Journey of State Management

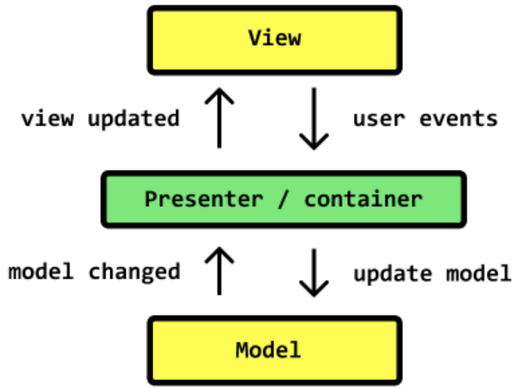
Casting프로젝트를 Angular에서 Next로 전환하면서 느낀 경험을 공유합니다.

- Wilson

FrontEnd 에서 하는 일

Model View Presenter

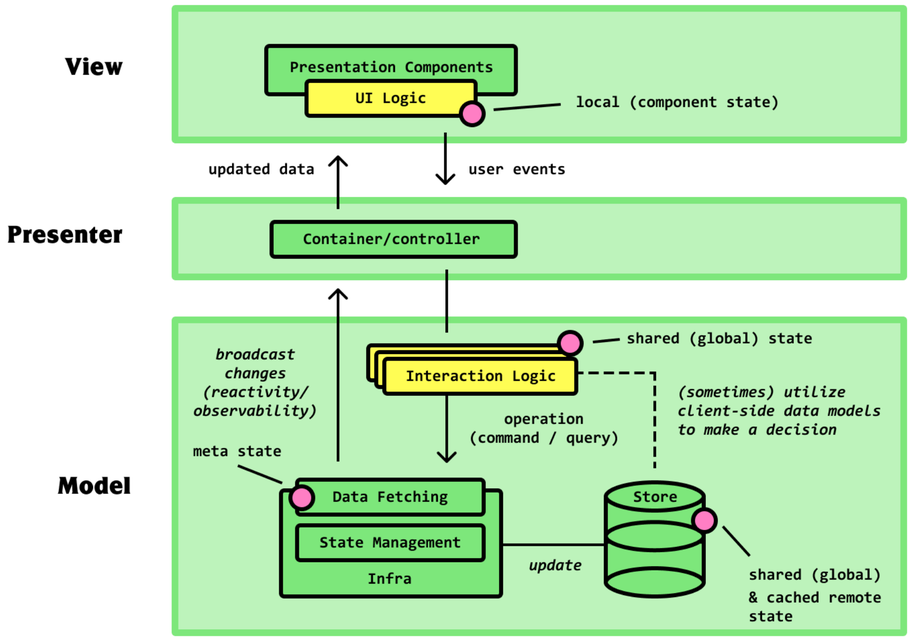
used for client-side apps

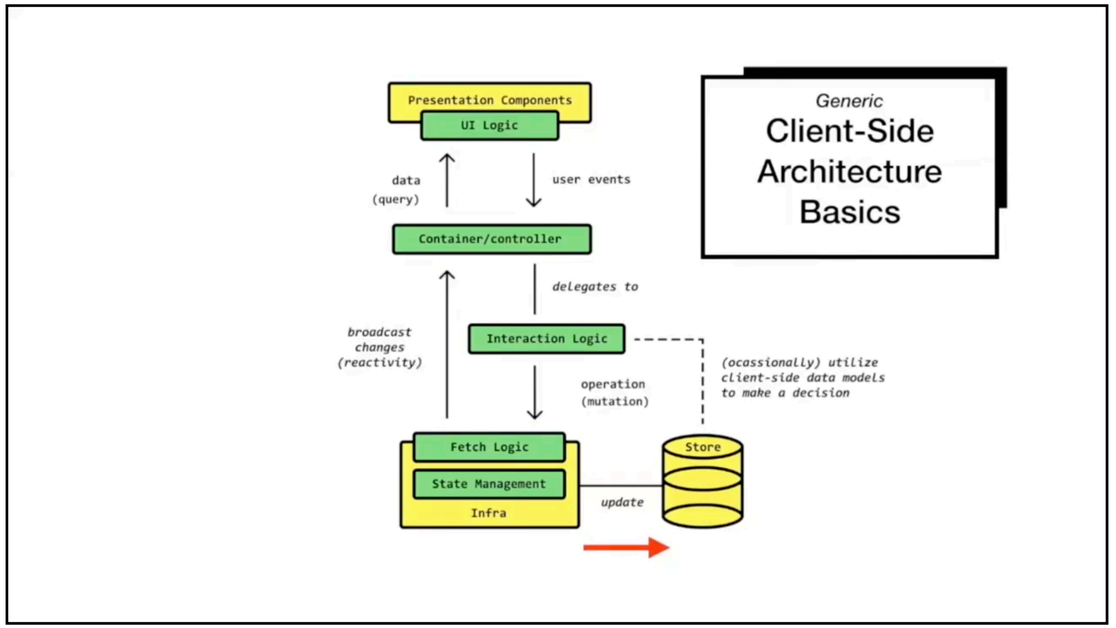


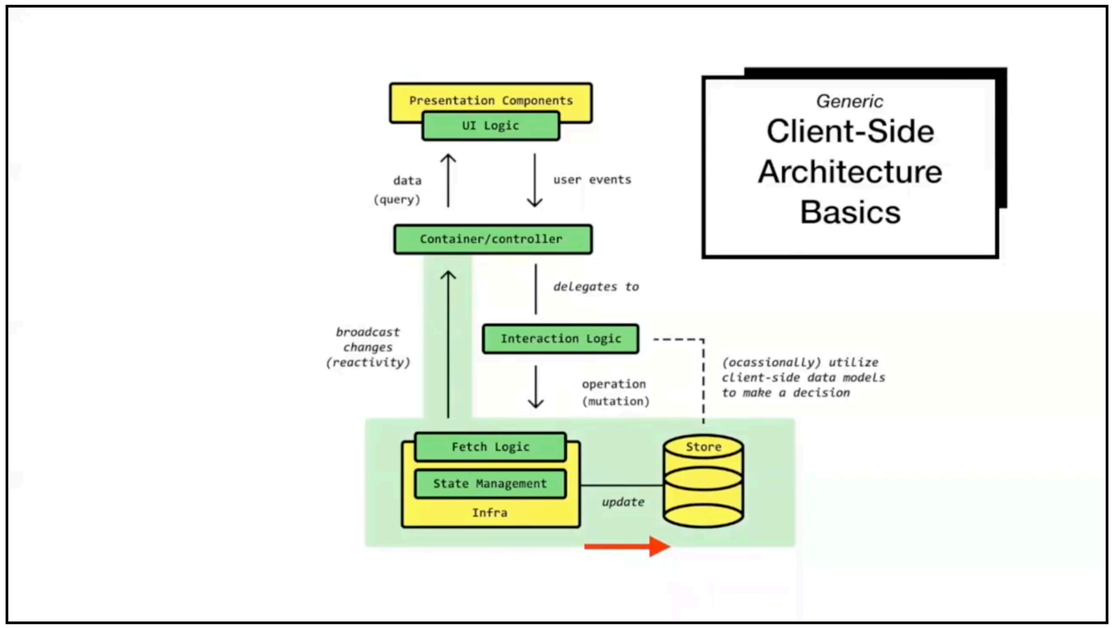
Modern

Model View Presenter

