

COMPUTER NETWORKS 4

SOCKET PROGRAMMING

Socket: Software Construct that applications use to send/receive data over the internet

Eg. for app^m to send/receive data from cmd line,
app^m use cin, cout, _____, Scanner, print

'C++ to'

Applications

→ 000000

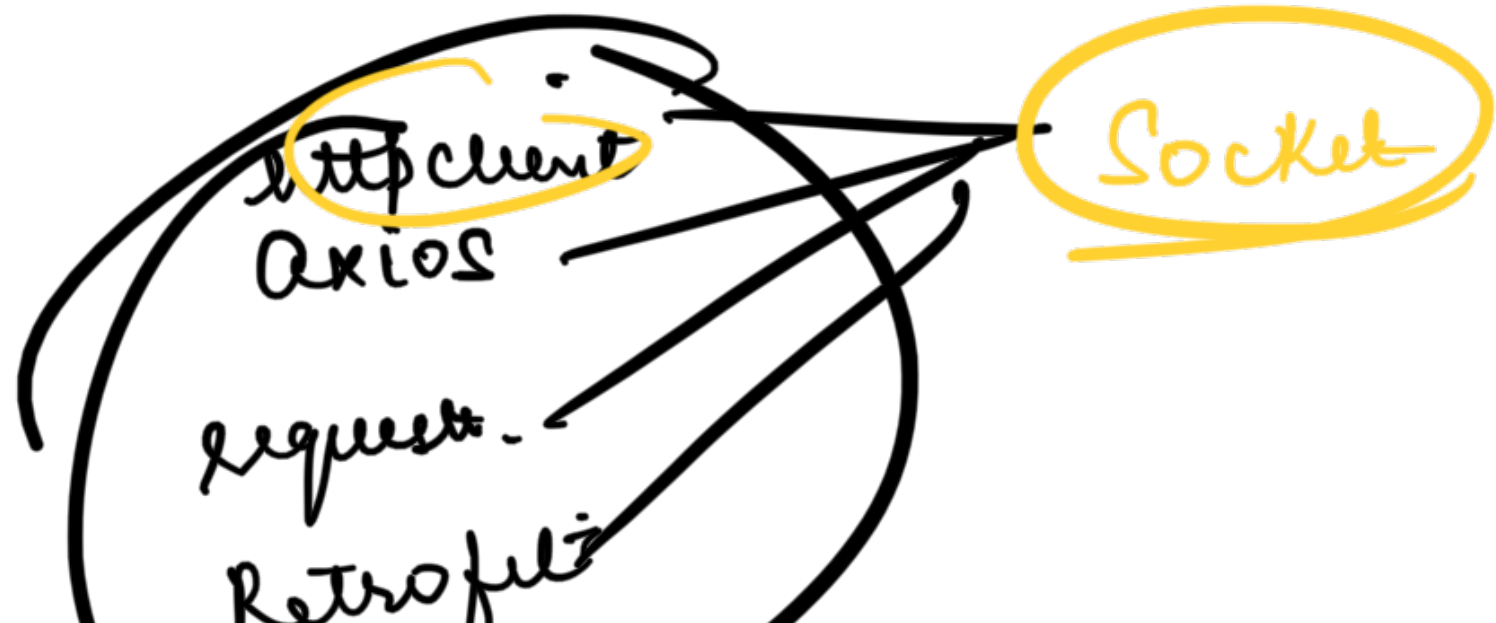
1'

