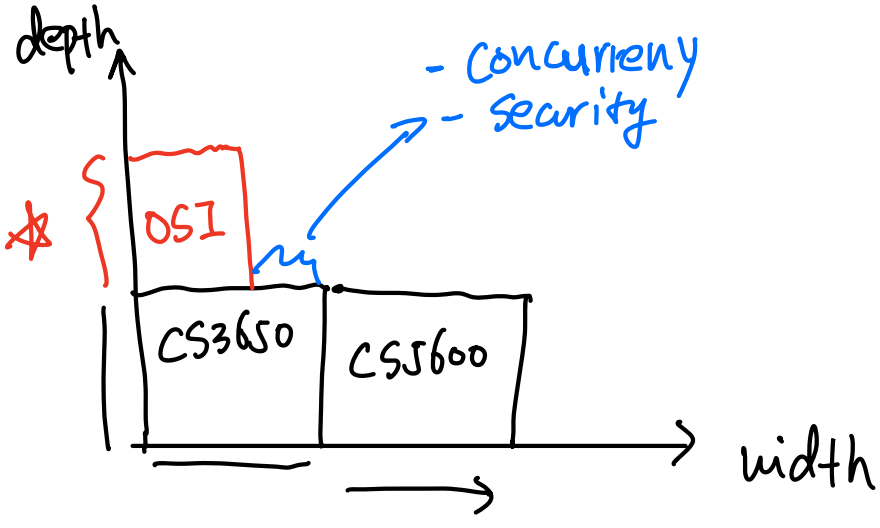
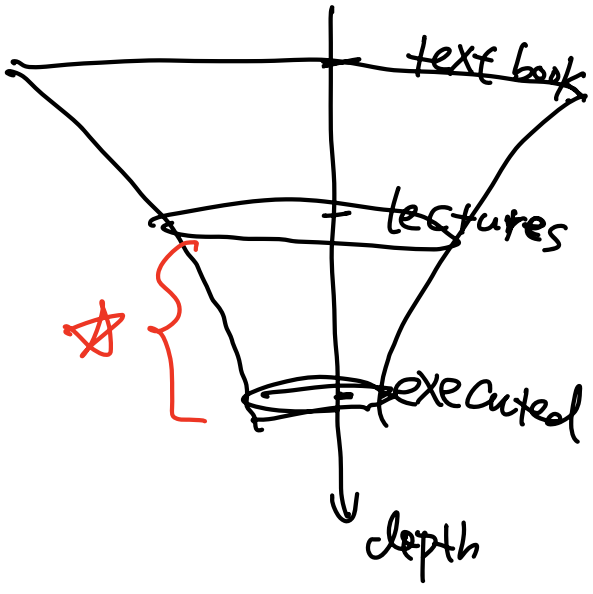
Week 1
CS4973/CS6640
01/06 2025
https://naizhengtan.github.io/25spring/

- [x] 0. in-class policies
- [x] 1. Intro to OSI
- [x] 2. Assumptions
- [x] 3. Mechanics and admin
- [ ] 4. C basics

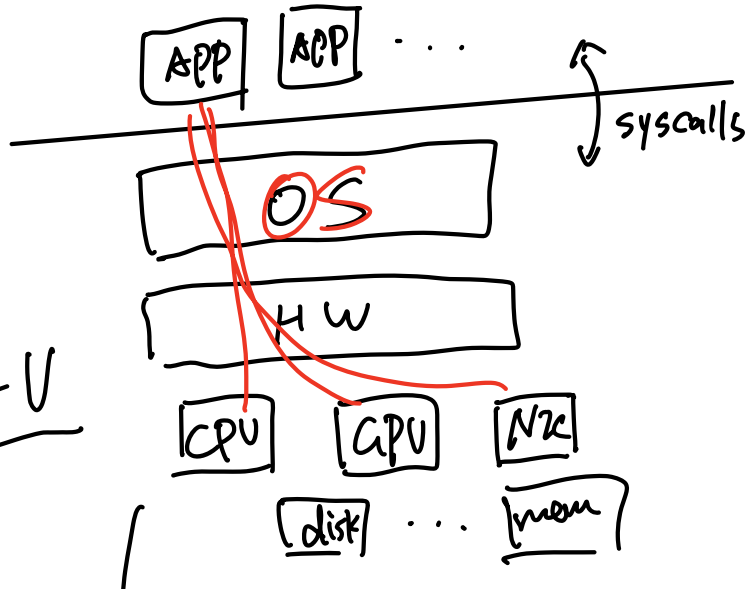
- no laptop
- chocolate
- lottery

- Intro to OSI





- what is OS?

