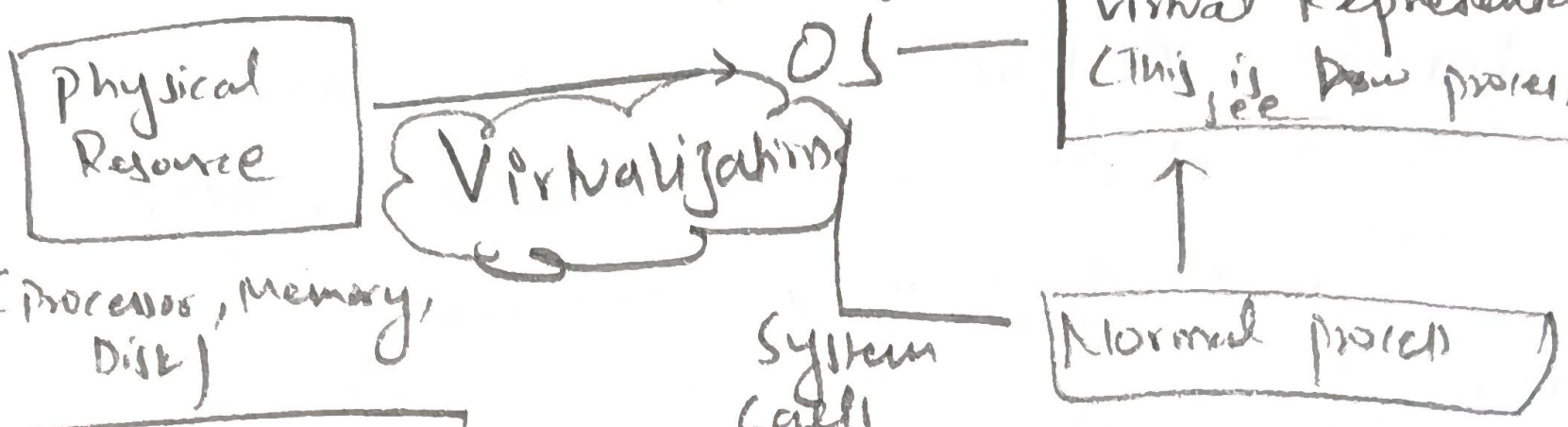
Chapter : 2



This is why :

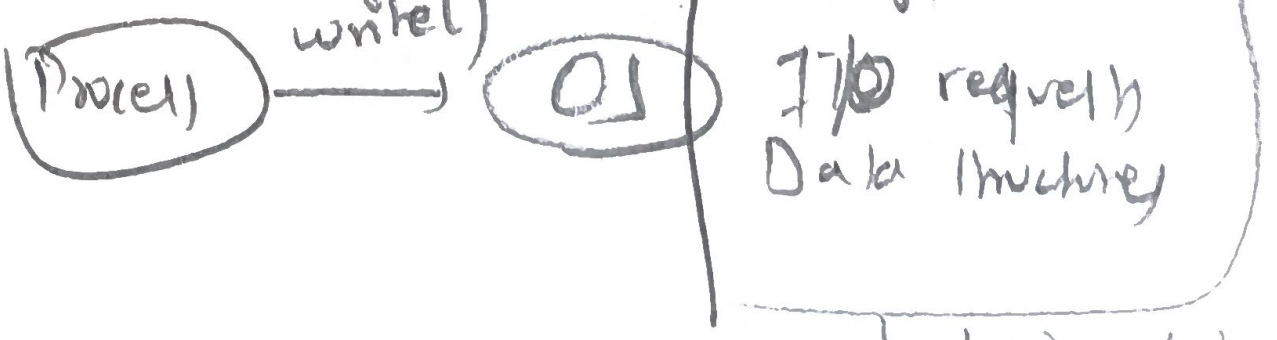
(1) Process can launch multiple threads even on a single core, virtual CPU, OS handles scheduling.

(2) Process has Virtual Address space, so when you print address, multiple process can/will have same address, like 0x2000

-> Multithreaded system, shows problem (Race condition) when accessing same memory/resource.

