Date: 19-11-21:

Message Queue

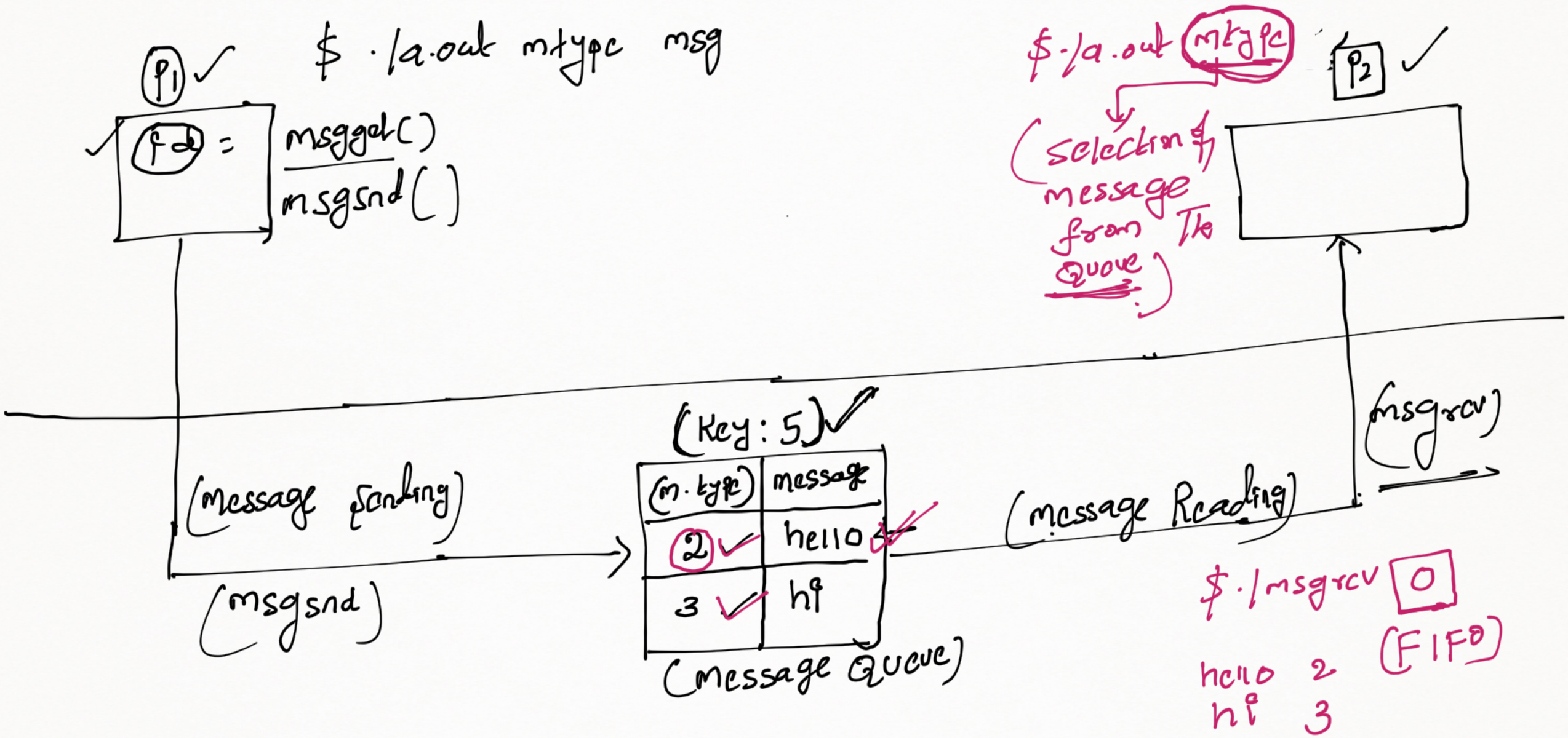
→ $ ipcs -q   This command will display information about message Queue

int msgsnd(int msqid, const void *msgp, size_t msgsz, int msgflg);

- int → on success → zero; on failure → -1
- const void *msgp → (addr)
- size_t msgsz → size of the message
- int msgflg → flags

→ $ ./a.out 2 hello

- 2 → mtype
- hello → mtext


$ ./a.out mtype msg
P1
fd =
msgget()
msgsnd()
$ ./a.out mtype
P2
(selecting message from the Queue)
(Key: 5)
(m.type)
message
2
hello
3
hi
(message sending)
(msgsnd)
(message Reading)
(msgrcv)
(Message Queue)
$ ./msgrcv 0
(FIFO)
hello 2
hi 3

⇒ A process which is reading messages from the Queue if it uses mtype is zero that means

$ ./a.out 0

msgrcv()
- on failure -1
- on success returns number of bytes reading from the queue and copied into mtext (structure member)

→ Receiving process mtype is for selection of message from the queue

(1) $ ./msgrcv 0
↳ select message from the queue as fifo order

(2) $ ./msgrcv 3
↳ select message from the queue exactly whose mtype is 3

(3) $ ./msgrcv -2
(mtype)

→ If mtype (message selection) is less than zero, than the first message in the queue with the lowest type less than (or) equal to the absolute value of mtype will be read

$ ./msgsnd 5 hi
$ ./msgsnd 3 hello
$ ./msgsnd 1 by

mtype	msg
5	hi
3	hello
1	by

$ ./msgrcv -2

5 <= |-2| / |2|
3 <= |2|
1 <= |2|