Client-side architecture basics




Generic
Client-Side Architecture Basics
Presentation Components
UI Logic
data (query)
user events
Container/controller
delegates to
broadcast changes (reactivity)
Interaction Logic
(ocassionally) utilize client-side data models to make a decision
operation (mutation)
Fetch Logic
State Management
Infra
update
Store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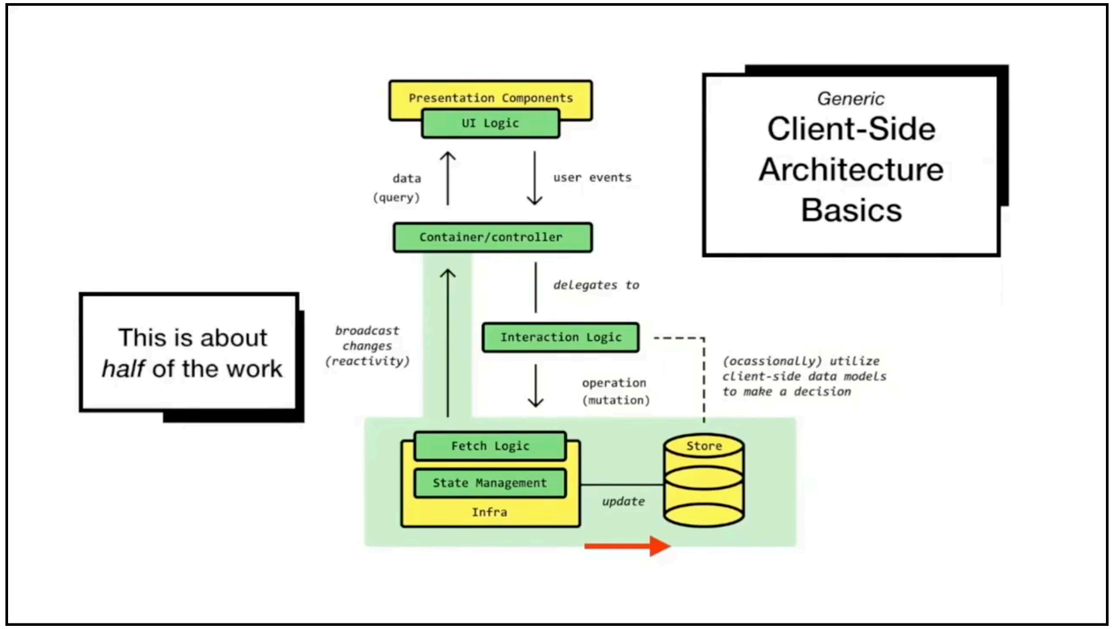
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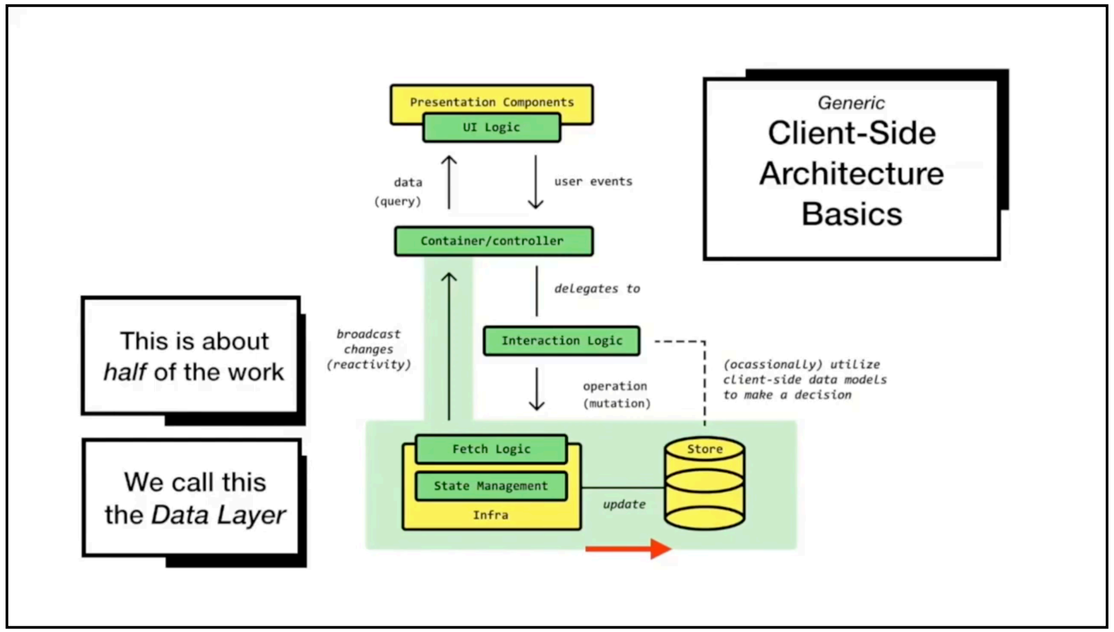
This is about half of the work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This is about half of the work
We call this the Data Layer