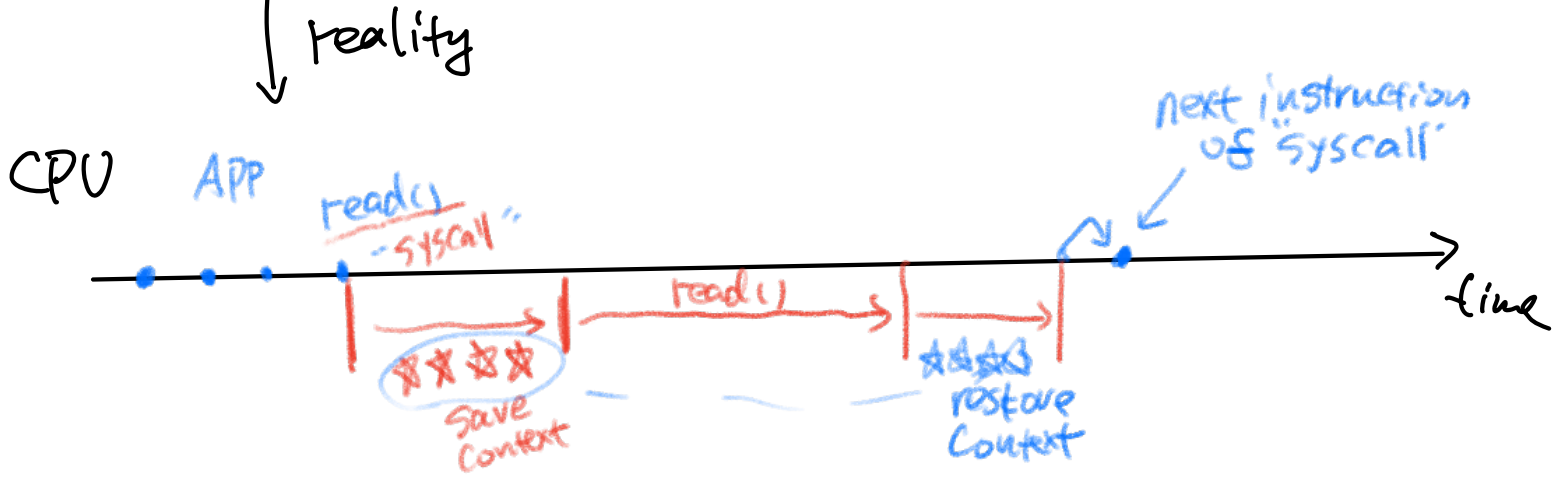


RISC-V

what an OS does ?

① managing resources

② abstracting HWs

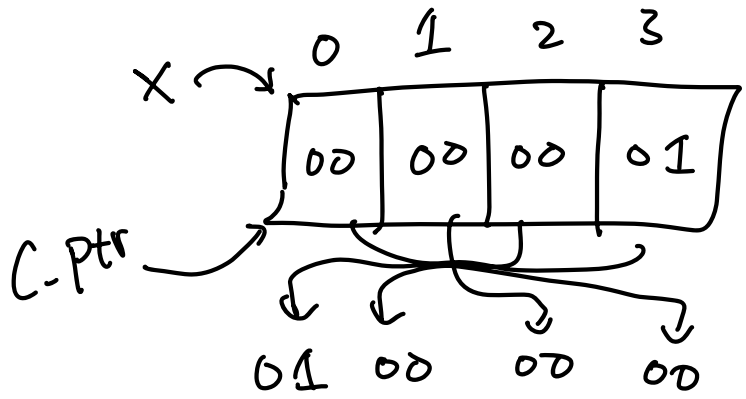


- WHY?
  - see what happened under the hood
  - deeper understanding of today's systems
  - be challenged

2. Assumptions
   a) core concepts of OS → $2^{32}B = 4GB$
      quiz:
      - 32-bit CPU vs. 64-bit CPU
      - privileged levels?
      - virtual memory? (%cr3) → root of PT (x86); %satp → RISC-V
      - inode?

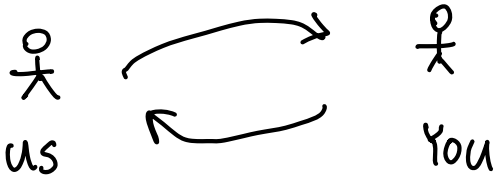
   b) C language
      quiz:
      - what will happen when calling a function?

