

At the end → isn't it ^{so} cool

How bunch of 0s 1s
are interpreted

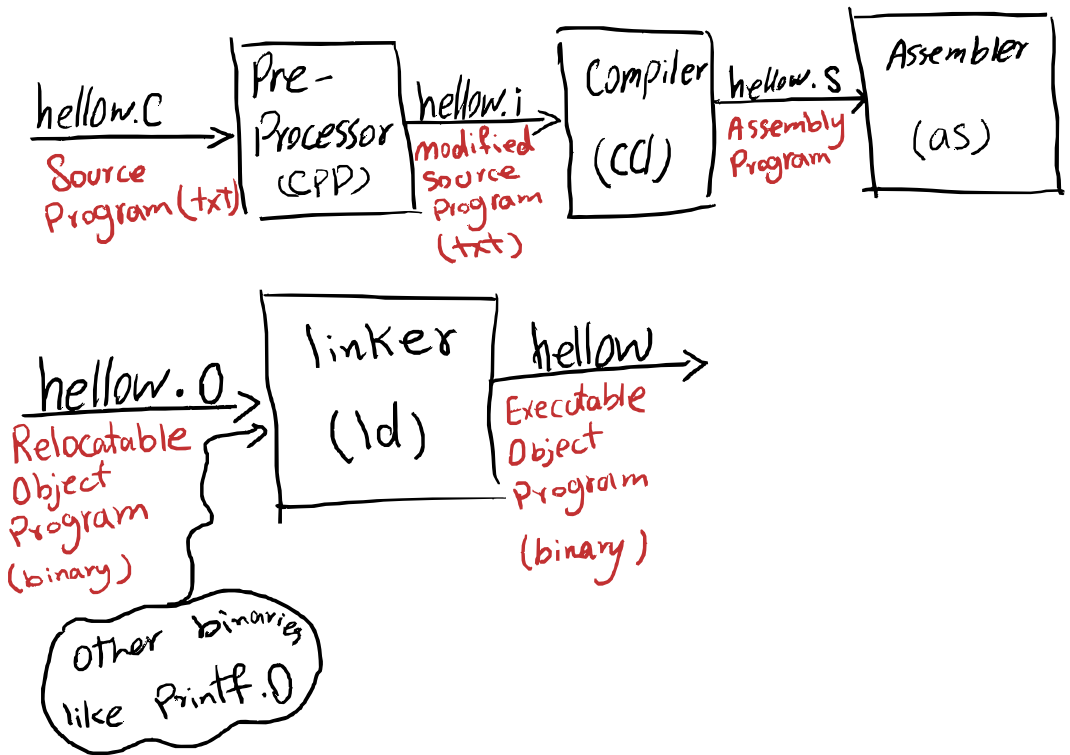
① Computer Architecture e.g. ^{big} _{little} endian

