CS 326-01 System Calls
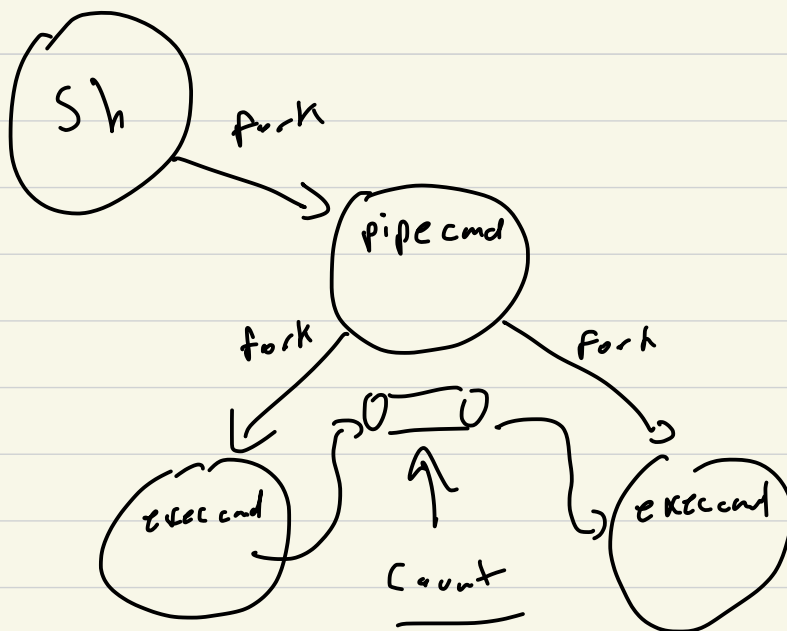
Project 02 — tests coming