Data Layer

State Management

오늘 이야기는

Apollo Data Layer

익숙한 프로젝트 구성

React + Redux + Redux-Saga

신규 Casting 프로젝트 구성은

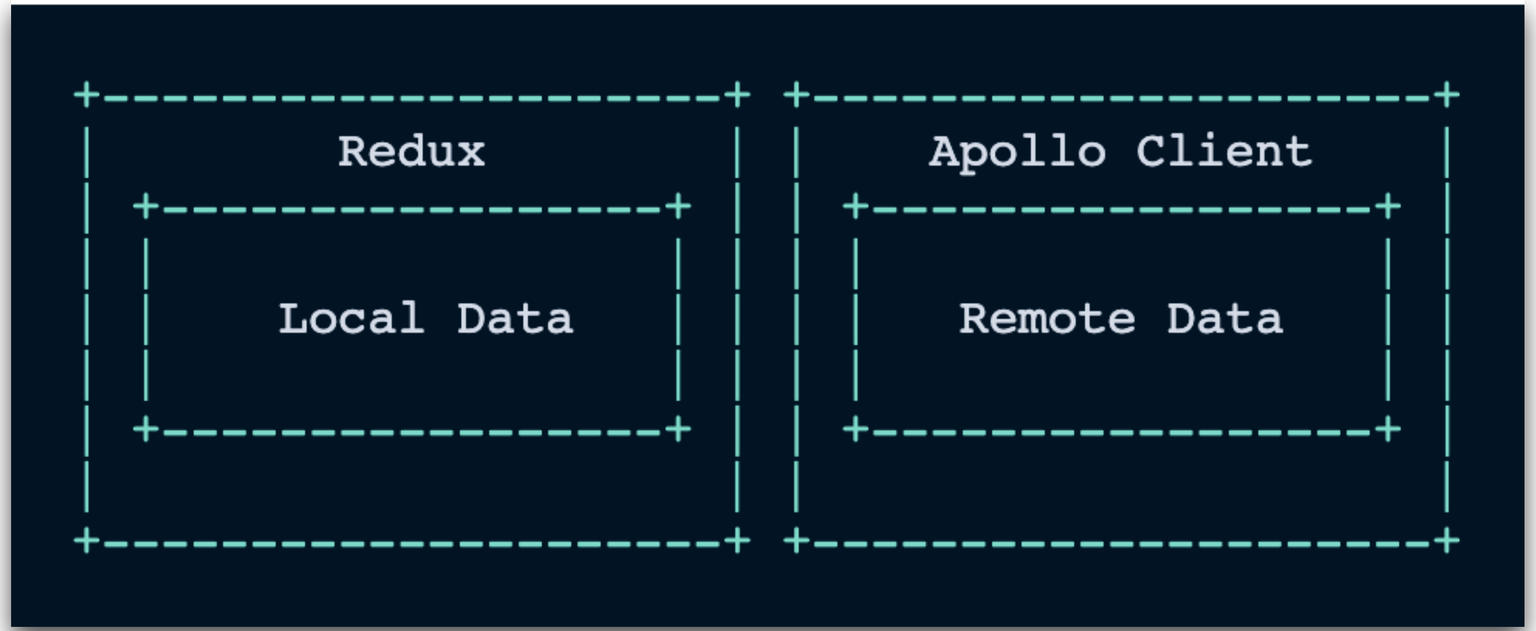
Next + Redux + Redux-Saga + Apollo

해당 스택으로 하는 상태관리

- Redux에서 정의하는 3가지 State
  - Raw(Remote) State
  - Application State
  - UI State

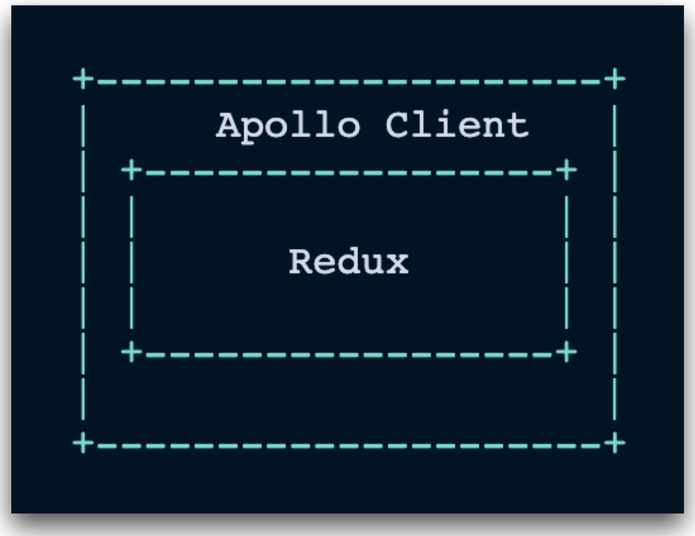
해당 스택으로 하는 상태관리

- Redux
  - Application State
  - UI State
- ***Apollo***
  - ***Remote State***


Redux
Local Data
Apollo Client
Remote Data

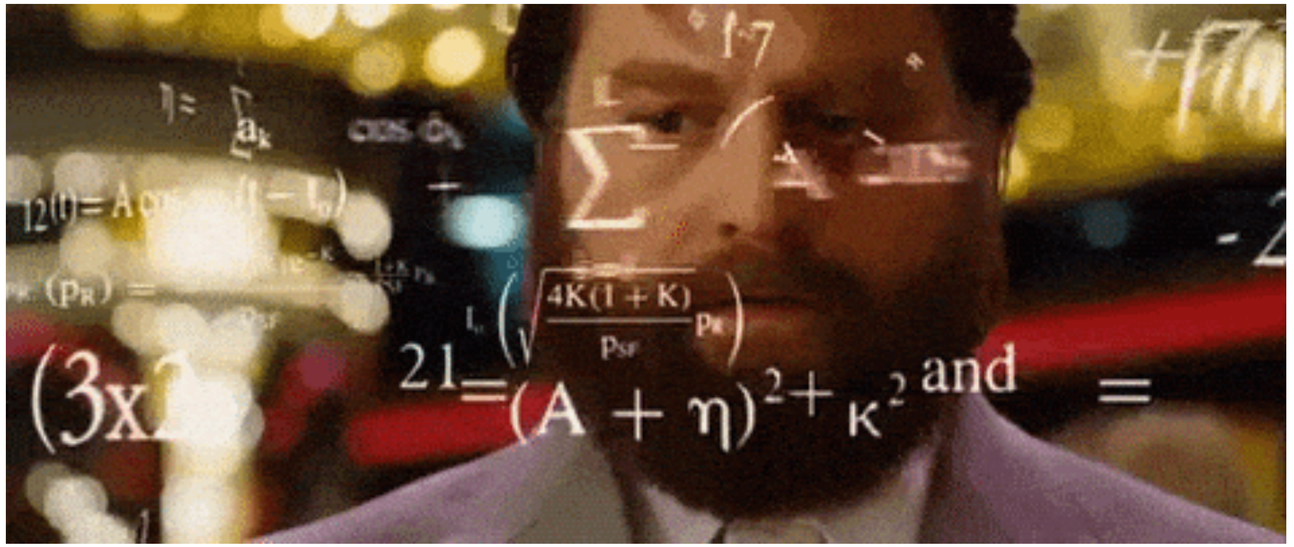
프로젝트를 조금 진행해보니...

