

process = box = a self-contained train of thought
 ↓
 anything read for train of thought is in the box
 ↓
 executing assembly

process != program. program might be composed of 1 or more processes

What is inside a process?

process struct (in kernel mem):

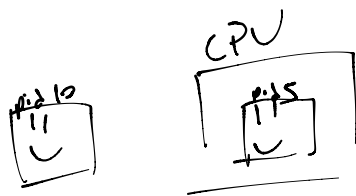
- pid (number)
- saved regs:
rax, rbx, rbp,
- virtual address table (pointer)
- file descriptor table
(points to open sessions)

process struct:

- PCB (process control block)
- task_struct

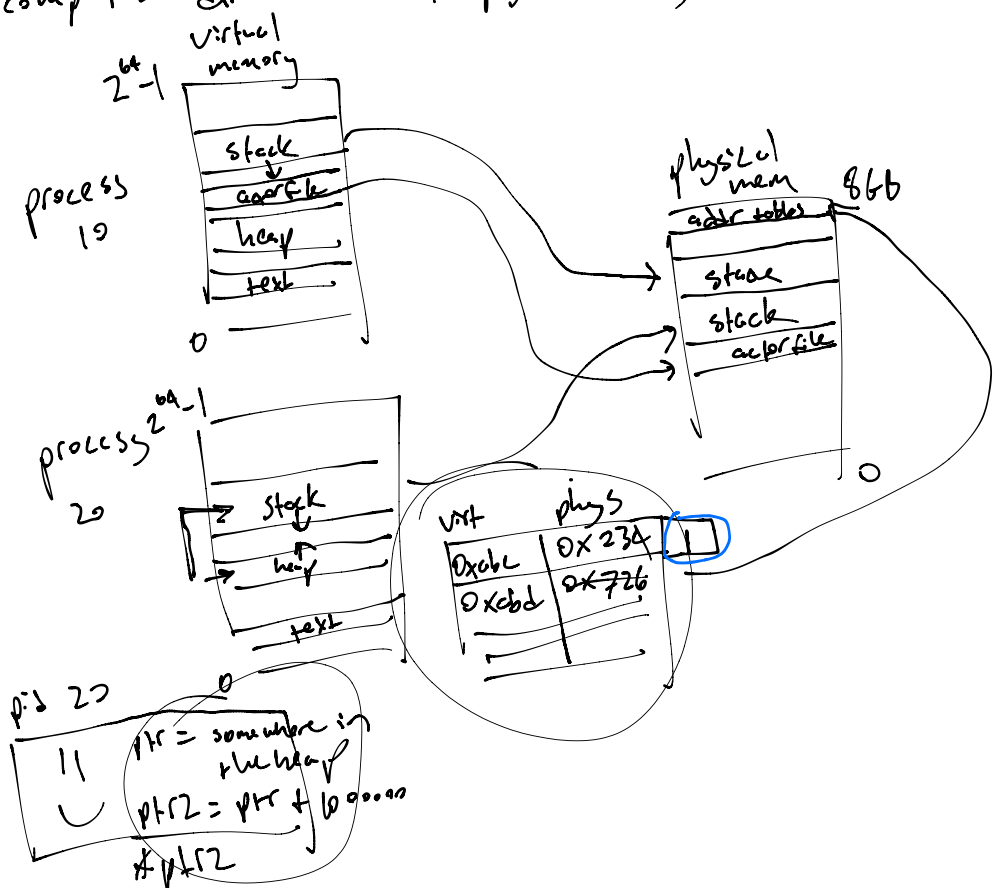
How do you execute multiple processes at the same time when $\text{num processes} > \text{num CPU cores}$?

Answer: switch really fast, storing regs in process struct



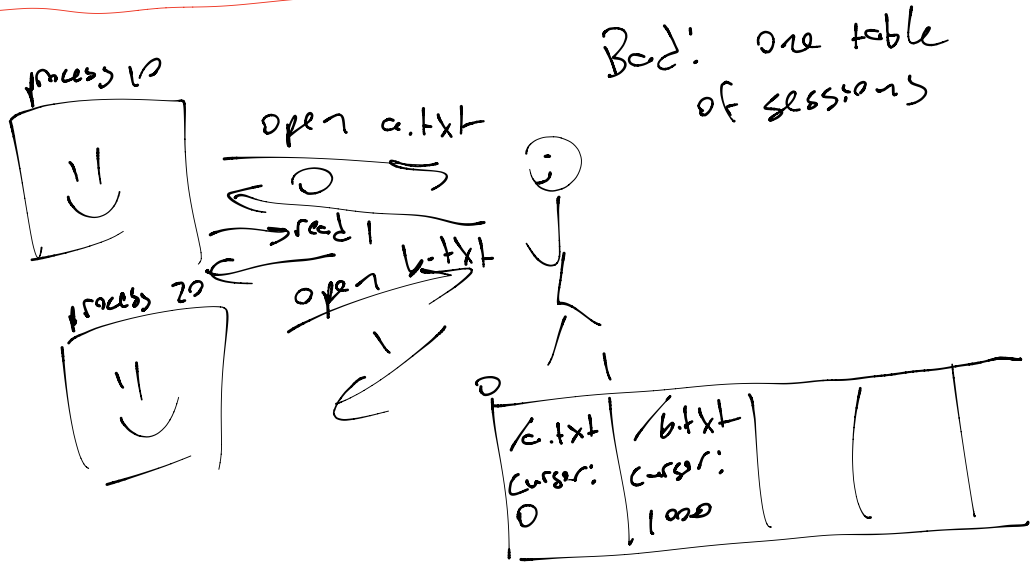
time slice: duration for which each process runs

