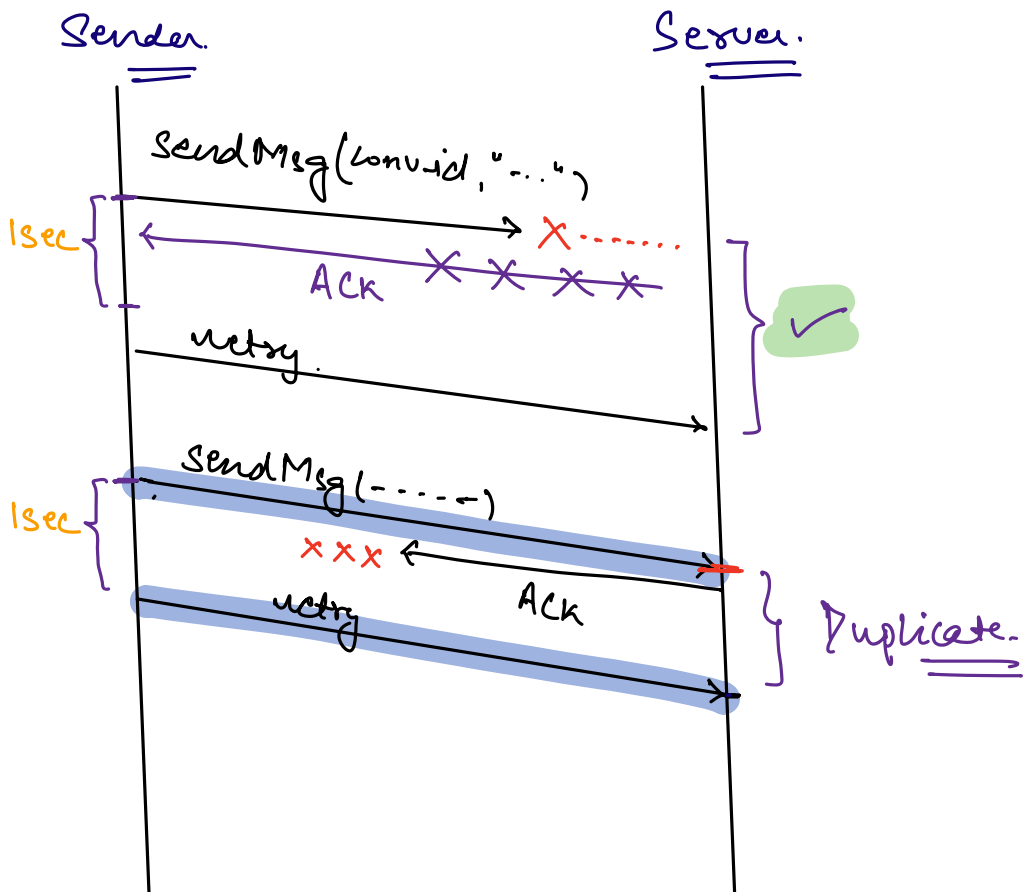
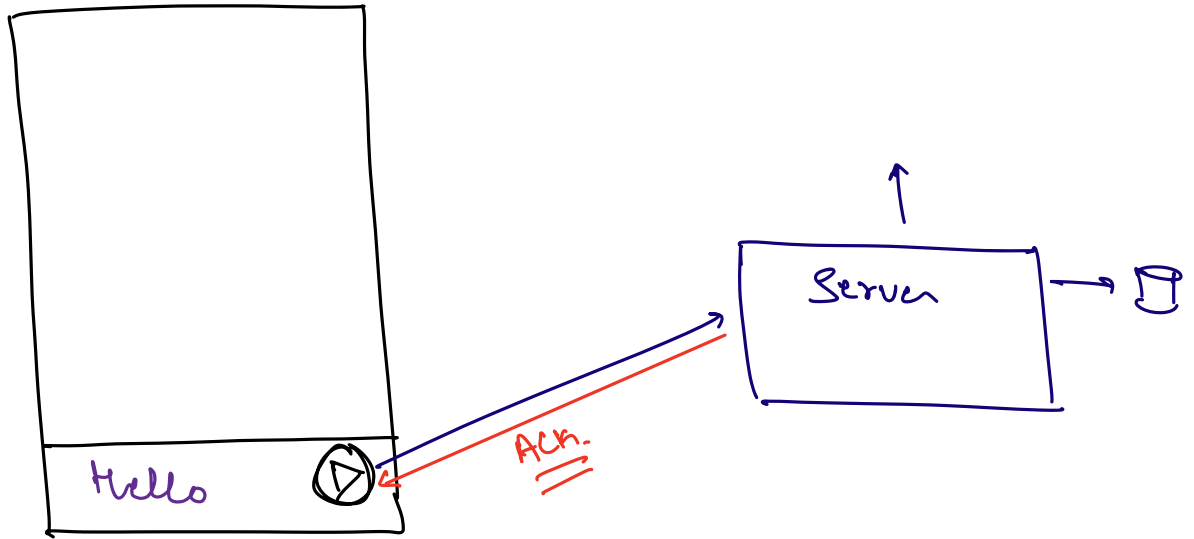