Or



Problem to Solve

- ***Domain Logic*** - Redux / React Hook / Redux-Saga
- ***Networking / API*** - Apollo / Redux-Saga
- ***State management*** - Redux / Context Api / Redux-Saga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$=$

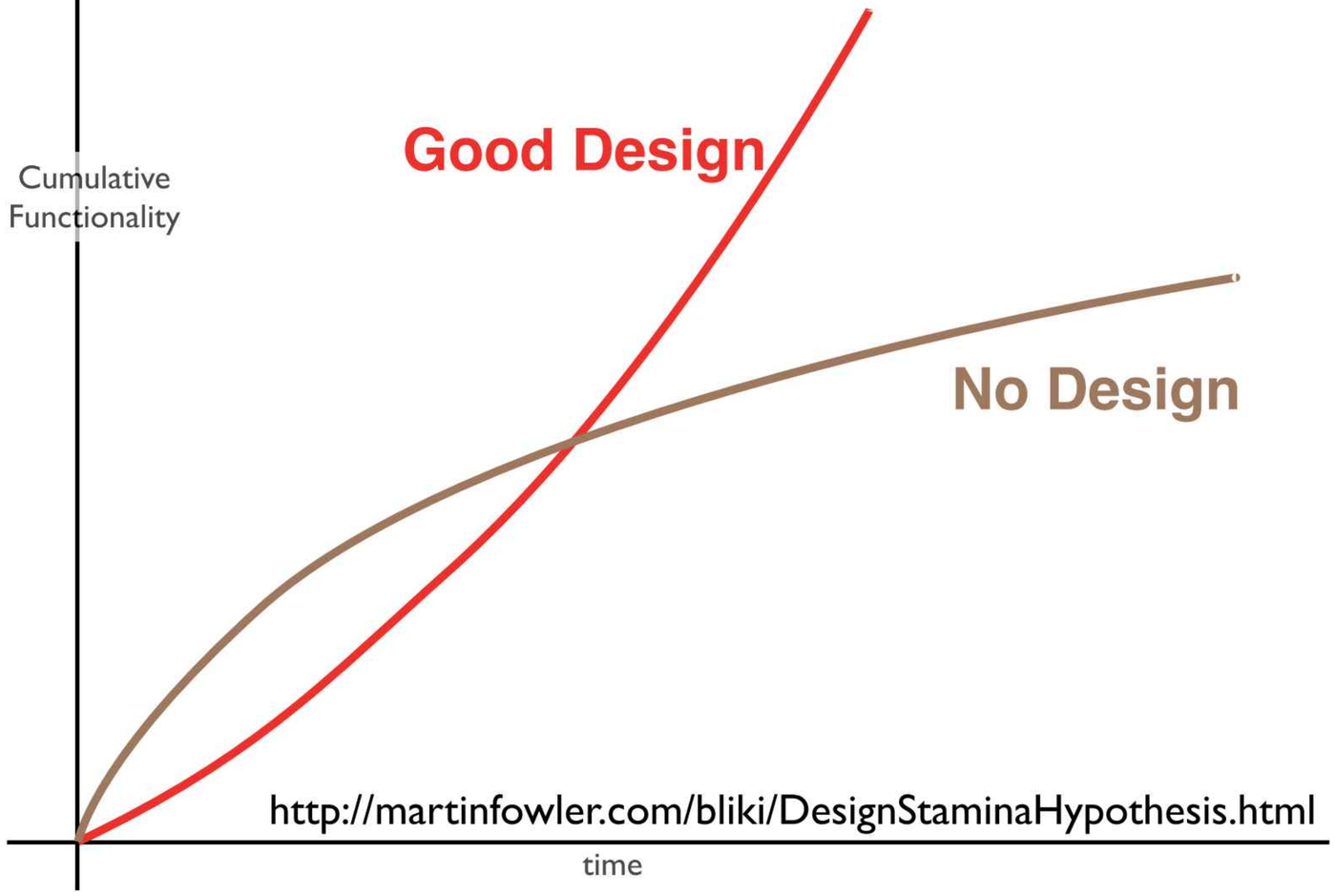
원칙에 혼동이 오기 시작

한때 학자들은 농업혁명이 인간성을 향한 위대한 도약이라고 생각했다. 이들은 두뇌의 힘을 연료로 하는 진보의 이야기를 지어냈다. …

이 이야기는 환상이다.

