Lecture 9 CS 333/347 23.8.22

* Theory quiz: 26th Aug. Friday
LA 001
~~8:30 am~~ 8:15 am.

SAFE

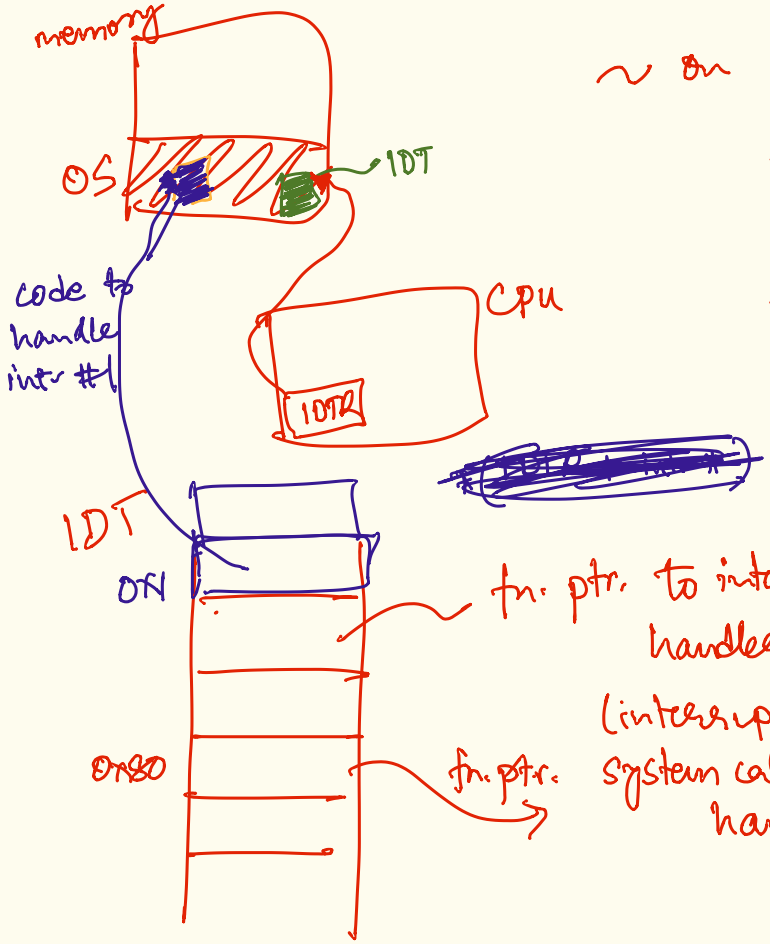
(*) system calls
- int 0x80
- iret

switches modes
saves context on kstack
jumps to syscall handler.

(1)

(2) syscall arguments via CPU regs.
eax ← syscall number (identifier)

(3) IDT ~ interrupt descriptor table
IDTR — IDTR register.

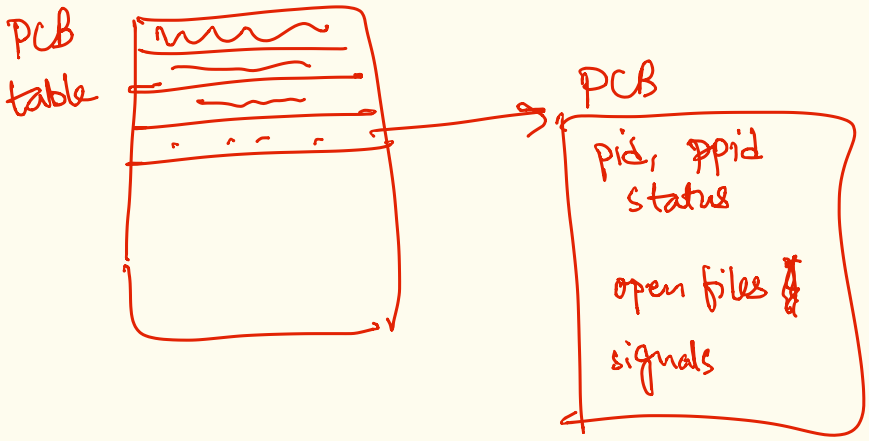


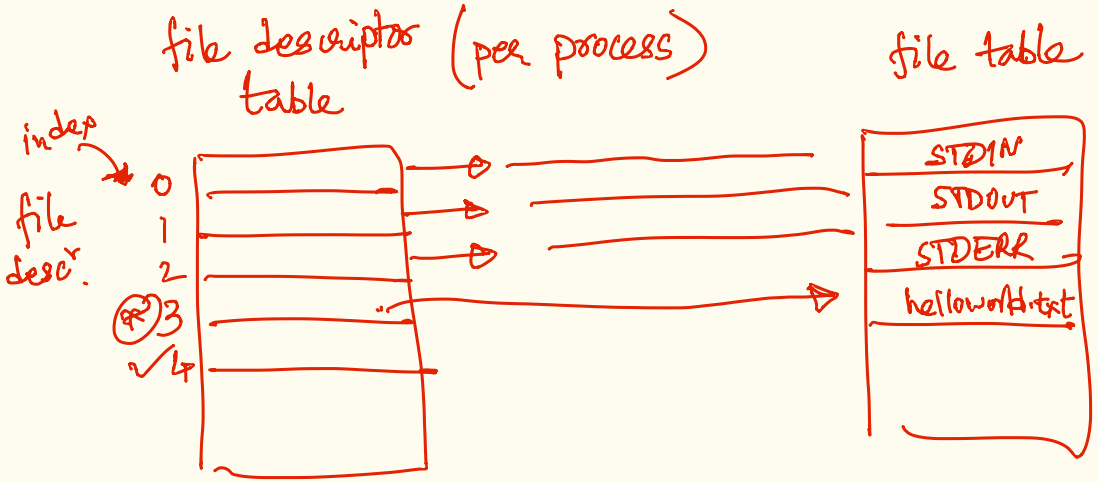
~ on interrupt
- freeze CPU execution
- switches to kernel mode
- save context of user process
- jump to interrupt handler (via IDTR)

jump to value in (IDTR + offset of interrupt #)

```
syscall_handler {
fn = syscall_table[eax];
call fn;
iret;
}
```

(*) file descriptors





(3) fd = open("helloworld.txt", O_WR);

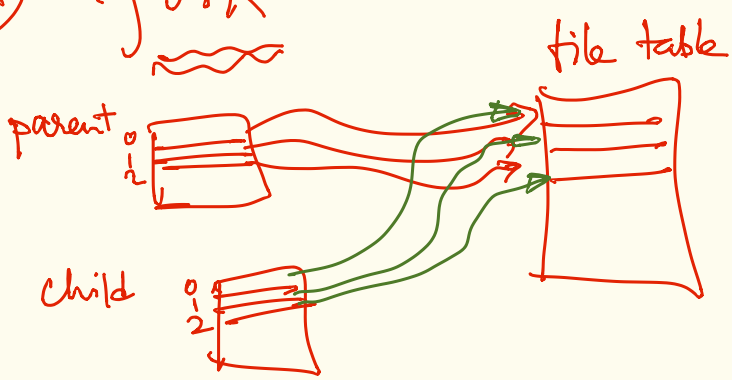
(4) fd1 = open( );

close (fd);

write(fd1, ——→);

(3) fd2 = open( );

(*) fork ~ copies/duplicates the fd table.



pipe