Sh.c modification

System calls in kernel

Sh.c mod

$ cat README |+ wc ✓

- sh: lt: 3011 bytes ↑
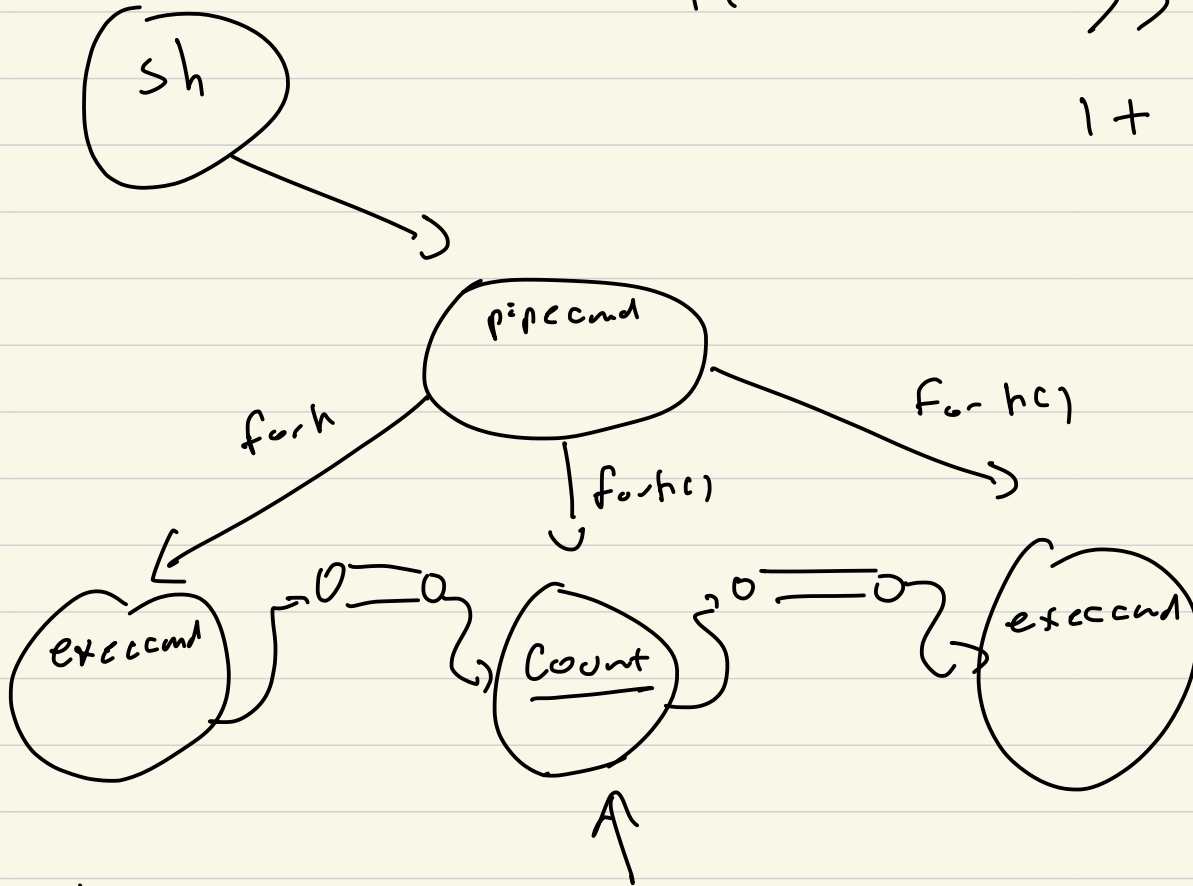   count
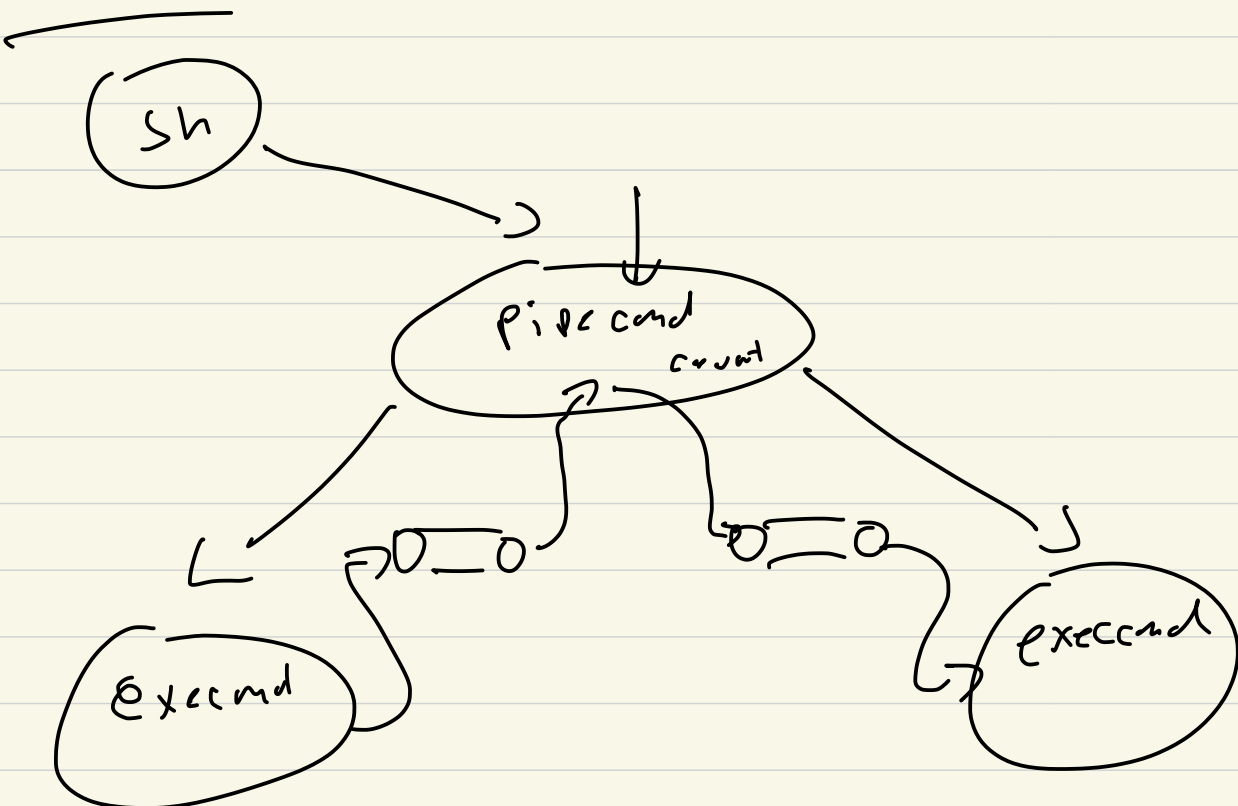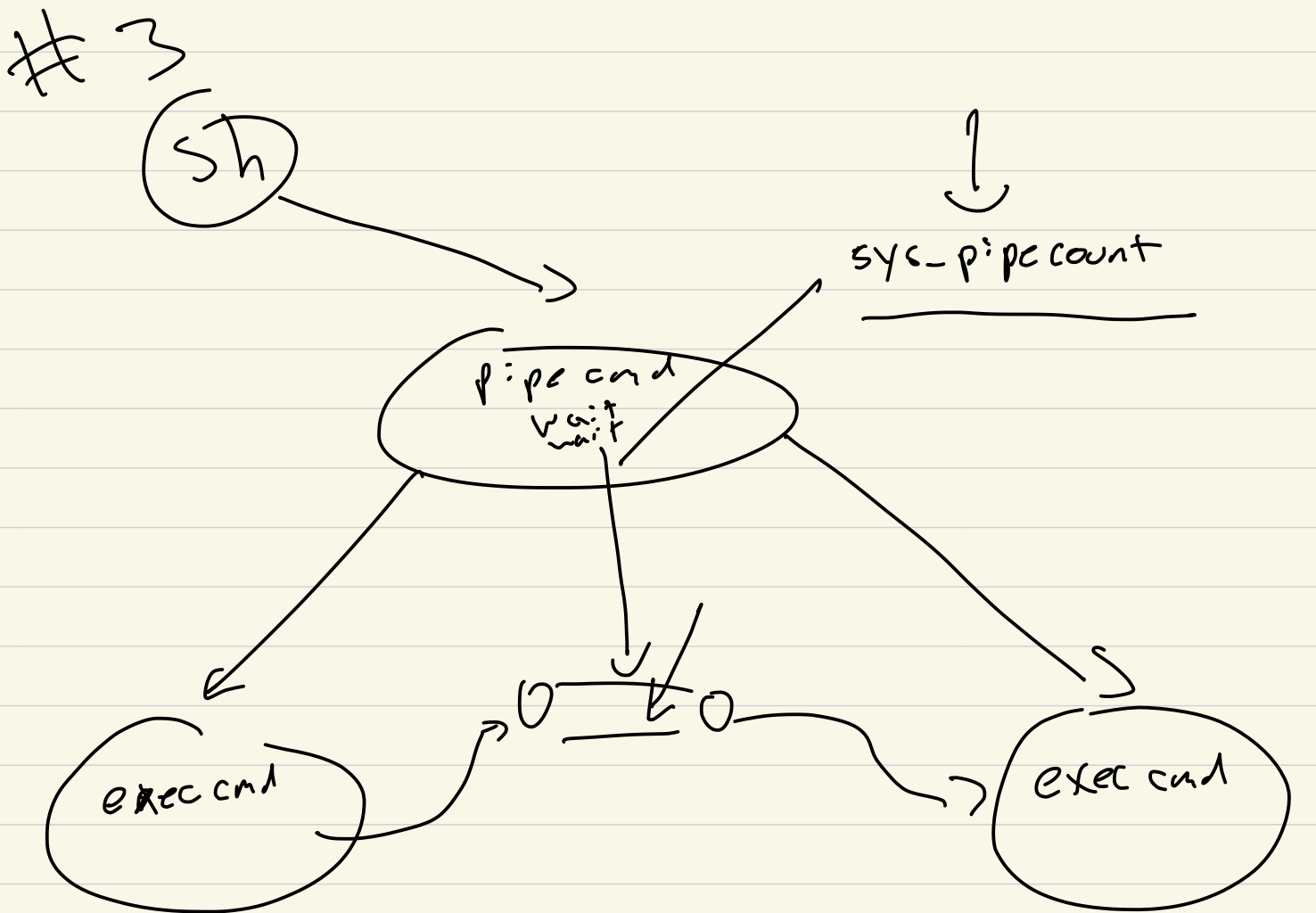   bytes