- 사피엔스

Design Stamina Hypothesis



진보된 아키텍쳐라고 생각했지만
모호한 규칙의 집합

임의의 규칙을 부과하는 대신
구조화된 아키텍쳐를 생각해보자

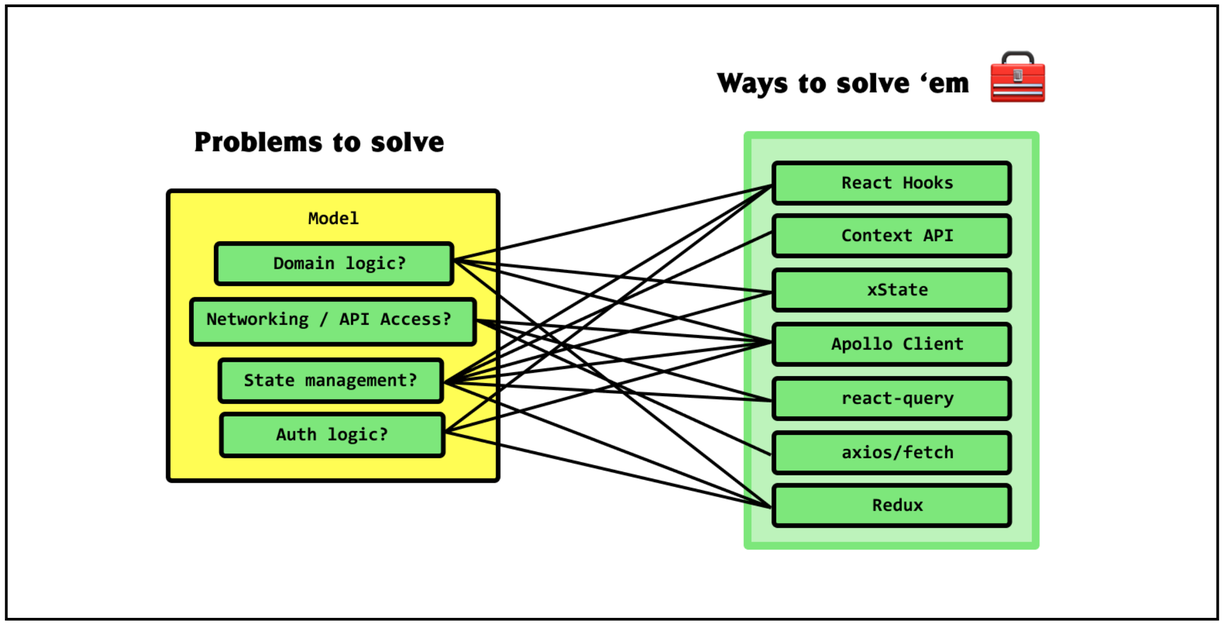
새로운 대안에 대해서 탐색

원하는 아키텍쳐

- 프로젝트를 진행할 수록 개발에 가속도가 생겨야 한다.
- 보일러 플레이트가 적어야한다. State 설정이 간단해야 한다.
- Tool 에서 제공하는 명확한 규칙이 있어야 한다.
- Remote, Local, Shared 상태를 관리 할 수 있어야 한다.
- 마이너한 Tool은 선택하지 않는다.

2020 React State management

- React Hook
- Redux
- Context Api
- Apollo Client
- xState
- React-Query

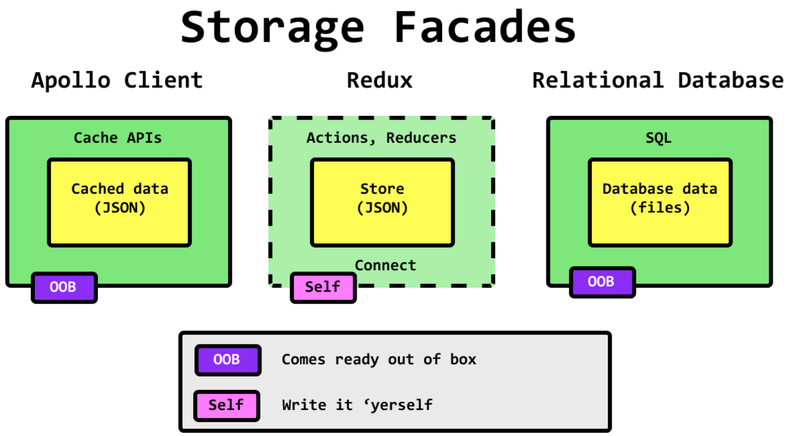

Ways to solve ‘em
Problems to solve
Model
Domain logic?
Networking / API Access?
State management?
Auth logic?
React Hooks
Context API
xState
Apollo Client
react-query
axios/fetch
Redux