Early computers: direct access to physical memory

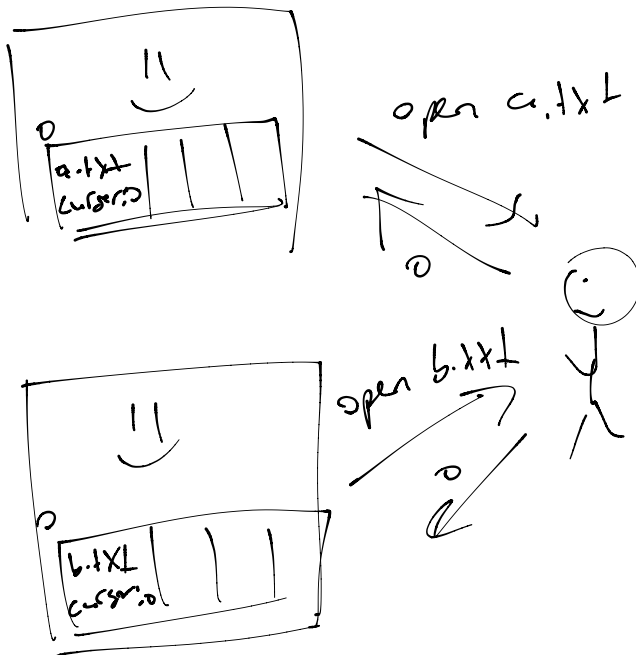


In practice, we map pages, not segments
(common page size is 4KB)

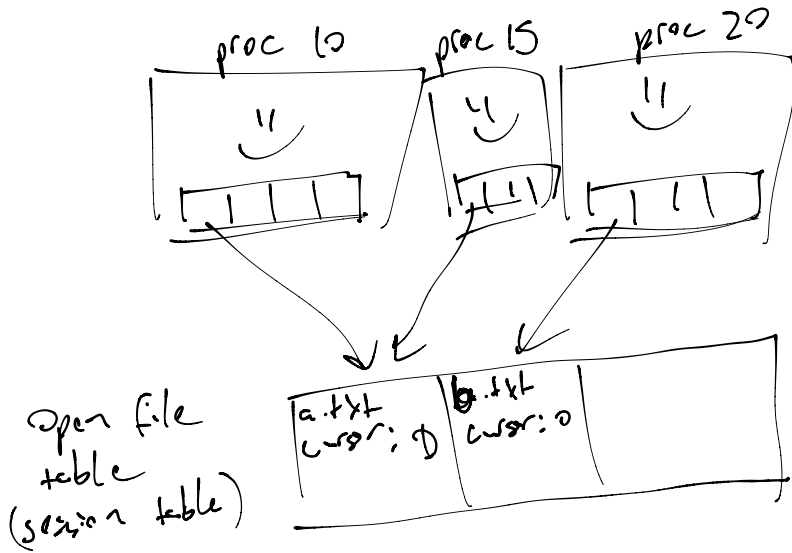
How to deal with file sessions?



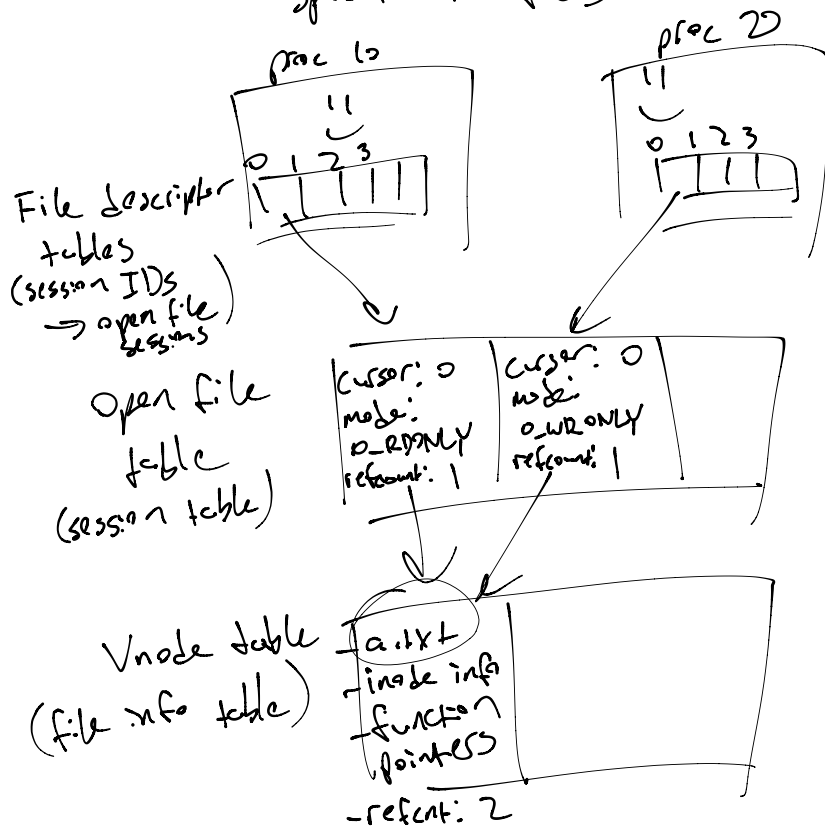
Store sessions per process?



Store sessions external to processes?



Final version: Add another table storing info specific to files



int fork(); split your process into two

getpid(); returns your pid

getppid(); returns parent pid