② OS e.g. $lrlr$ vs. lr

③ Application Software

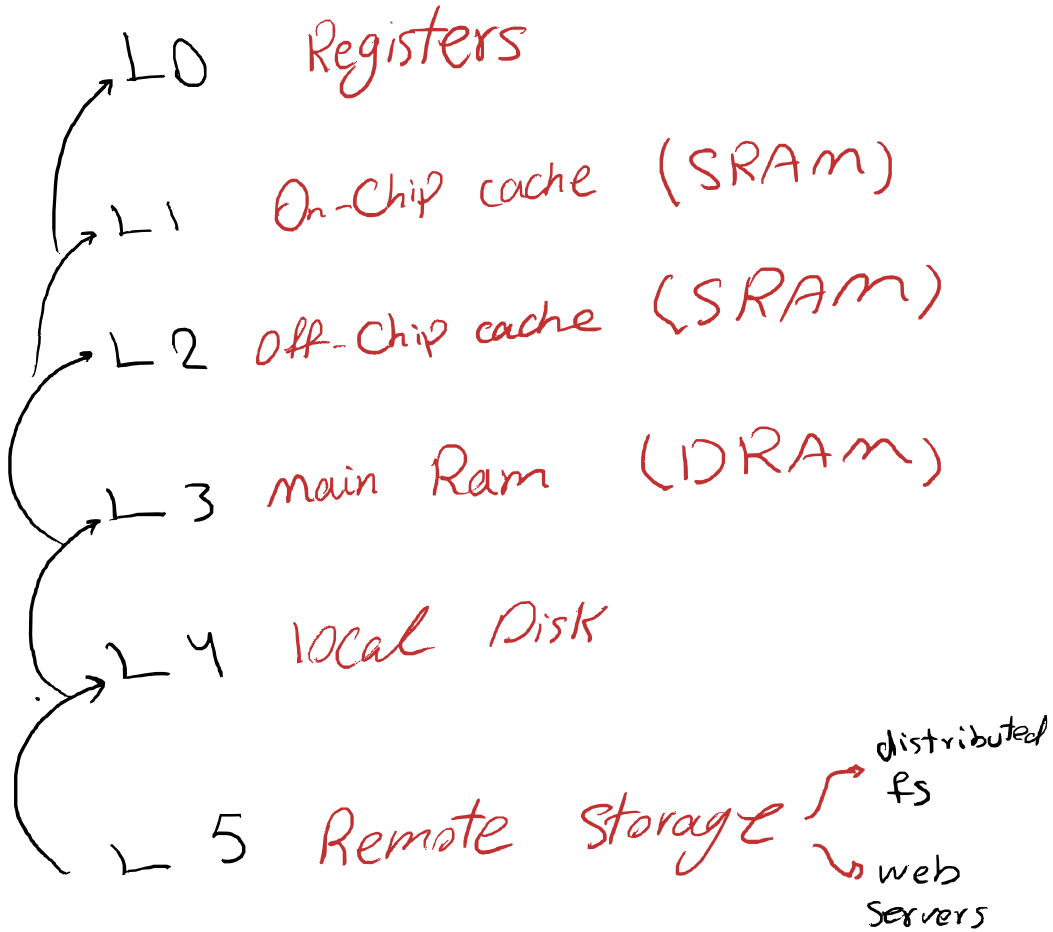
Compilation Process

C/C++



Java

Storage Hierarchy



? How we can exploit this hierarchy to improve efficiency?

what does OS do?

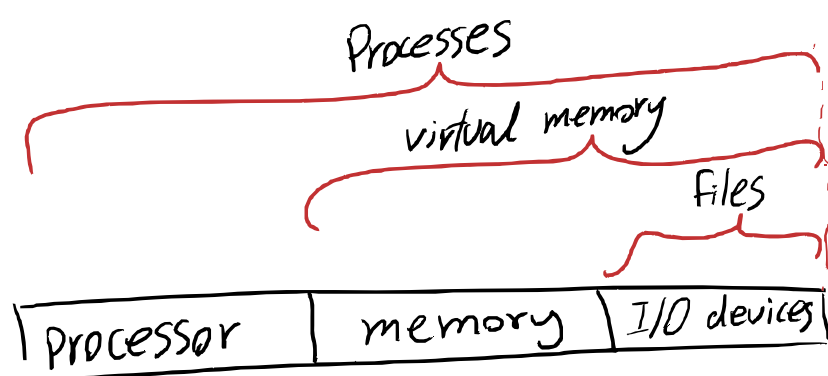
① Protect The hardware from misuse by Applications.

② Provide a uniform mechanism for manipulating various complicated low-level hardware.

How?

★ Same old Abstraction

"This is the way"



Process → the program thinks its the only Process (isolation)

→ Can have multiple executions
thread
↳ can run concurrently

files {
 R/w → network, disk
 R-only → web-cam, keyboard
 W-only → printer

- uniform interface for varied I/O device.
- Abstracts away all the underlying details on how data read/written.
- Program written in one system can easily be ported.