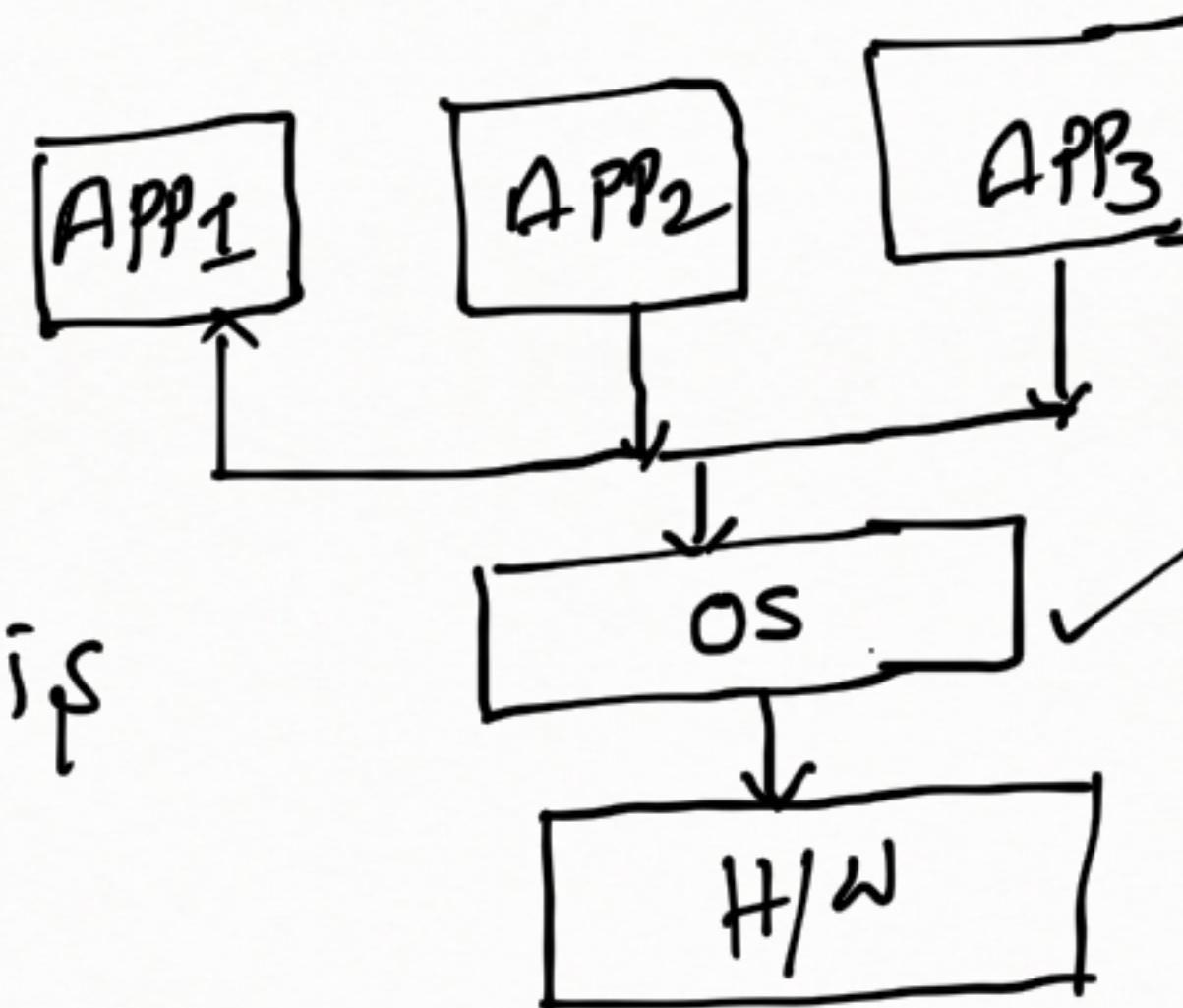


Date: 22-9-21 :

- what is OS? ✓
- what are the components of OS?
- why OS for embedded?