Redux + Redux-Saga

너무 많은 보일러플레이트로 **생산성에 의문**

Apollo Client가 마음에 드는점

- 보일러 플레이트가 적다.
- Apollo가 제공하는 Best Practice



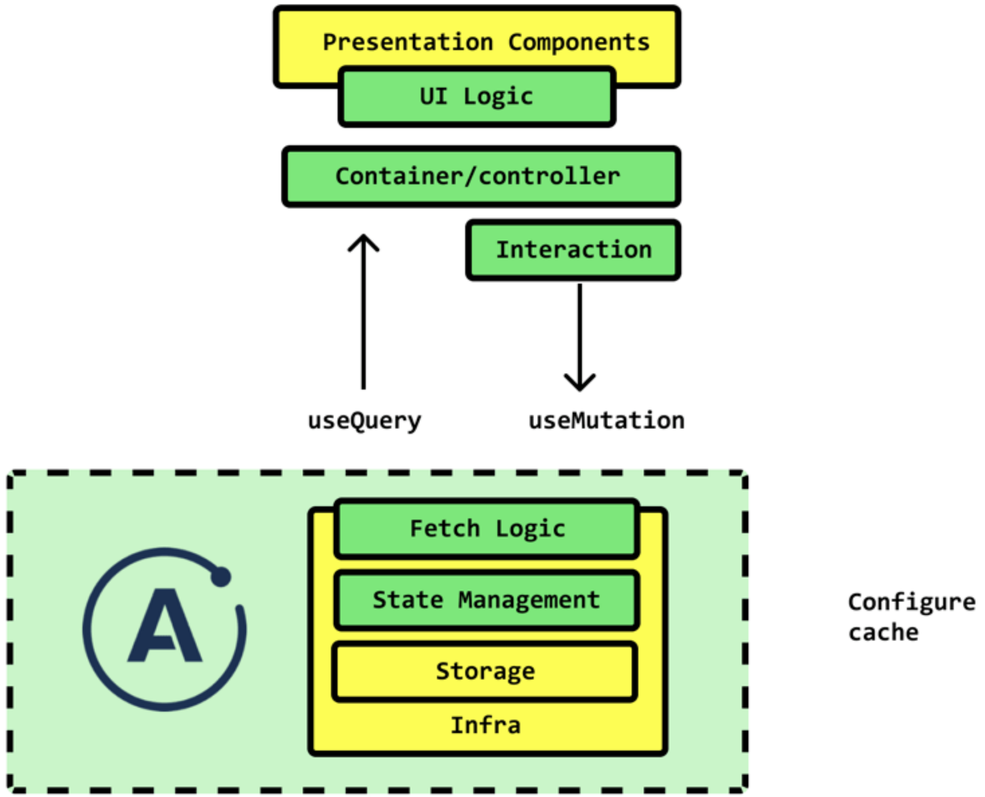
wilson-jung commented 15 days ago • edited

- redux-saga 에서 graphql api를 호출하는 방법
- redux, redux-saga -> apollo-client 전환이 가능한가?

Redux + Redux-Saga = Apollo Client 가능할까?