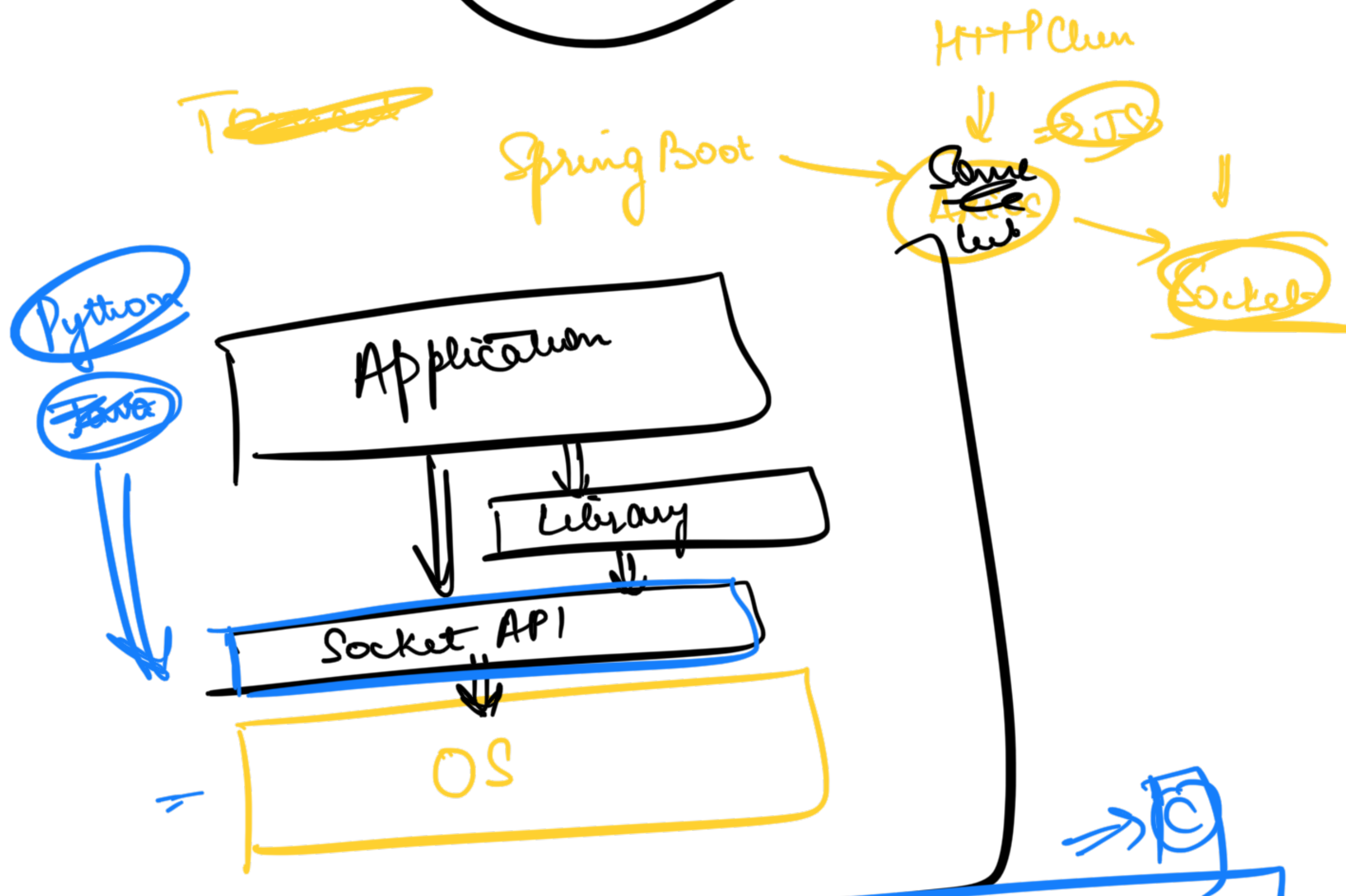
Socket c = new Socket()

s. _____()