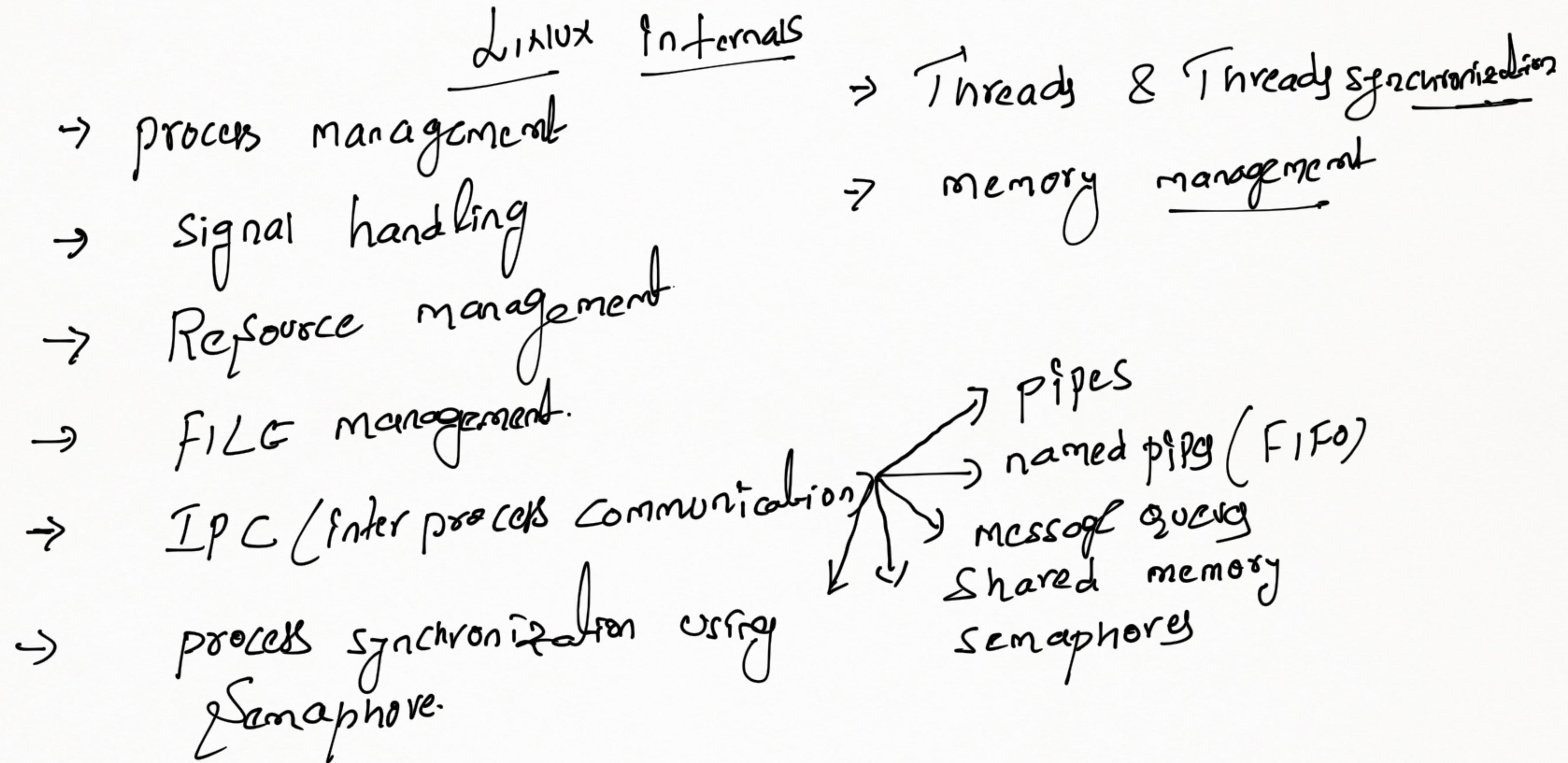
→ In order to handle  
multi tasking (or)