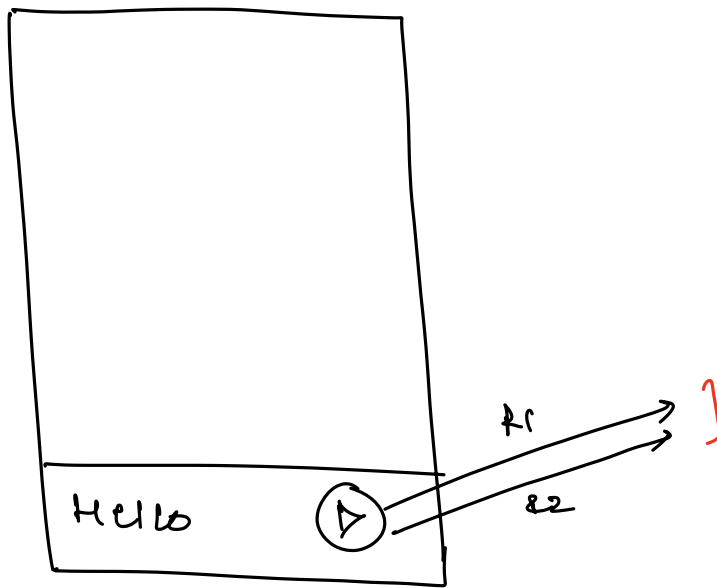
# Agenda.

→ Idempotency

→ Sharding key.

## # Idempotency.

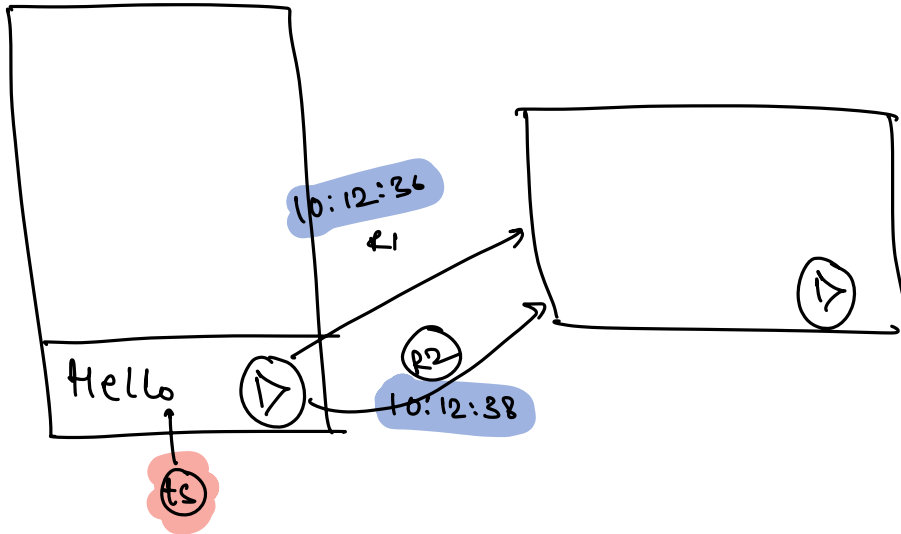
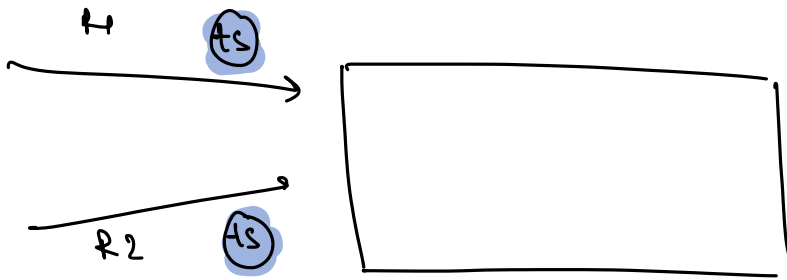




SendMsg (Sender-id, Conn-id, Content, **msg-id**)