}			
T	<u>Socket</u> →	30% ✓	70% ✗
⇒	<u>Internet</u> →	99% ✓	1% ✗

HTTP
Rest API





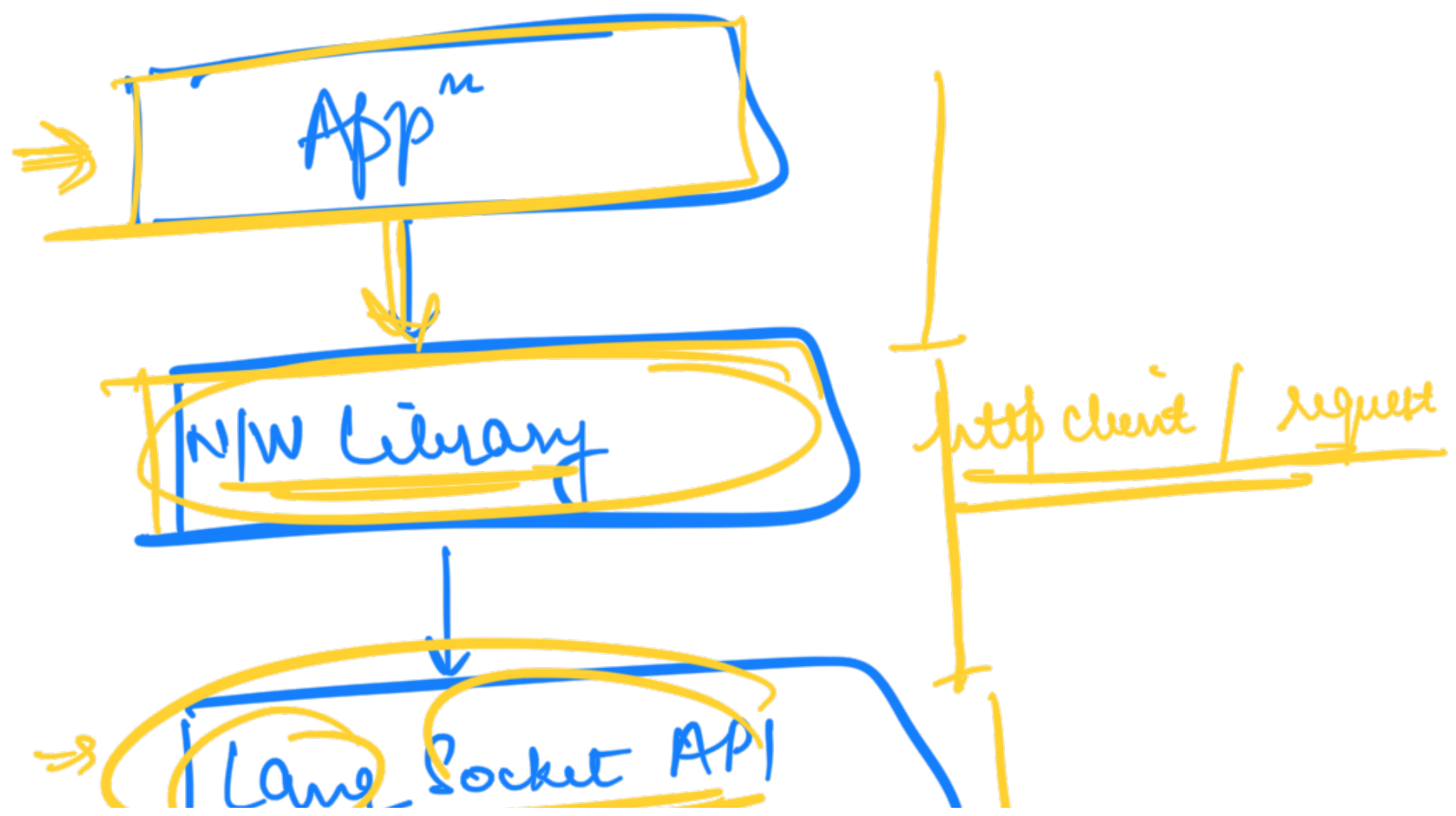
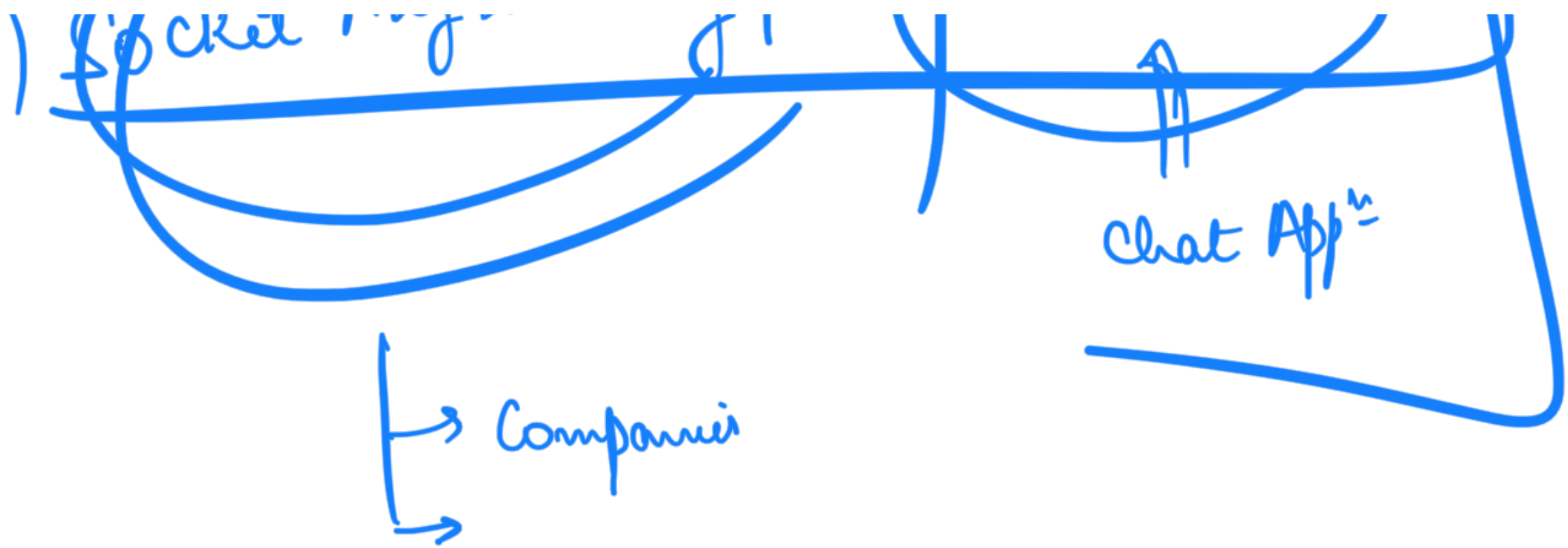
provided as a part of OS