~~multif processing~~ OS is  
mandatory

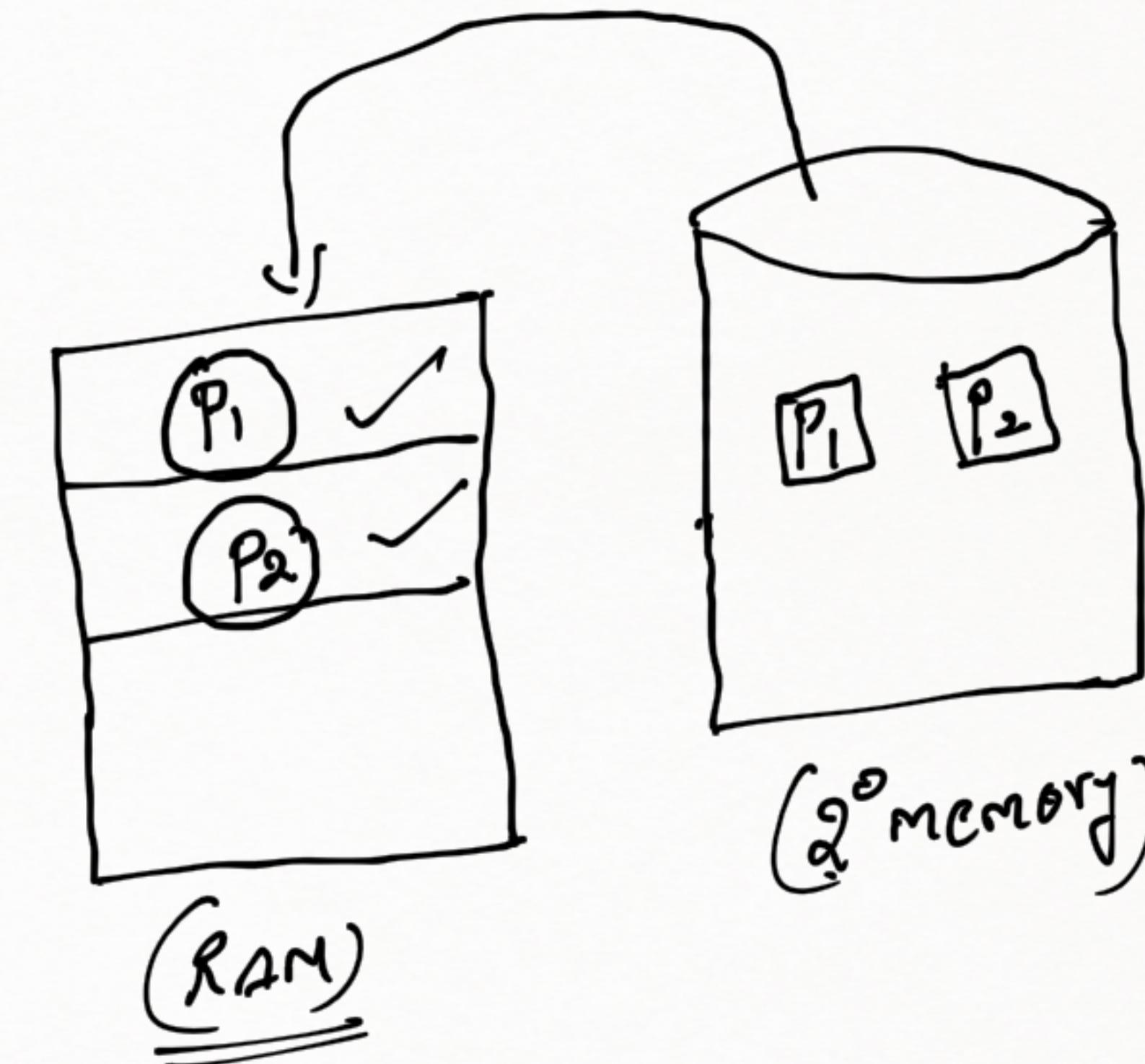


OS is an interface b/w  
applications and hardware.

→ Why Linux?  
→ open source ([www.kernel.org](http://www.kernel.org))  
↳ GPL  
→ it is supporting many H/W arch.



- process      management
- what is process?
- a) A program (code) which is under execution is called process
- foreground vs background
- \$ ./a.out &  
↳ process executed as background



⇒ When a process starts execution (foreground / background)  
process manager will provide a number it is called process ID  
(pid)

[ 1 ]      6325  
↓  
~~JobID~~      ↳ PID

ps : it will display jobs which are executing under a particular terminal

[1] 6325  
[2] 6989 ✓  
[3] 7121 ✓

[1] 7737  
[2] 7762

[3] 7781

\$ fg  
↳ one process will back as foreground process, if many are running as background, then the last job which is entered as background will come first as foreground (LIFO)

\$ fg 1  
↳ Job Id 1 process will come as foreground

multiprocessing : more than one process under execution

is called multiprocessing.

