

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

Pagination

→ go to page 50 (like part)

Offset → skip 1st 20 & return next 10

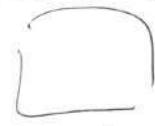
Cursor → cursor (unique identifier for last item on previous page)

↳ Continuous Scrolling

efficient for large dataset

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

Frontend



client

asks for
Page + gives

Backend



Server

E Tag in IF-None-Match

header
to see if resource is modified
or use the cached one
or not

checks

Send 304 Not Modified
Send 200 OK
(if permissible)

Body Hash duplication

↳ Computing Hash of a new/fres body & using
to detect identical payloads.

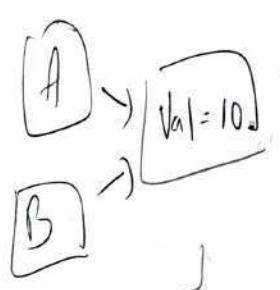
If 2 bodies → Same Hash → Duplication detected

Body Hash duplication → Server Side Identity
content

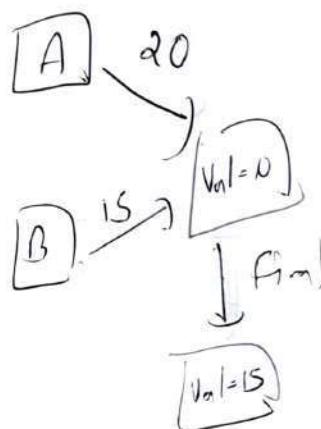
Etag → Client-Server Cache
Validation

Lost Update Problem → Concurrent updates
overwrite each other

e.g.)



then



A's update lost

Now if we use Etag + If-Match

current Etag = "V1" → updated
↓
new Etag "V2"

B) \rightarrow When $\{ \text{tag} != \text{"V1"} \} \rightarrow$ fail else

Etag alone \rightarrow Identifier

Etag + If-None-Match \rightarrow Cache Validation

Etag + If-Match \rightarrow Write Safety

Logging levels \rightarrow DEBUG \rightarrow INFO \rightarrow WARN \rightarrow ERROR
↓
(CRITICAL)

\rightarrow Context logging is necessary

(the level for
some & all
how much fine)