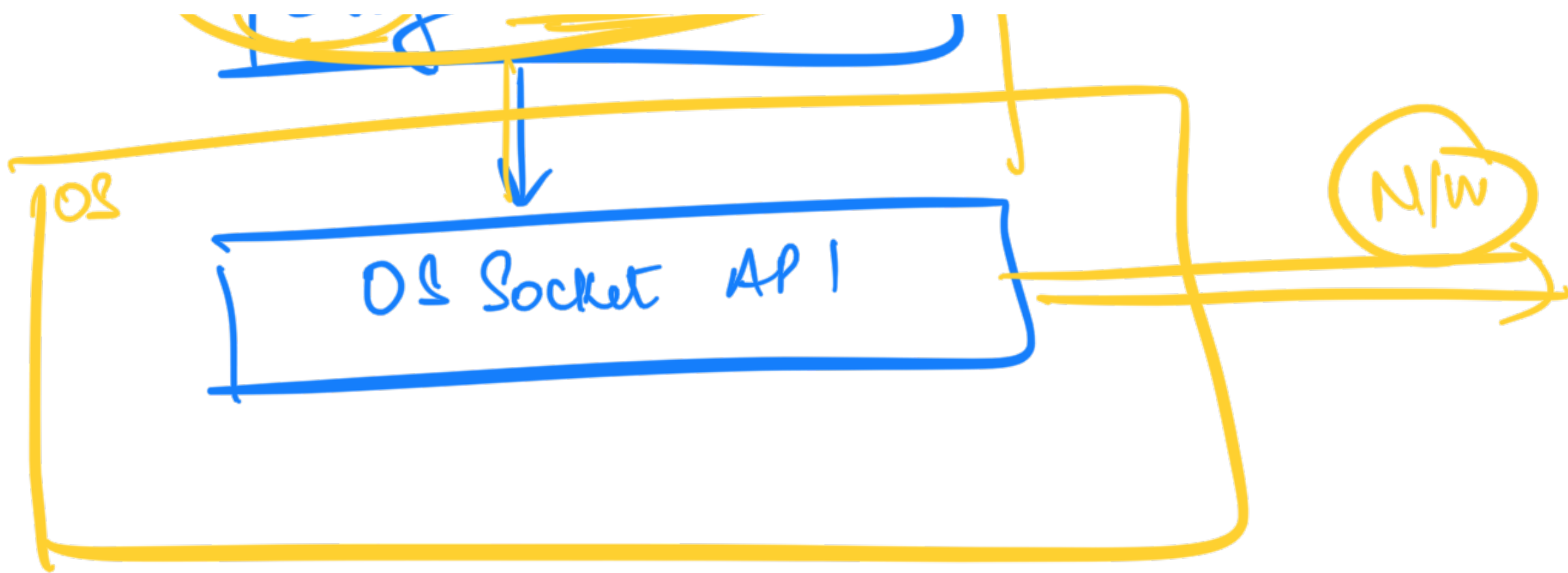
Socket API is provided

→ Most of the programming languages include a wrapper over OS Socket API in their Standard library.

Sockets ⇒ wrapper over OS Socket API

Programming ! ⇒ Websocket





2 Types of Entities





How Sockets Work



① Create a Socket!

