Computer Networks HW2 Report
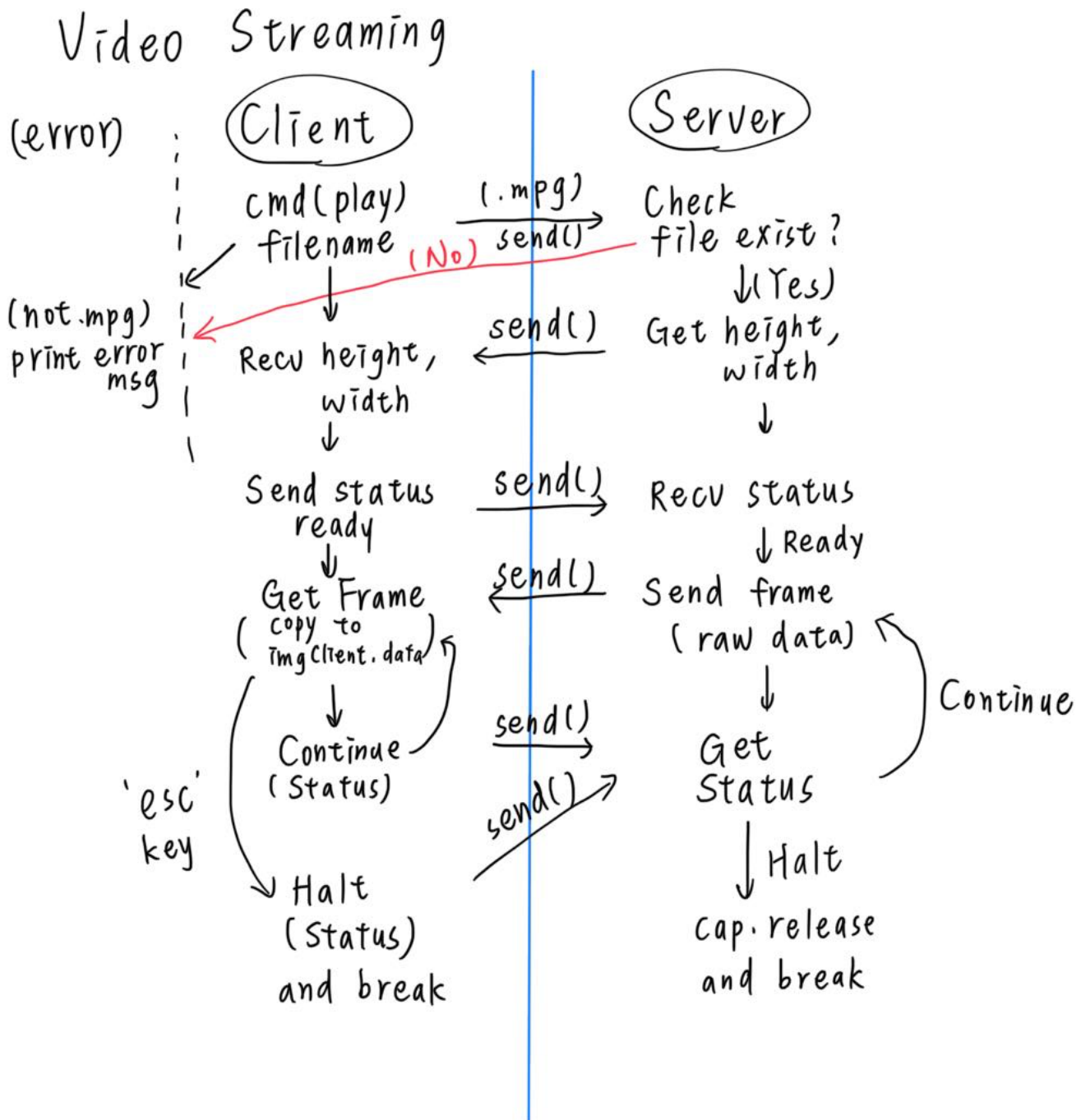
B06902002　資工三　沈郁鈞
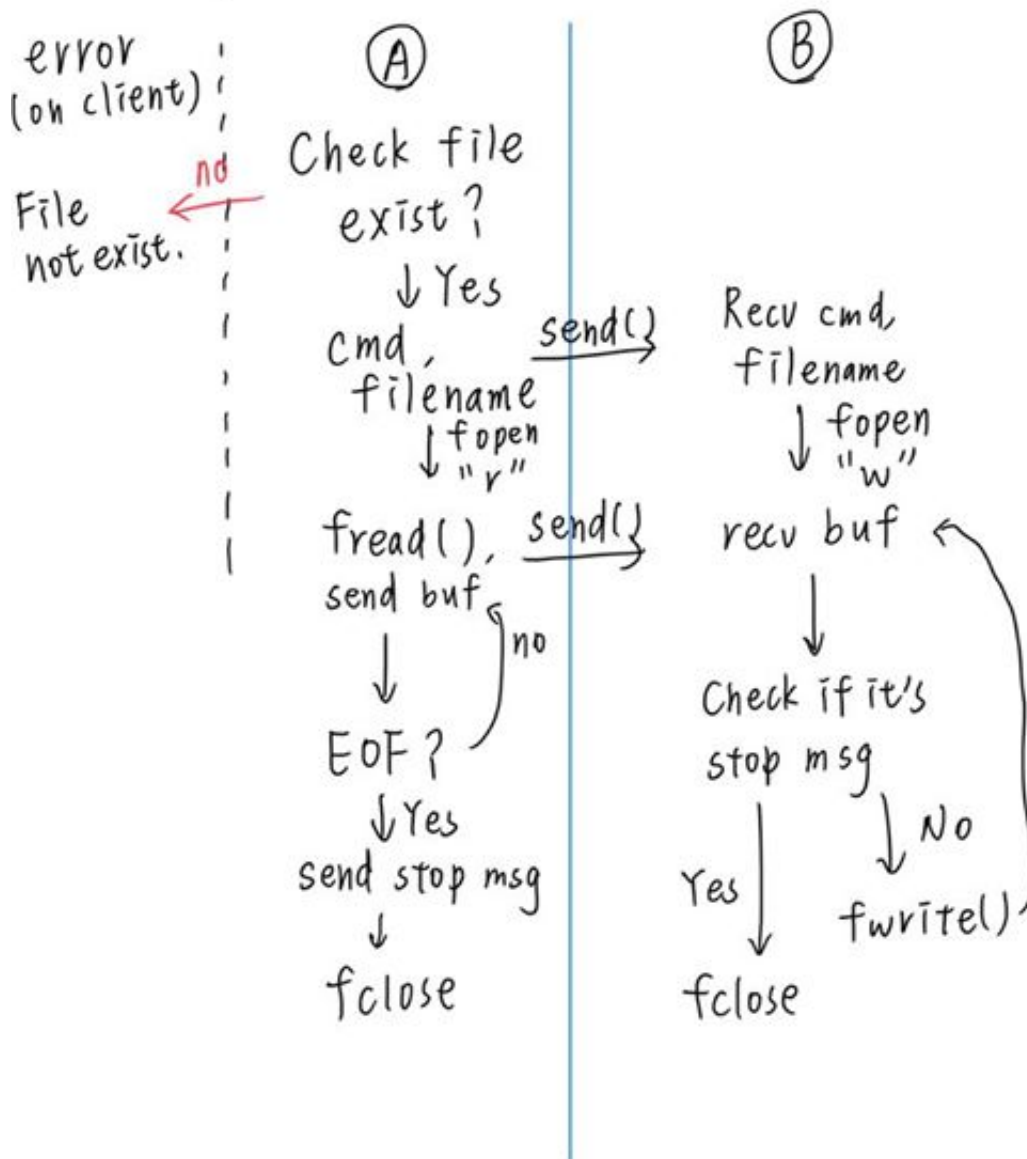
1

2

File Transfer

get = server(A) to client(B)

put = client(A) to server(B)

error (on client)

(A)   (B)

Check file exist ?
— no → File not exist.

↓ Yes

cmd, filename — send() → Recv cmd, filename

↓ fopen "r"   ↓ fopen "w"

fread(), send buf — send() → recv buf

↓   ↓

) no

EOF ?   Check if it's stop msg

↓ Yes   Yes | | No
                                       ↓
send stop msg   fwrite()

↓   ↓

fclose   fclose

3

- If a process `send()` / `write()` to a invalid (broken) pipe or fd (file descriptor), then the system will send a "SIGPIPE" signal to corrupt the process.

- I use strace to look up what fd that server `send()` or `recv()` to. Sometimes Ctrl+C on client may cause SIGPIPE on server. On server side, I'll check if the return value of `recv()` is -1, then will close the client fd.

4

- Blocking I/O is not equal to syncronized I/O.
  Blocking I/O: kernel should wait until I/O command has finished.
  Syncronized I/O: The process should wait until the previous process has finished.

- For example, for a process, if the kernel has finished its task while the I/O is not finished, then asyncronized blocking I/O could continue do other process, while syncronized blocking I/O not.