CS 326-01 Processes and Pipes

Tag Campuswire posts

Project01 — feedback

Lab04 → Release today, due Tue Mar 21

Review

file descriptors

processes — fork(), wait(), exec()

redirection —

pipes — pipe()

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fork()

Parent

```
Main() {

    id = fork()
    id = pid
       of
     child


    }
```

Child

```
main {

    id = fork()
      id = 0



    }
```

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proc

| pid = 13 | pid = 14 |

exec()

PID 17

```
main()
{
    id = fork()
    if(id==0){
        exec()
    } else {
        wait()
    }
}
```

PID 18

```
main()
{
    id = fork
    if (id==0)
        exec('ls')
    else {
        wait()
    }
}
```
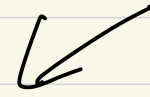
ls

```
main()
}
    ls  lsel
```

K

| FD TABLE | → FD TABLE |

Redirection

```
id = fork()

  if (id == 0) {
        [ manipulate the
            Fd table ]

        exec()

  }
```
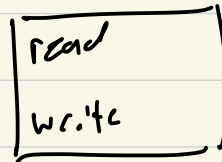

Pipes   -   a kernel buffer

FD   FD

writer   Pipe   reader
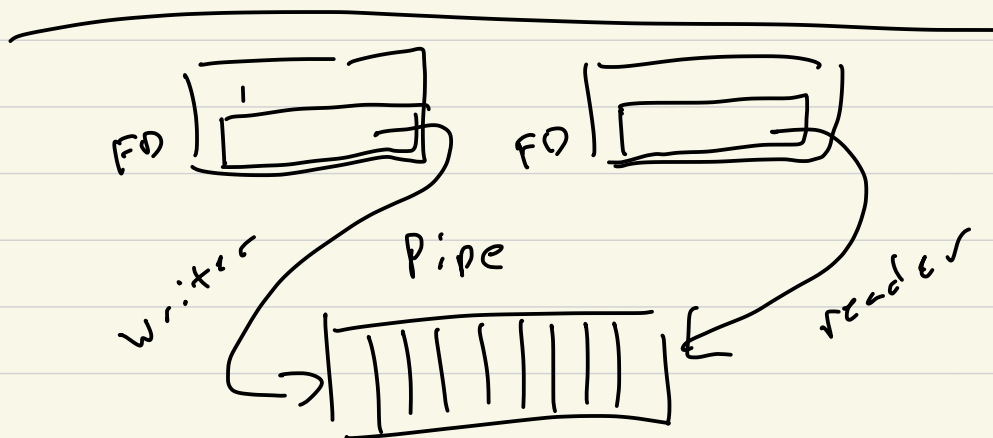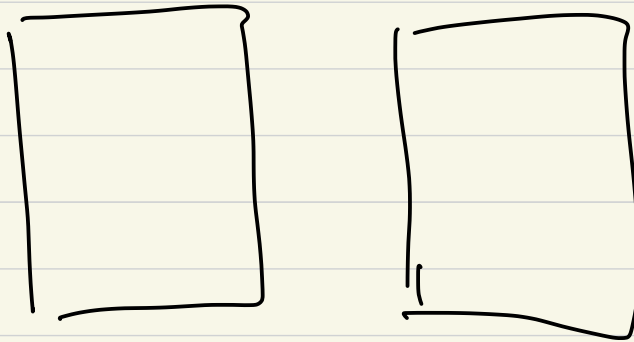
int pfds[2];   ① Need to create pipe
                  before fork()

→ pipe (pfds)

FDTABLE

0	stdin
1	stdout
2	stderr
3	p.
4	u

read

```
read
write
```
pfds[0]   ← read
pfds[1]
         ↑
       write

② Need to close off pipe fds
   not in use.

pipe.c