20th Feb

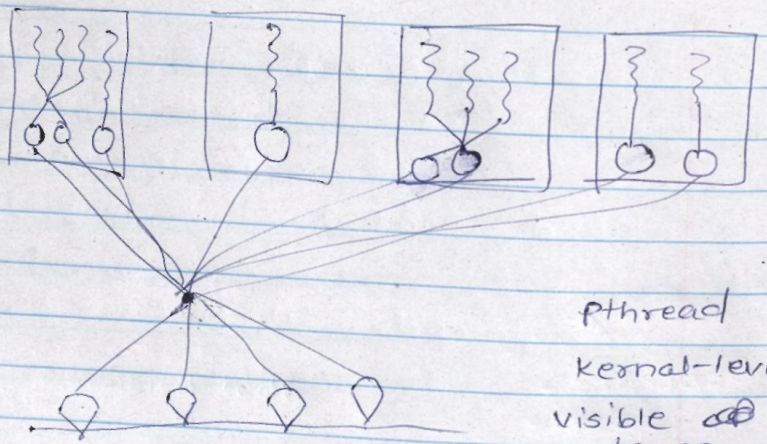
proj 2

```
wait_ev
{
xtab[current].state = XEVENT;
resched();  <-- a thread XREADY to run
}           <-- back
```

in proj ⇒ ✗ no xthread.yield()

your code will not call ctxsw()
just use resched();

* { thread ○ LWP kernal ◯ CPU (core)

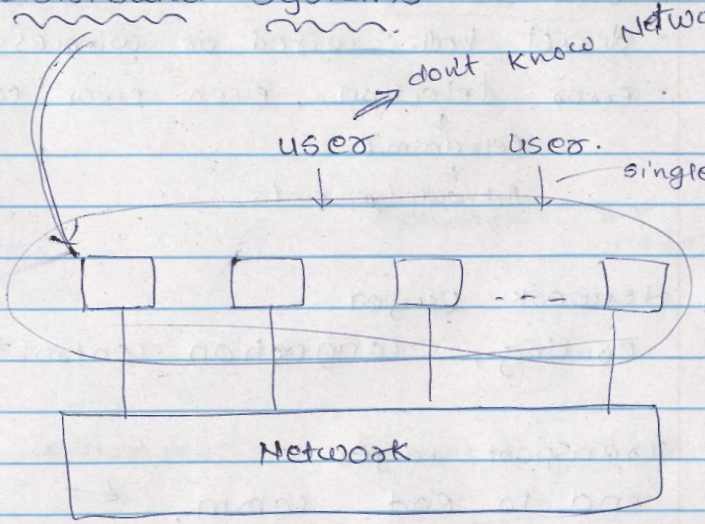


pthread
kernal-level
visible to OS scheduler

one thread makes system call blocking
↓
the whole kernal process blocked

user level thread
- cheaper
- faster
- create switch

(5) Distributed systems



(4) OSI Reference model
complex system ⇒ layered design

Sender

wired/ wireless

Receiver

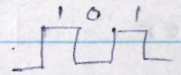
Medium Access Control (MAC)

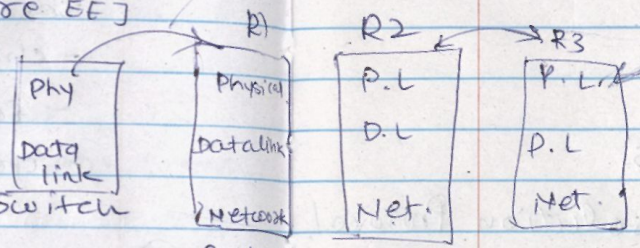
Identification

1 Physical Layer [Hardware EE]

bit 1 high

bit 0 low





MAC address

Hardware Address

NIC Address

Ether Address

2 Data Link layer

- Point-to-point communication
- direct talk: wired or wireless
- error detection, even error correction
  - ↓ Retransmit
  - ↓ Acknowledgements

IP Address.

3. Network Layer

Routing, congestion control ⇒ throw away

4 Transport layer

end to end comm.

error control

Transport

Service port

5 UNIT Application layer

Session

Process.

presentation

encrypted code.

Application

- same layer
- Standard Rule
- msg format
- actions

HTTP

Protocol

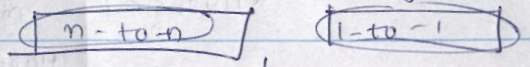
Web browser

Get Path

Application

Service port.

switch / bridge



Hub / Repeater

Router / Gateways.

ARP Address Resolution Protocol