# **SPA Server/Client**

### In a SPA:

- Client handles UI and UI State
- Server is "source of truth"

State can be duplicated between client and server!

• Server is "real"

# **Keeping State in sync**

Client state can be "stale"

• out of date

Effort to keep in sync

- Depends on importance
- Can decide to always overwrite
- Can add and check an "as of" with data
- Remember: Don't trust client data!

### **SPA:** Fetch sends commands

#### In SPA:

- Client sends commands to server
- Server
  - Decides if to do it
  - Decides response
  - Informs client
- Client updates state
  - Possibly from data in response
  - Possibly makes same change itself
  - Server response is usually better

# **Pagination**

Our examples have all been small and fast

Real examples are often not

• "Give me all movies from 2000"

"Pagination" is where server sends partial response

- often includes a "page" or "cursor"
- use to request next "page" of data
- Does data in page change?

## What kind of web dev?

#### Front-End

- HTML (Semantic?)
- CSS
- SASS?
- JS in browser
  - babel? Webpack?
  - fetch (or other XHR)
- SPA?
- Progressive Enhancement?
- May need to run backend environment

### **Backend Web Dev**

### Backend

- May not be in JS
- May need to call other systems
  - Database
- Providing pages?
  - HTML in language/templates
- Providing services?
  - Have to consider clients that aren't you
  - CORS!
- Deploying changes

## **Full Stack Web Dev**

- Often alone or small team
- Can cover all the bases
  - Connect the sides
- Often shallow or narrow in tech
- Language swapping impacts code style

## **Serverless**

"Serverless" does not mean no server

Does mean limited server role

- cloud-based full virtual servers, or
- cloud-based static files, or
- cloud-based functions-as-a-service, or
- cloud-based database-as-a-service, or
- etc