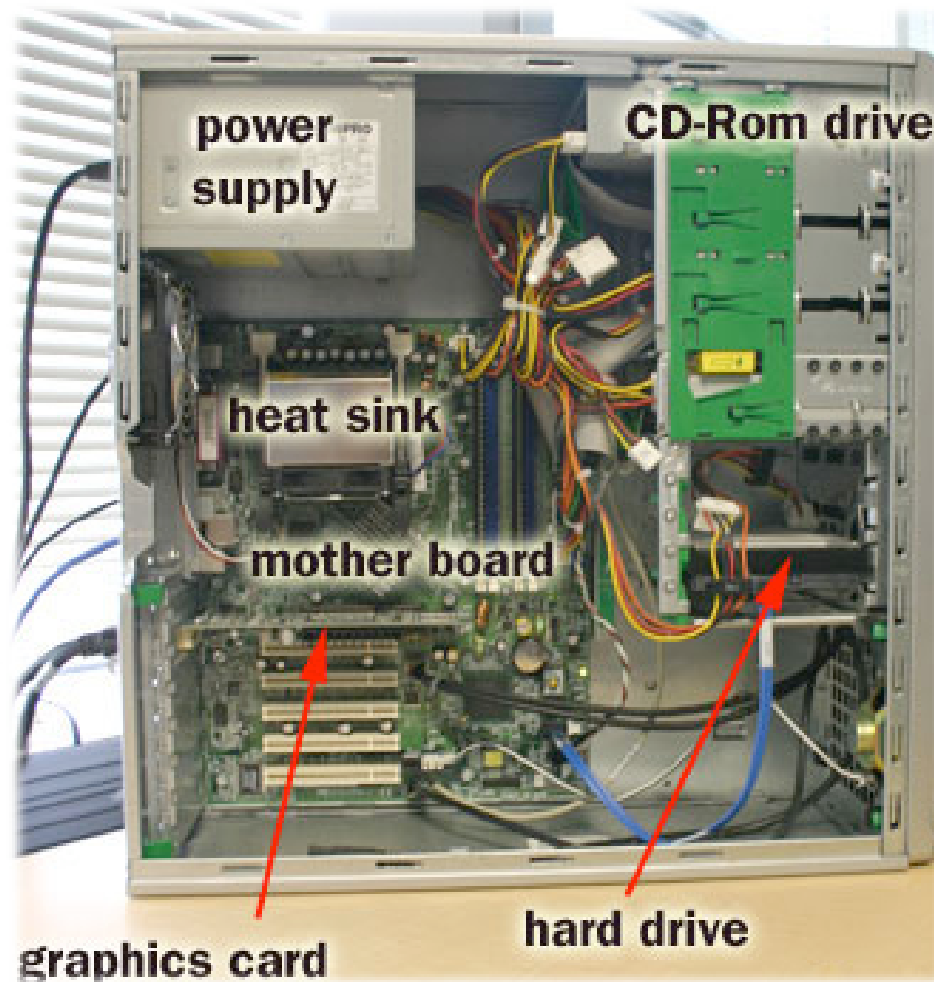
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Jinyang Li

