React Router 4.0

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Introduction

- React Router is a component

- React Router package helps to achieve single page navigation in React Application

- > npm install react-router-dom —save

```
import {BrowserRouter as Router
} from "react-router-dom"

render(<Router/>, document.getElementById('root'))
```

browserHistory (HTML5)

uses the History API built into the browser to manipulate the URL, creating real URLs that look like

example.com/some/path.

hashHistory (Hash #/)

uses the Hash # on the URL creating real URLs that look like

example.com/#/some/path.

Import for Hash

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

render((
  <Router >
    <Route path="/" component={App}/>
  </Router>
), document.getElementById('root'))
```

HashHistory enables Hash # Navigation

example.com/#/some/path.

BrowserRouter

```
import {BrowserRouter as Router
} from "react-router-dom"

render((
  <Router >
    <Route path="/" component={App}/>
  </Router>
), document.getElementById('root'))
```

BrowserRouter enables HTML5 Navigation
Clean URL

example.com/some/path.

Hash URL

Address bar   http://localhost:8080/#/cart

. **Request URL:**http://localhost:8080/
. **Request Method:**GET

Cons

Search Engine Optimization

HTML5

Address bar   http://localhost:8080/cart

. **Request URL:**`http://localhost:8080/cart`
. **Request Method:**`GET`

GOOD for SEO

Cons

Server side support needed

```
// Routes.js
import About from './components/About'
import Contact from './components/Contact'
import { HashRouter as Router, Route, Switch}
from 'react-router-dom'

export default function Routes((
  <Router >
    <App>
      <Switch>
      <Route path="/" exact component={Home}/>
      <Route path="/contact" component={Contact}/>
      <Route path="/about" component={About}/>
</Switch>
    </App>
  </Router>
)
```

Navigation

```jsx
// components/Header.js
import { NavLink } from 'react-router-dom'