   c) read manuals and specs



3. Logistics

a) Communication



/etc/XYZ/abc

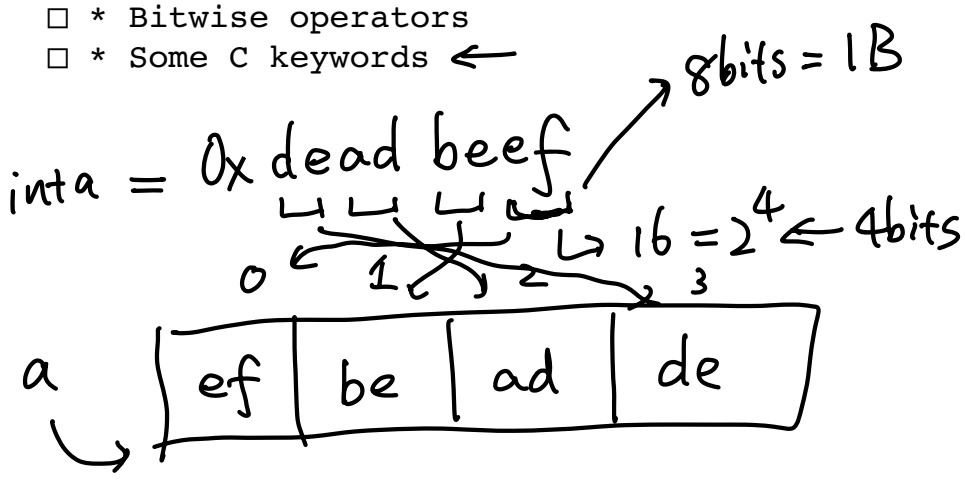
b) Course's Components.

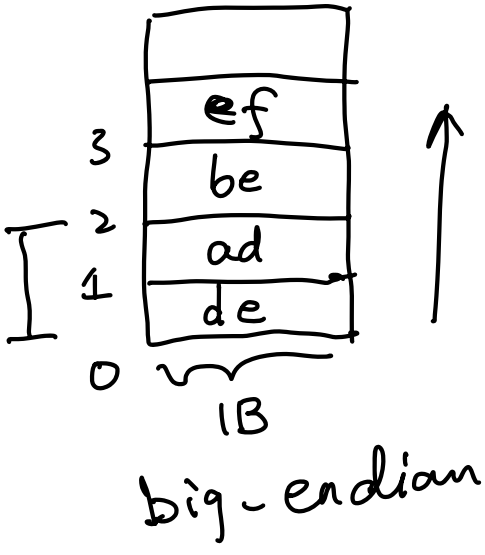
- labs
- lecutures
- one exam
- final project

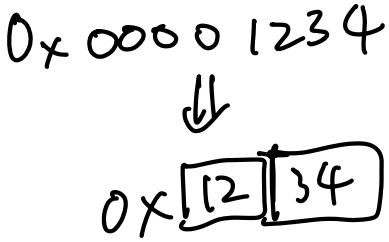
c) integrity

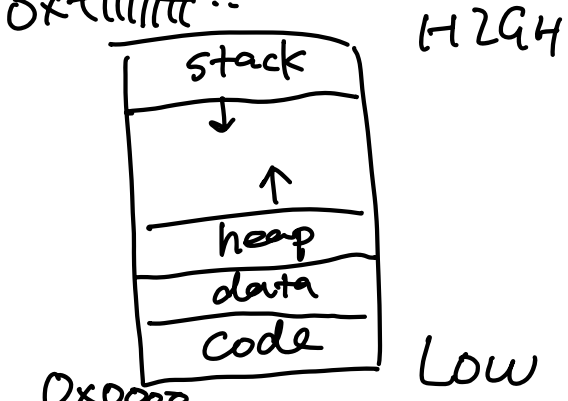
a. Looking at a classmate's solution and then coding it by yourself afterward
b. Showing your code to a classmate who has questions
c. Modifying code that you find on StackOverflow
d. Modifying code for a similar assignment that you find on GitHub

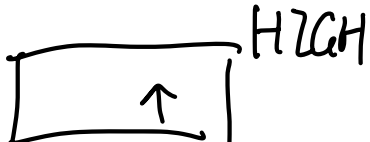
- [ ] 4. C basics
  - [ ] * Why C?
  - [ ] * Everything is 0s/1s
  - [x] * Little-endian ←
  - [ ] * Memory layout in egos-2k+ ←
  - [ ] * C pointers
  - [ ] * C arrays
  - [ ] * Bitwise operators
  - [ ] * Some C keywords ←

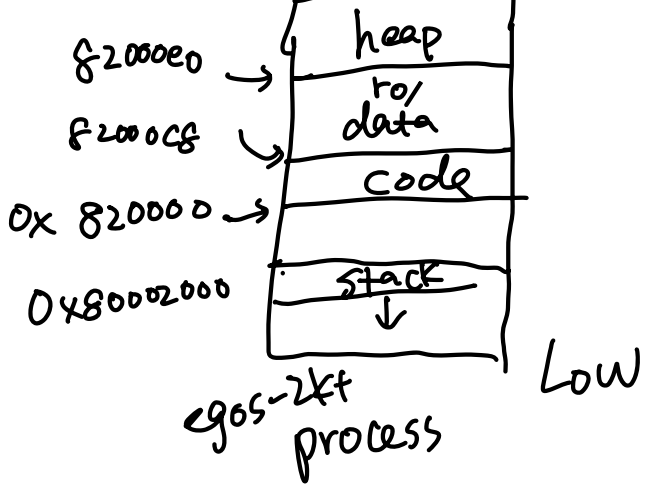












egos-2k+
process