

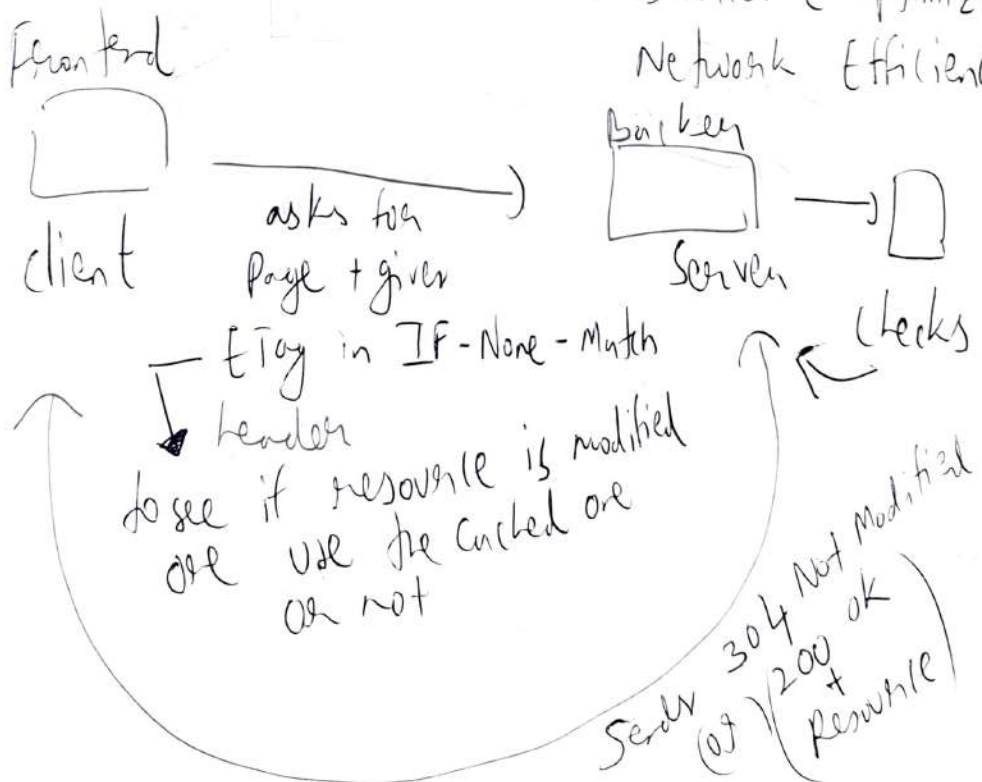
Pagination → Way to split Large sets of data into smaller chunks (pages) so client don't have to fetch everything at once

Pagination {
 → Cursor GET /users? offset=20 & limit=10
 → Offset GET /users? cursor=abc & limit=10
 → go to page so (like book)

Cursor Offset → skip 1st 20 & return next 10

Cursor → Cursor (unique Identifier for last item on previous page) → efficient for large dataset
 → Continuous Scrolling

E Tag (Entity Tag) → Mechanism used by web servers & browsers to validate cached resources & optimize Network Efficiency



Body Hash duplication

Computing Hash of a req/res body & using
to detect identical payloads.

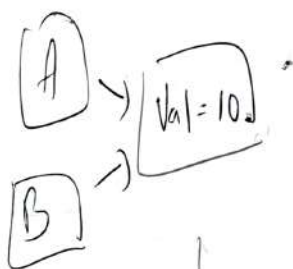
If 2 bodies \rightarrow Same Hash \rightarrow duplication detected

Body Hash duplication \rightarrow server side Identity
content

Etag \rightarrow client-server Cache
Validation

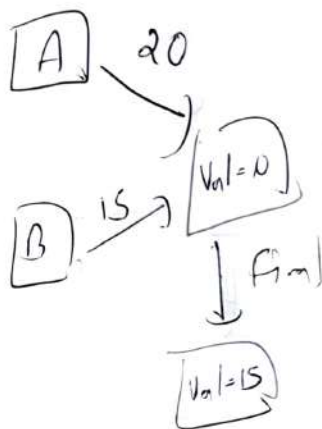
Lost the Update Problem \rightarrow Concurrent updates
overwrite each other

e.g)



read
Val = 10

then



A's update lost

Now if we use Etag + If-Match

current Etag == 'V1' \rightarrow updated

\downarrow
new Etag "V2"

B' → went {Tag != "VI"} → fail over

ETag Alone → Identifier

ETag + If-None-Match → Cache Validation

ETag + If-Match → Write Safety

Logging Levels → DEBUG → INFO → WARN → ERROR
↓
(CRITICAL)

→ Context Logging is necessary
(the level to
store & fill
how much time)