export class Header extends React.Component {
  render() {
    return (
    <div>
        <NavLink to="/" exact>Home</NavLink>
        <NavLink to="/about" activeClassName="red">
                About
        </NavLink>
        <NavLink to="/contacts" >Contact</NavLink>
    </div>
    )
  }
}
```
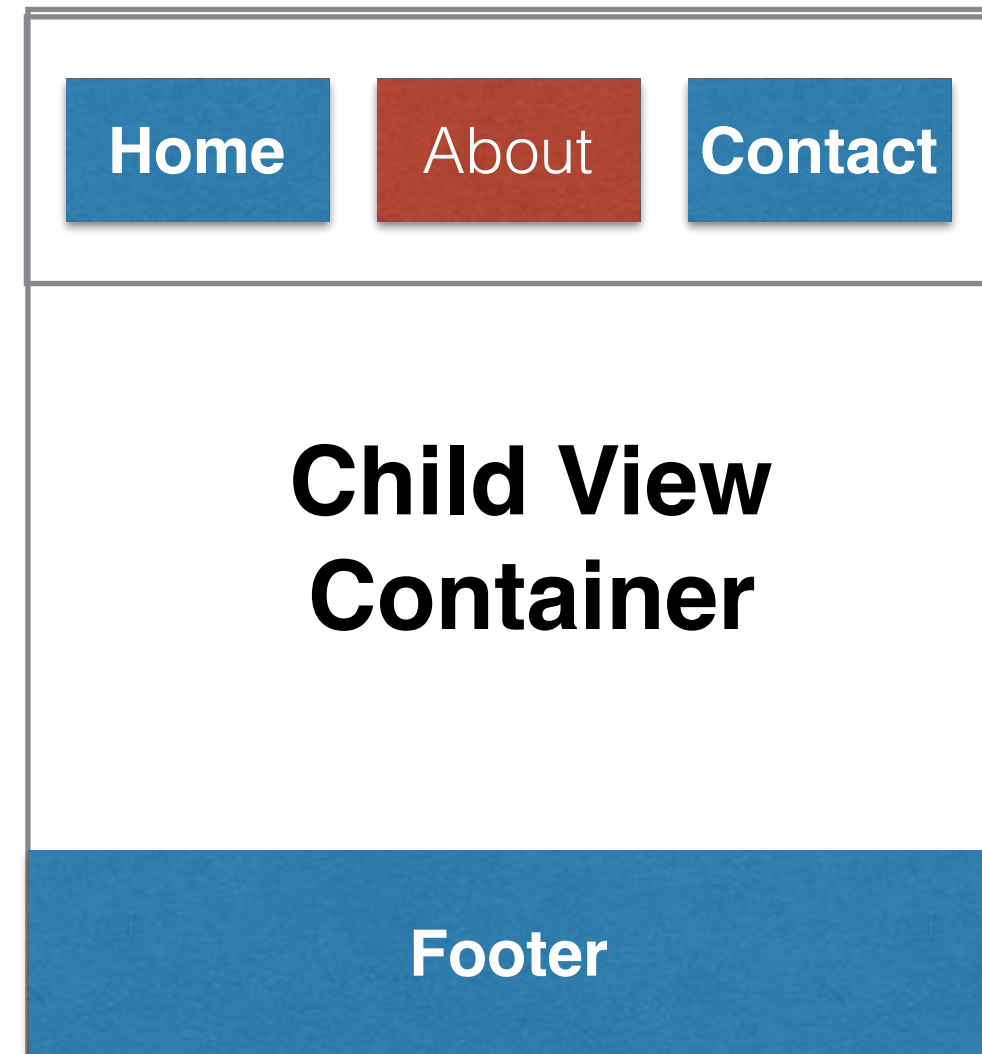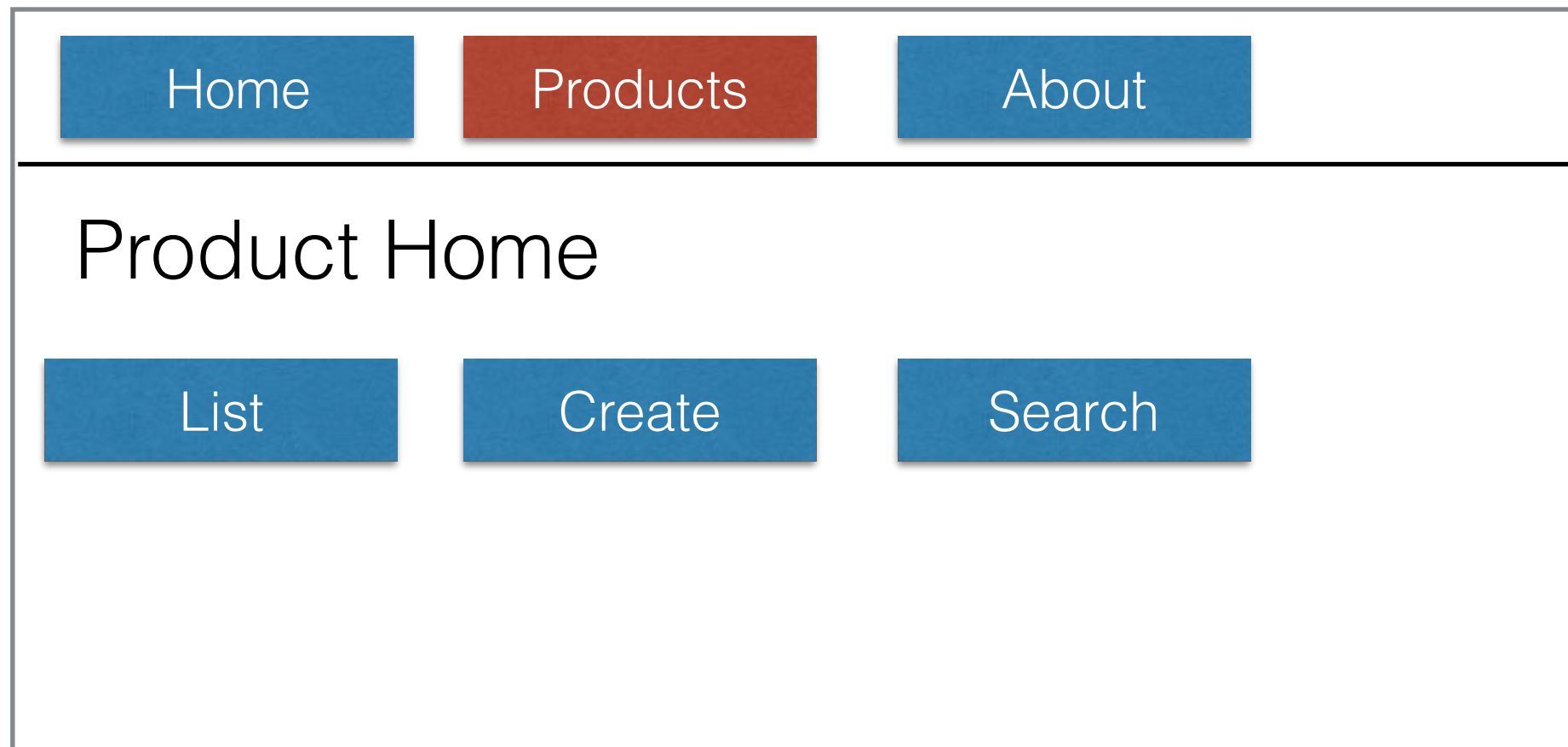
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```jsx
import React from "react";

export class App extends React.Component {
  render() {
    return (
    <div >
        <Header>
        </Header>
        {/* Child view container  */}
        <div>
            {this.props.children}
        </div>

        <Footer >
        </Footer>
    </div>
    )
  }
}
```