Count bytes through pipe

$| t$

$>>$ $+$

$1 +$ $?$

#1

sh

pipecmd

fork

fork()

fork()

execcmd

Count

execcmd

#2

sh

pipecmd
count

execmd

execcmd

3

sh

pipe cmd
wait

sys-pipecount

exec cmd

exec cmd

System calls

process

```
li a7, 1
ecall
ret
```

User

Kernel

Trap handler

assembly

C code

syscall()

li a7, 1
ecall
ret
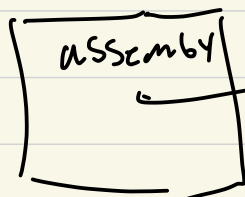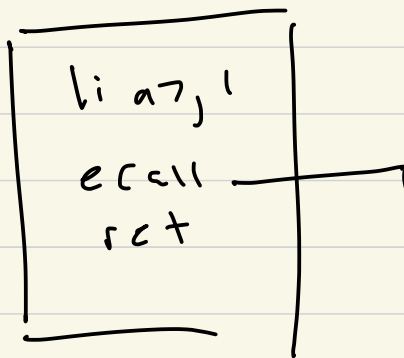
user

kernel

→ uservec
(asm)

Save user
regs
on stack

→ usertrap (c)

→ syscall (c)

look-up
call