Concurrency

Persistence



So Major goals of OS:

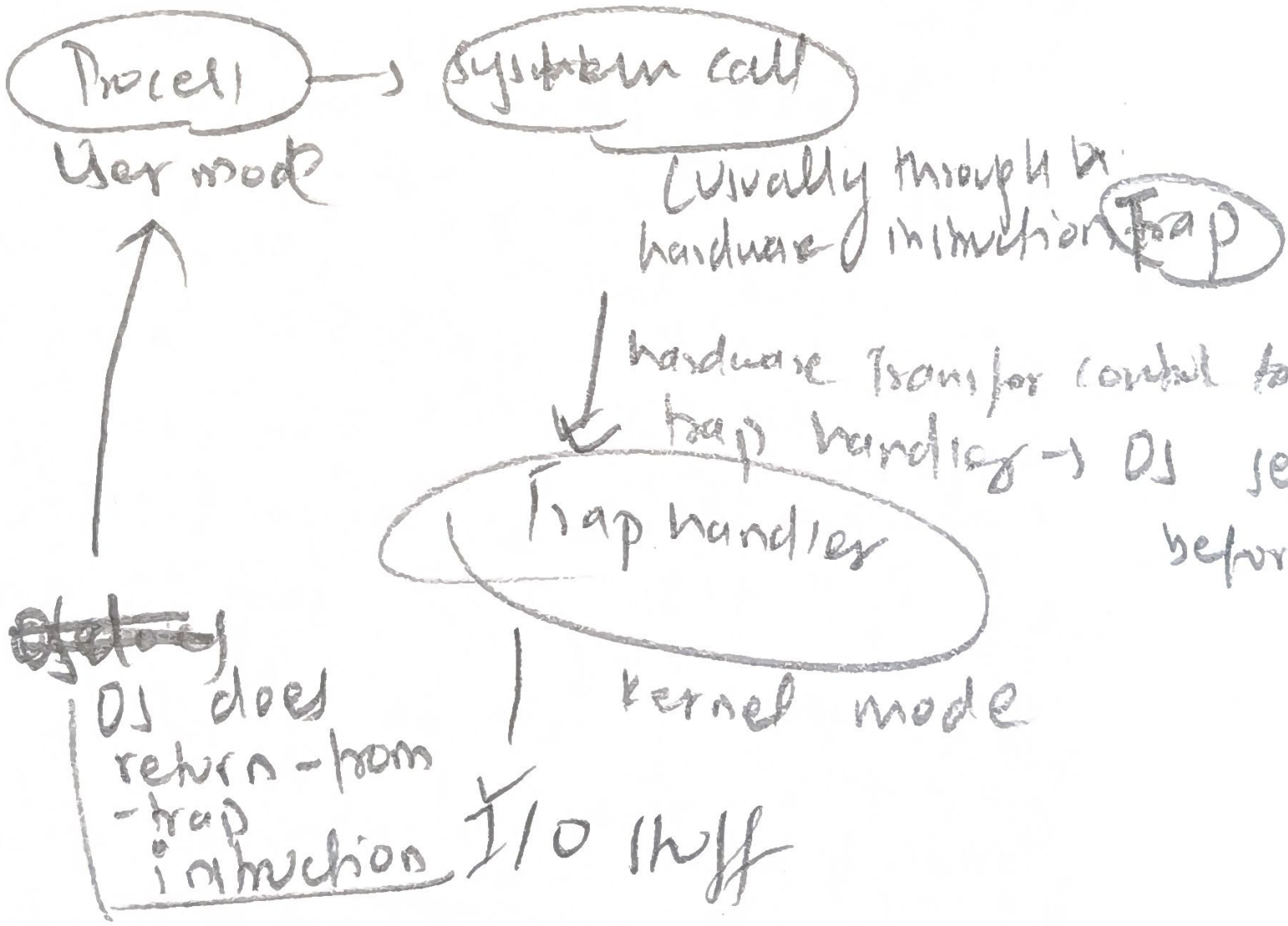
→ Virtualization, Concurrency, Data Persitence

→ Provide Abstractions → Protection (Process isolation)
→ Provide performance → Reliability (OS does not crash)
→ Energy efficient ~~few~~ → Security

History

① 1st libraries
- 1st provided wrappers for lowlevel IO
→ A human operator was responsible for scheduling batches

② Protection → User mode / kernel mode



③ Multiprogramming
-> switching b/w tasks,
-> Unix introduced -> computers became affordable

④ Modern Era: (PC)
-> Initially, bad multitasking, one job infinite loop would end things, lol)
-> No memory protection.