| Home | About | Contact |

Child View Container

Footer

Nested Navigation

| Home | Products | About |

Product Home

| List | Create | Search |

Nested Navigation

```jsx
import React from "react";
import {Route, Switch} from "react-router-dom";
...
export default function Routes() {
    return (
        <ProductLayout>
         <Switch>
            <Route path="/products/list"
                   component={ProductList}  >
            </Route>

            <Route path="/products/edit/:id"
                   component={ProductEdit} >
            </Route>
         </Switch>
        </ProductLayout>
    )
}
```

Render Children

```jsx
import React from "react";
import {NavLink} from "react-router-dom";
export default function ProductLayout (props) {
    return (
    <div>
        <h2>Product Home</h2>
        <div>
         <NavLink to="/products/list"> List
            </NavLink>
        <NavLink to="/products/create">Create
            </NavLink>
        </div>
          <div>
            {/* view container */}
            {props.children}
          </div>
        </div>
    )
}
```

Active Links

```
// modules/App.js
<li><NavLink to="/about" activeStyle={{ color: 'red' }}>About</NavLink></li>
<li><NavLink to="/repos" activeStyle={{ color: 'red' }}>Repos</NavLink></li>
```

```
// modules/App.js
<li><Link to="/about" activeClassName="active">About</Link></li>
<li><Link to="/repos" activeClassName="active">Repos</Link></li>
```

css

```
.active {
  color: green;
}
```

Params

/products/:id/:name

this.props.match.params["id"]

this.props.match.params["name"]

Params

```javascript
//at index.js
import {Products, Product} from './modules/products'

render((
  <Router >
    <Route path="/" >
      <Route path="/products" component={Products}/>
      {/* add the new route */}
      <Route path="/products/detail/:id/:name"
component={ProductDetail}/>

    </Route>
  </Router>
), document.getElementById('root'))
```

Redirect

```
import { Route, Redirect } from 'react-router'

<Route exact path="/" render={() => (
  loggedIn ? (
    <Redirect to="/dashboard"/>
  ) : (
    <PublicHomePage/>
  )
)}/>
```

Handling Base Path

Deploying app with example.com/myapp?

```
<Router basename={'myapp'}>
…
</Router>
```

Deploying app with example.com/business/myapp?

```
<Router basename={'business/myapp'}>
…
</Router>
```

Navigation

```
gotoLink() {
  this.props.history.push('/products')
}
```

404 Like Not found

import NotFound from "./not-found";

<Route path='*' component={NotFound} />