② Connect to Server's IP and port ← (request)

③ Client Sends data to the Server (response)

④ Client receives the data

⑤ Close =



Server

① Create a socket

② Bind to a particular port

③ Start listen

WAIT

④ Server accepts a req from client

⑤ Send

⑥ Receive

accept
it on
a diff
conn

A new socket obj is created

Server
↓
Socket API

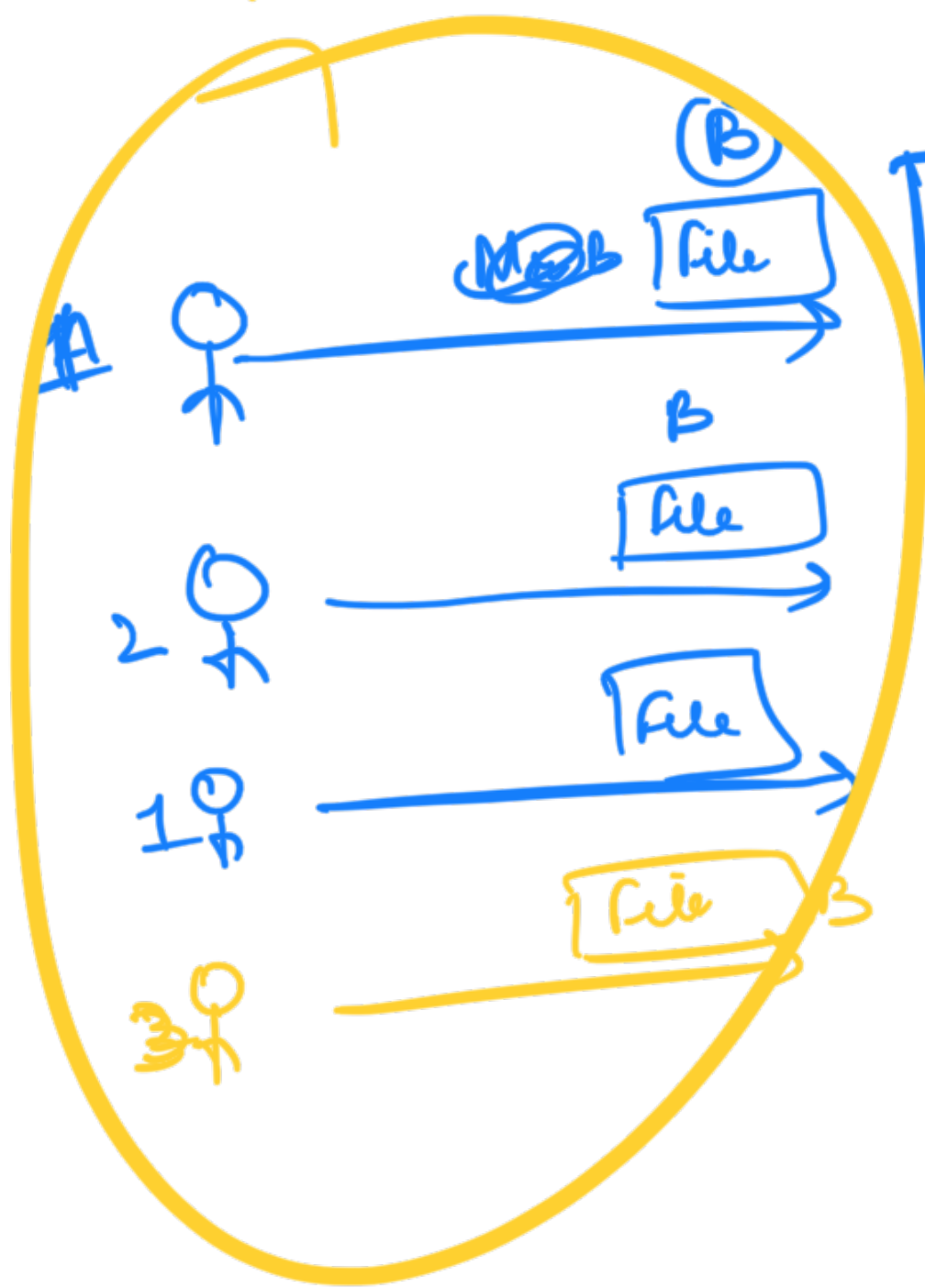
OS

8181



Multiple Clients

DS ↓



Receptionist Table

For	From	Where
B	1	C
B	3	E
B	2	D
B	-	B

