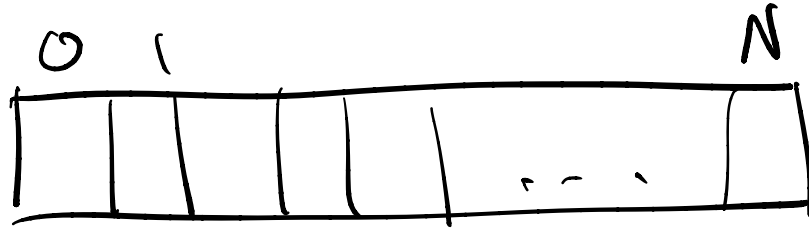


CS 208

W, 12 Nov 2025

A pipe is a data structure



char buffer
(sequence of bytes)

lock variables to prevent
reading process + writing
process from interfering
with each other

\$ ls -l | wc -l

bash will

① fork + argv + exec
for "ls -l"

② fork + argv + exec
for "wc -l"

③ create a pipe

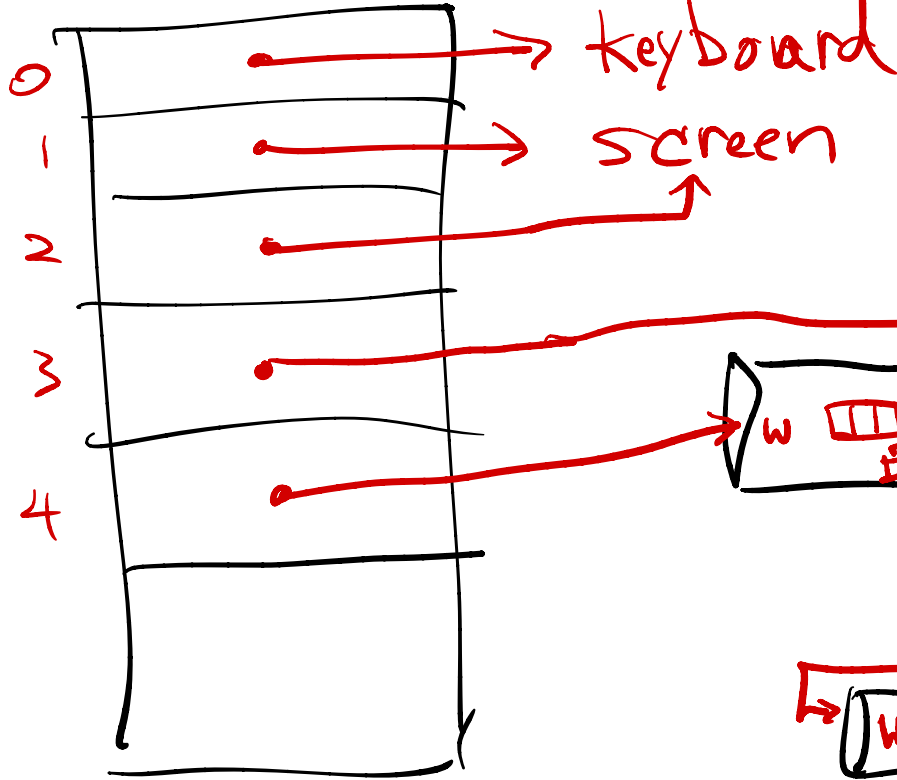
④ dup2 "ls -l"'s stdout to write
to the pipe

⑤ dup2 "wc -l"'s stdin to read pipe

Scheduler in Linux will
give each process little
slices of time, interrupting
them at unpredictable times

this can be trouble

fd table



```
int fd[2];  
pipe(fd);
```

```
if (fork() == 0) {  
    // child  
    // "ls -l"  
    child wants
```