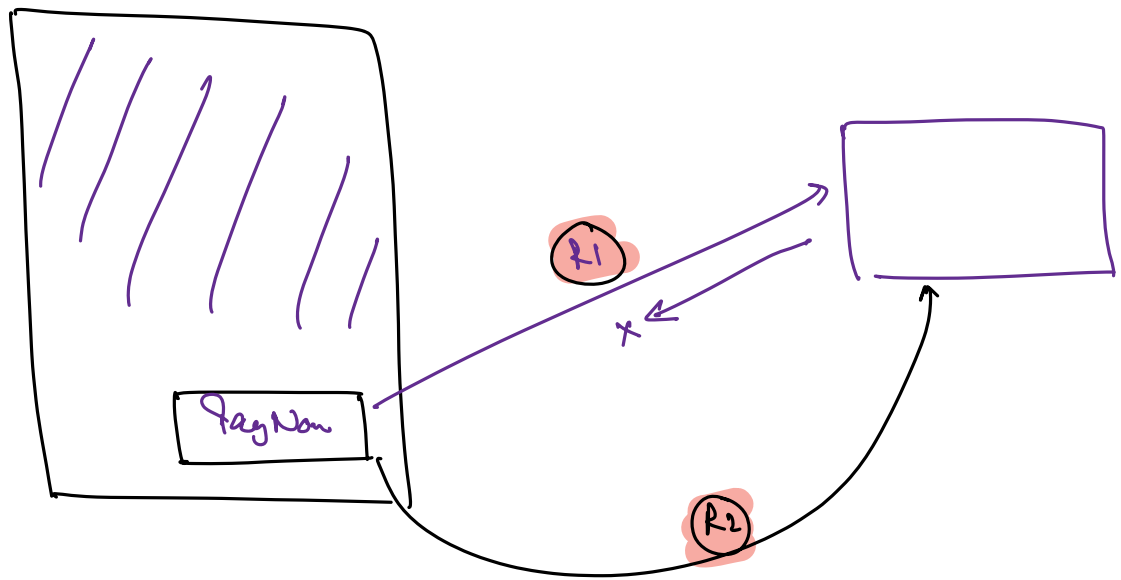
⇒ Every request should have a **unique id** associated in itself that can be used by the server to identify if the request is a new request or a duplicate request.

⇒ msg-id : timestamp + user-id + **device-info**



-----↑  
timestamp of  
last typed char.

msg-id: device-info + user-id + timestamp.  
(of last typed character)  
↓  
Idempotency key.



$\Rightarrow$  Reconciliation  
 $\downarrow$   
24hrs.

# SHARDING. ✓



How to Choose Sharding key.

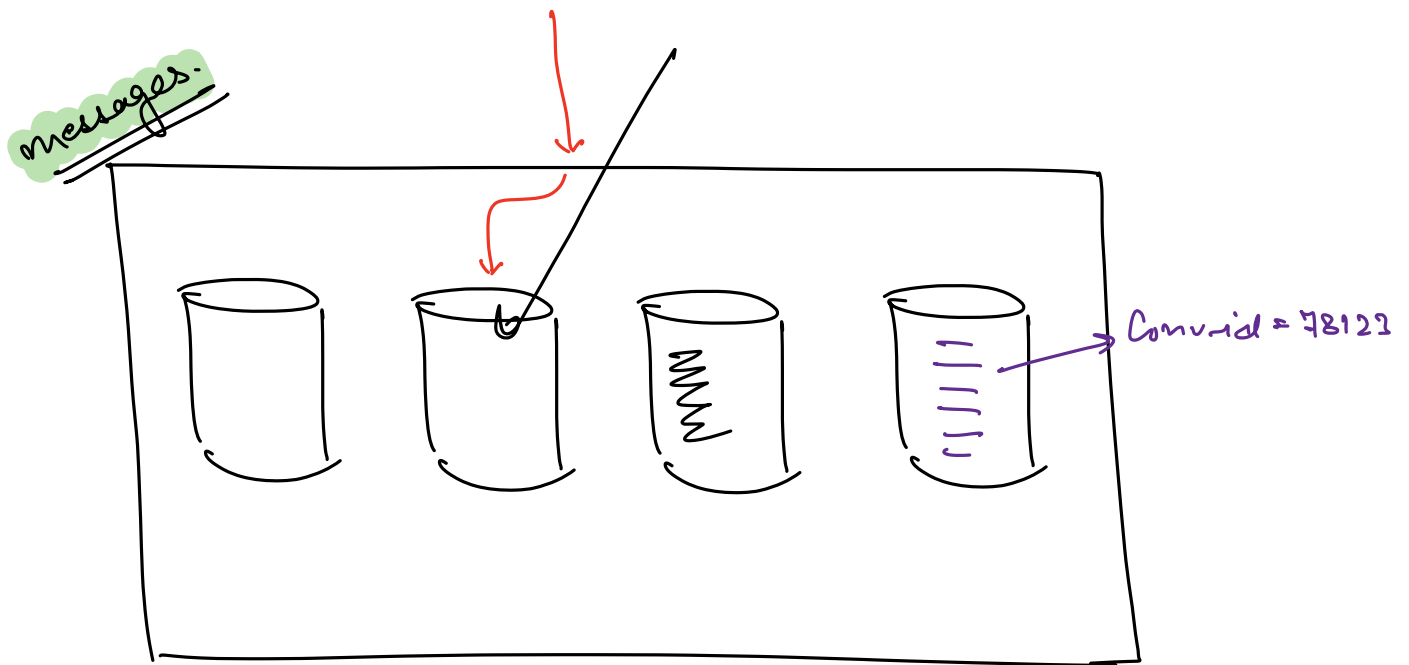
Intra Shard.