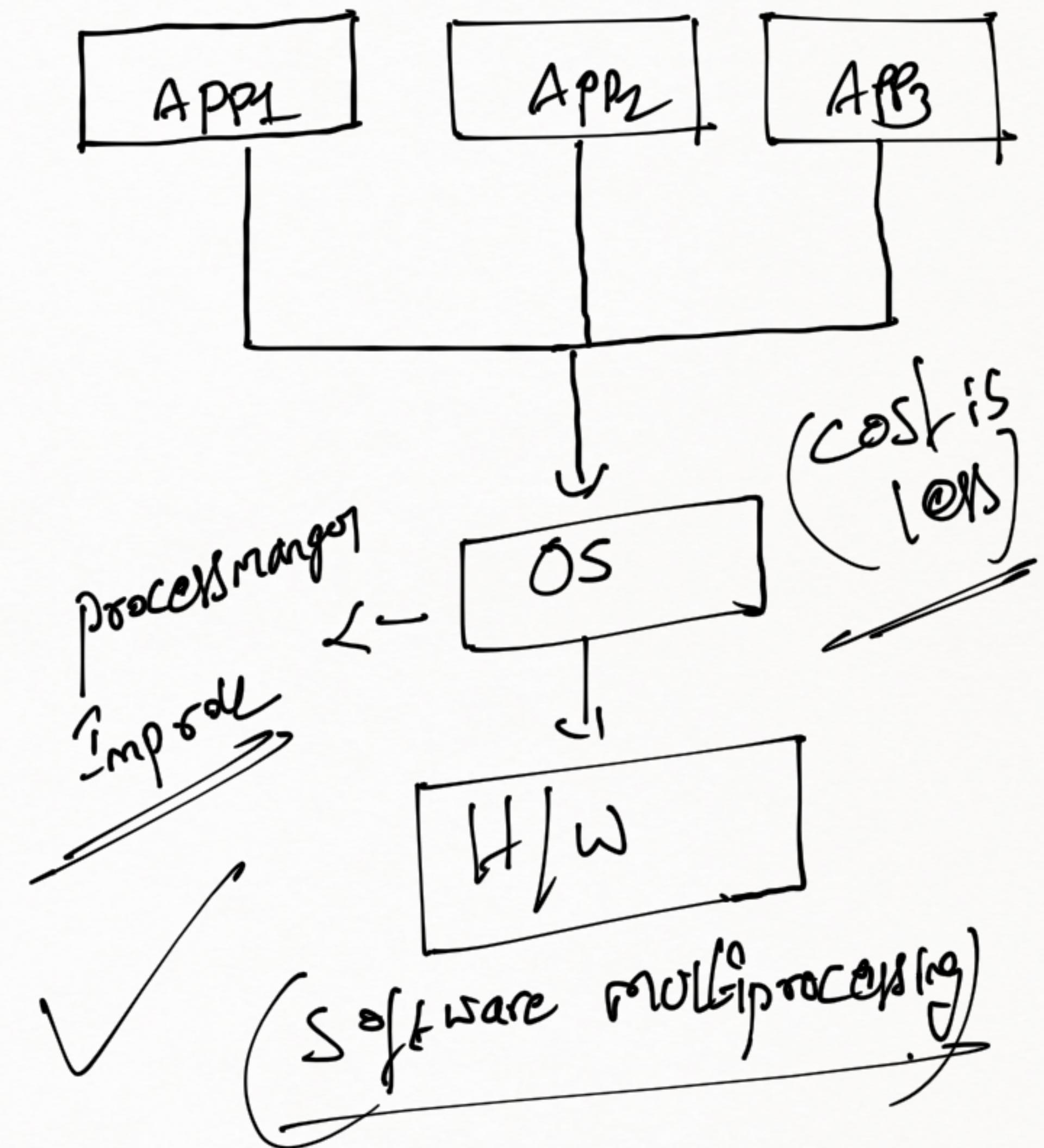
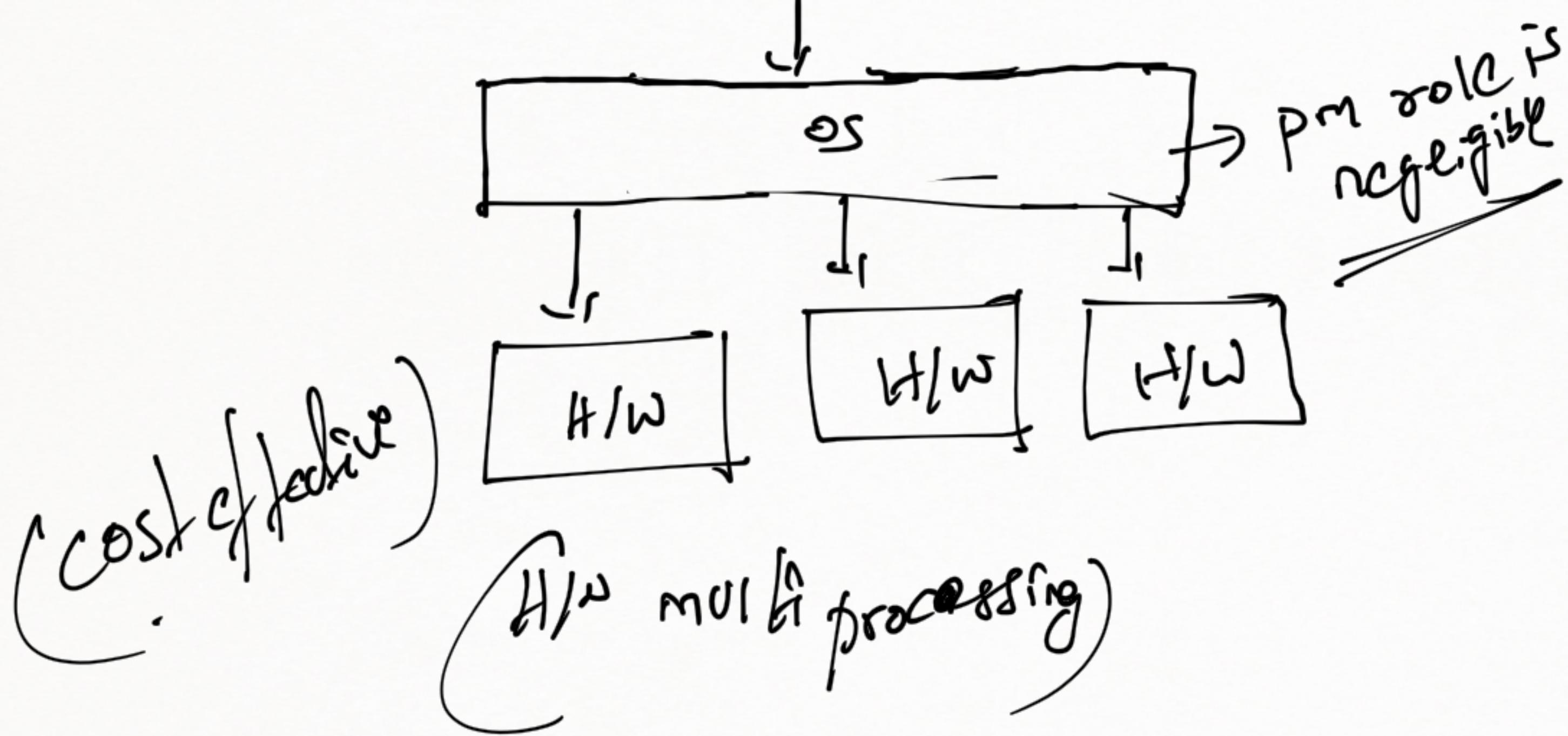
→ There are 2-types of multiprocessing

- ① H/W multiprocessing
- ② S/W multiprocessing

H/W multiprocessing: many CPUs for many applications hence

→ faster in execution

S/W multiprocessing: one H/W for many application hence slower in execution compared to H/W multiprocessing



## Daemons:

they are long lived processes often a daemon is created at system startup and runs until the system is shutdown.

→ it runs in the background and has no controlling terminal (observe with ?(ps -e))

→ Daemons will carry a specific task

Ex: httpd ⇒ HTTP server

ps -e  
↳ all jobs running (including background) are displayed

ps -l  
↳ will display jobs under a particular terminal with long list format