REACT ROUTER

Declarative routing for React

REVIEW

NOT SINGLE PAGE APPLICATION

Server

index.html

GET /

User clicks on link . . .

Server

settings.html

GET /settings

NOT SINGLE PAGE APPLICATIONS

- Views stored on the server, served up as HTML pages.
- When user goes to a new page, the browser navigates in totality, navigating, refreshing and retrieving a brand new HTML document.
- Each page, since it is a new page, retrieves stylesheets, script files, etc.

SINGLE PAGE APPLICATION (SPA)

Server

index.html

GET /

User clicks on link . . .

Server

```
{
  “billingInfo”: {},
  “notifyMe”: true
}
```

GET /user/1/settings

Display settings view

SINGLE PAGE APPLICATIONS

- On page change, a new page is not loaded. The front-end JavaScript replaces elements on existing DOM to update view.

- AJAX plays a big part to fill in the data

- Two options for dealing with the url bar:
  - Use the HTML5 **Browser History API**, OR
  - Manipulate the **Document Fragment Identifier (#)**

REACT ROUTER

WHAT IS REACT-ROUTER?

- React Router keeps your UI in sync with the URL.
- Ties into URL and history to allow for easy navigation to and between different parts of your application.
- Easily integrates nesting of components.

INGREDIENTS

INGREDIENT LIST

- A Router (either HashRouter or BrowserRouter)
- Routes
- Links

"ROUTER" (HASH ROUTER OR BROWSER ROUTER)

ROUTER

- Answers simple question: *Use the BrowserHistory API, or abuse the Document Fragment Identifier (#)*

- *Needs to be the parent of almost everything*

  - *Why? Because whenever the url changes, it's the Router component that changes its state, which causes everything beneath it to re-render*

```
import {HashRouter as Router} from 'react-router-dom'
```

```
import {HashRouter as Router} from 'react-router-dom'

const Main = () => {
  return (
    <Router>
      {/* basically everything else */}
    </Router>
  )
}
```

ROUTE = PATH + COMPONENT

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```
<Route path='/somePath' component={SomeComponent} />
```

WHEN THE URL BAR MATCHES THE ONE SPECIFIED IN THE ROUTE, REACT-ROUTER CAUSES THAT COMPONENT'S RENDER FUNCTION TO EXECUTE

THIS MATCHING IS "FUZZY" (THINK "JUST LIKE APP.USE!")

LINK

LIKE AN "A" TAG BUT BETTER

LINK

```
<Link to='somePath'>Go to SomePath</Link>
```

REACT ROUTER