⇒ getMsgs (conv.id)

⇒ getConversations (userid)

⇒ sendMsg ( - - - - )

⇒ Conv-id.



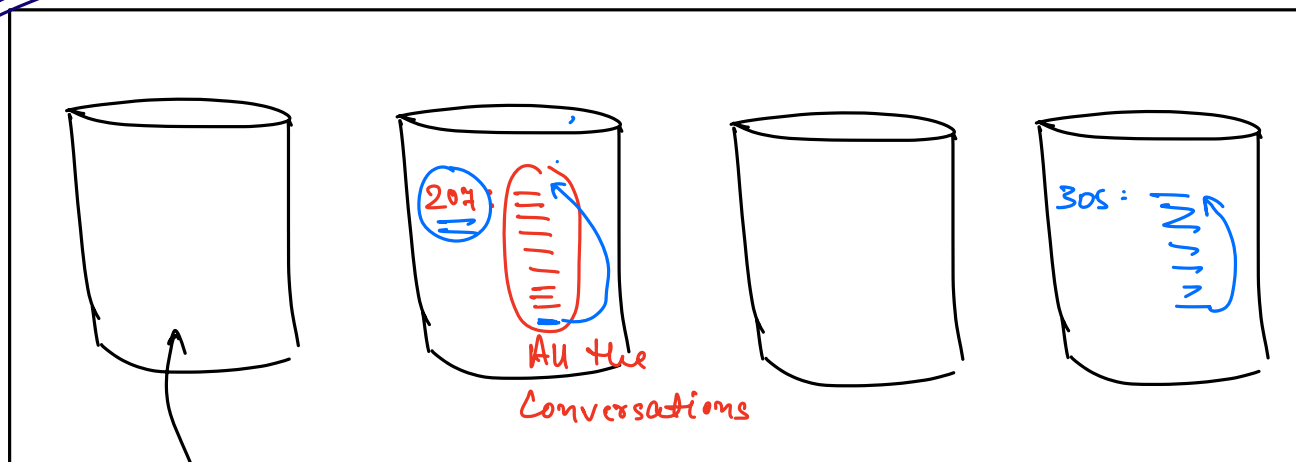
⇒ getMsgs (conv-id) ⇒ 1

⇒ getConversations (userid) ⇒ Multiple.

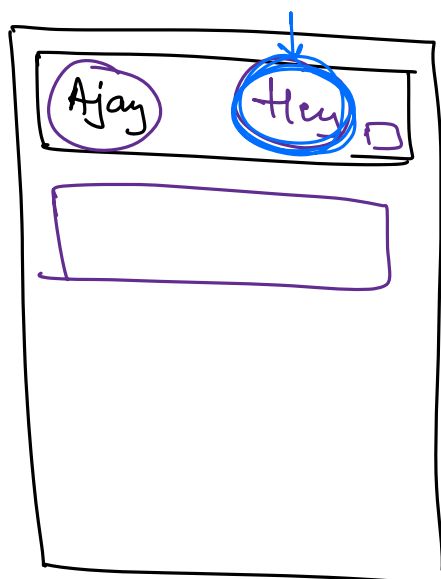
⇒ SendMsg (userid, conv-id, ...) ⇒ ①

⇒ userid

Conversations.



All the conversations of a particular user will be stored in one u/c



30 x 30 x 100 Bytes

900000 Bytes ⇒ 9TB

207:

708123: Hey

⇒ getConversations(userid) ⇒ ①

# 2 DB's

→ messages DB : Sharding key = conv-id

→ Conversations DB

↳ Sharding key: userid.

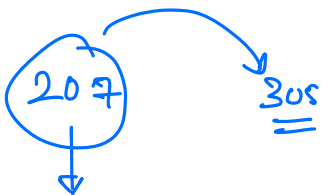
⇒ getMsgs(conv-id) ⇒ messages DB (1 M/c)

⇒ getConversations(userid) ⇒ Conversations DB (1 M/c)

⇒ SendMsg(userid, conv-id, ...) ⇒ 3 M/c

→ messages DB ⇒ 1 M/c

→ Conversations DB ⇒ 2 M/c



———— \* ————