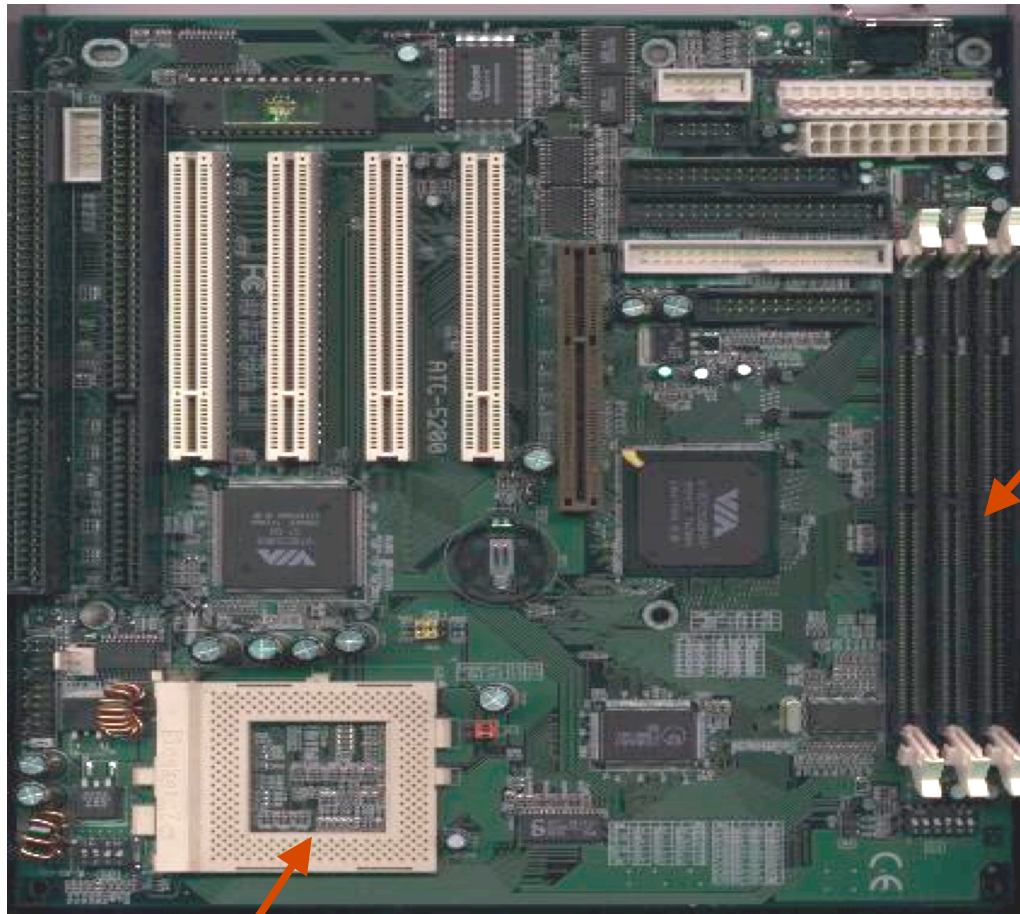
# Write an OS to count lines

- Alice is asking you to write an OS to count lines in a file.
- What must you know before starting?
  - What type of computer?
  - What type of the disk?
  - What type of the monitor?

# Inside a PC



# PC architecture

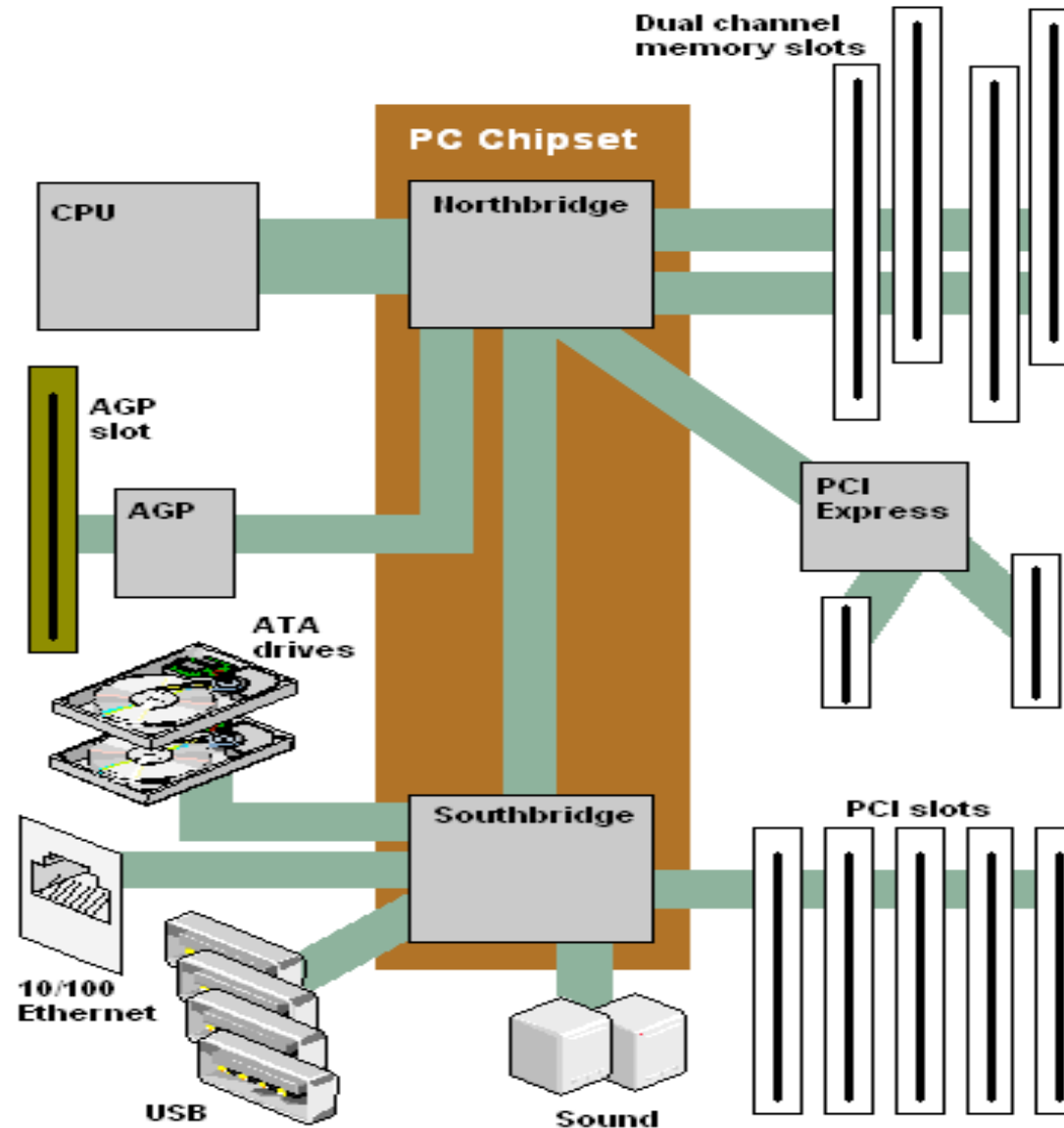


Plug 4G memory banks here

Plug CPU (Intel Xeon) here

# PC architecture

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# Processor architecture

- X86
  - Most commercially successful
  - A class of CPU chips
  - An machine instruction set
  - Used in most PCs, workstations and laptops
- ARM (advanced RISC machine)
  - Used in most mobile phones (e.g. iphone)
- MIPS
  - Cisco routers, wireless routers, playstation

# X86 is the dominant PC architecture