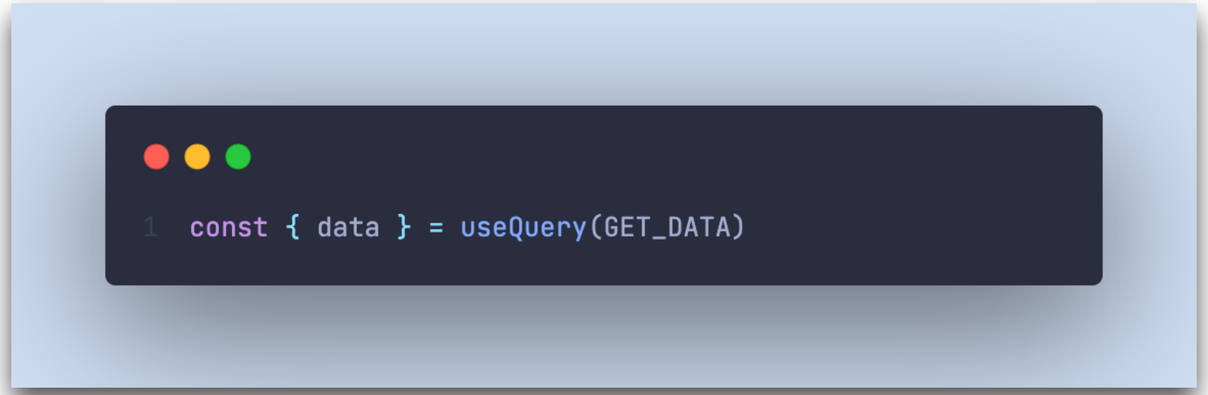
Apollo Client Data Layer 관리

- Redux: State management
- Redux-Saga: SideEffect / Networking



Remote State

State retrieved from backend services



Remote State

useQuery for ***Fetch***

```
const GET_TODO = gql`
  query GetTodos {
    todos {
      id
      text
      completed
    }
  }
`

const MyApp = () => {
  // data 값이 변경되면 자동으로 컴포넌트 re-render
  const { data } = useQuery(GET_TODO)
  return (
    <div>
      ...
      <ul>
        {data.todos.map(todo => <li>{todo}</li>)}
      </ul>
      ...
    </div>
  )
}
```

Remote State

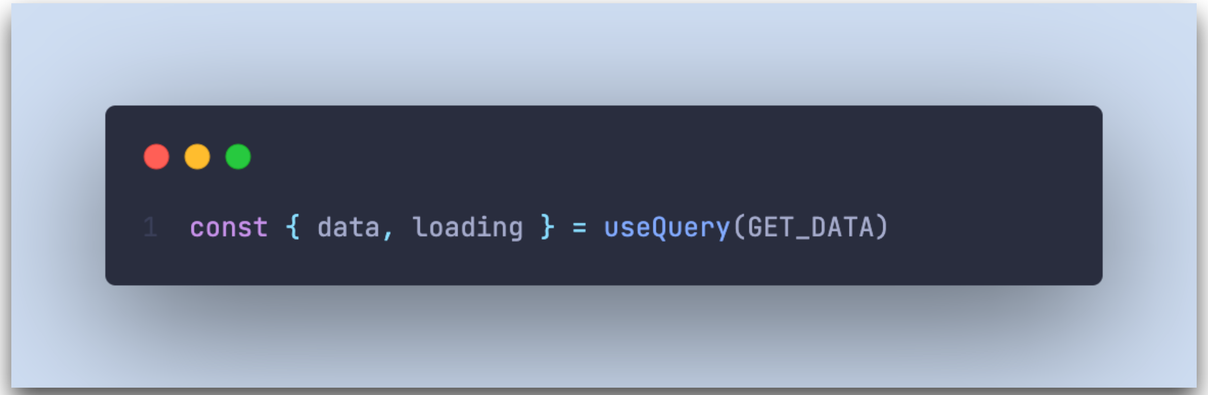
useMutation for ***Update***

```
const ADD_TODO = gql`
  mutation AddTodo($text: String!) {
    addTodo (text: $text) {
      todo {
        id
        text
        completed
      }
    }
  }
`

const MyApp = () => {
  // data 값이 변경되면 자동으로 컴포넌트 re-render
  const { data } = useQuery(GET_TODO)
  const [mutate] = useMutation(ADD_TODO)
  return (
    <div>
      <button onClick={() => mutate('new Todo')} />
      ...
      <ul>
        {data.todos.map(todo => <li>{todo}</li>)}
      </ul>
      ...
    </div>
  )
}
```

Meta State

State *about* state



Meta State

State *about* state

```
const MyApp = () => {
  // loading 값이 변경되면 자동으로 컴포넌트 re-render
  // loading: boolean
  const { data, loading: fetchTodoLoading } = useQuery(GET_TODO)
  const [mutate, { loading: addTodoLoading }] = useMutation(ADD_TODO)
  return (
    <div>
      <button onClick={() => mutate('new Todo')} loading={addTodoLoading} />
      ...
      {
        fetchTodoLoading
          ? <p>loading...</p>
          : <ul>
              {data.todos.map(todo => <li>{todo}</li>)}
            </ul>
      }
      ...
    </div>
  )
}
```

Local State

State belonging to a single component

Shared Local State

State used by multiple components

Shared Local State

- client-side only state
- combination remote and client-side

Client-side only state

```
const todosVar = makeVar<Todos>(todoInitialValue) // initialize

const cache: InMemoryCache = new InMemoryCache({
  typePolicies: {
    Query: {
      fields: {
        darkMode: {
          read () {
            return darkModeVar();
          }
        }
      }
    }
  }
})

const GET_DARK_MODE = gql`
  query GetAllTodos {
    darkMode @client
  }
`

const { data, loading } = useQuery(GET_DARK_MODE)
```

Combination remote and client-side

```
const cache: InMemoryCache = new InMemoryCache({
  typePolicies: {
    Query: {
      fields: {
        darkMode: {
          read () {
            return darkModeVar();
          }
        }
      }
    }
  }
})

const GET_TODO_AND_DARK_MODE = gql`
  query GetTodosAndDarkMode {
    todos {
      id
      text
      completed
    }
    darkMode @client
  }
`

const { data, loading } = useQuery(GET_TODO_AND_DARK_MODE)
```

End