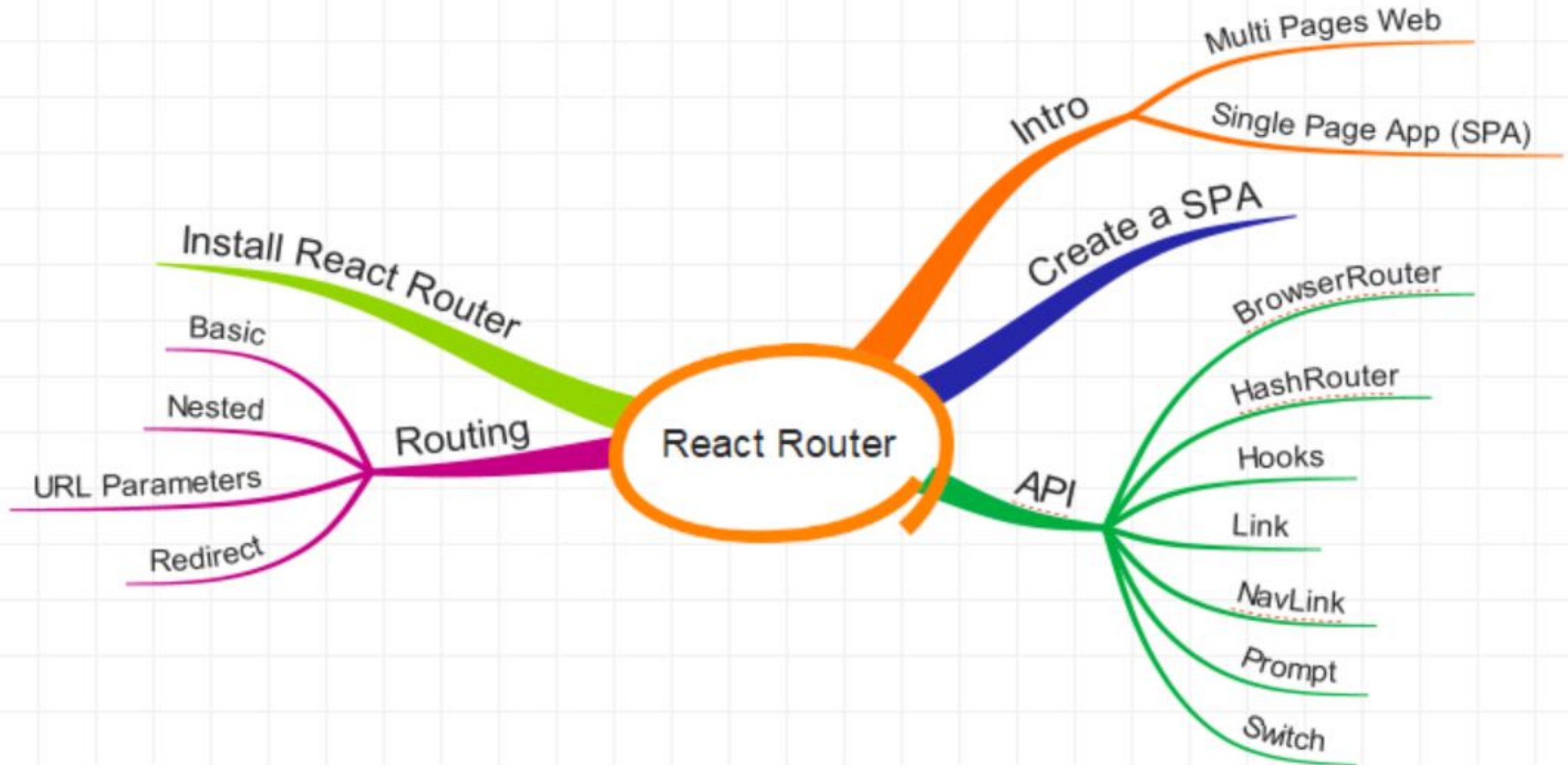


Session 3

REACT ROUTER

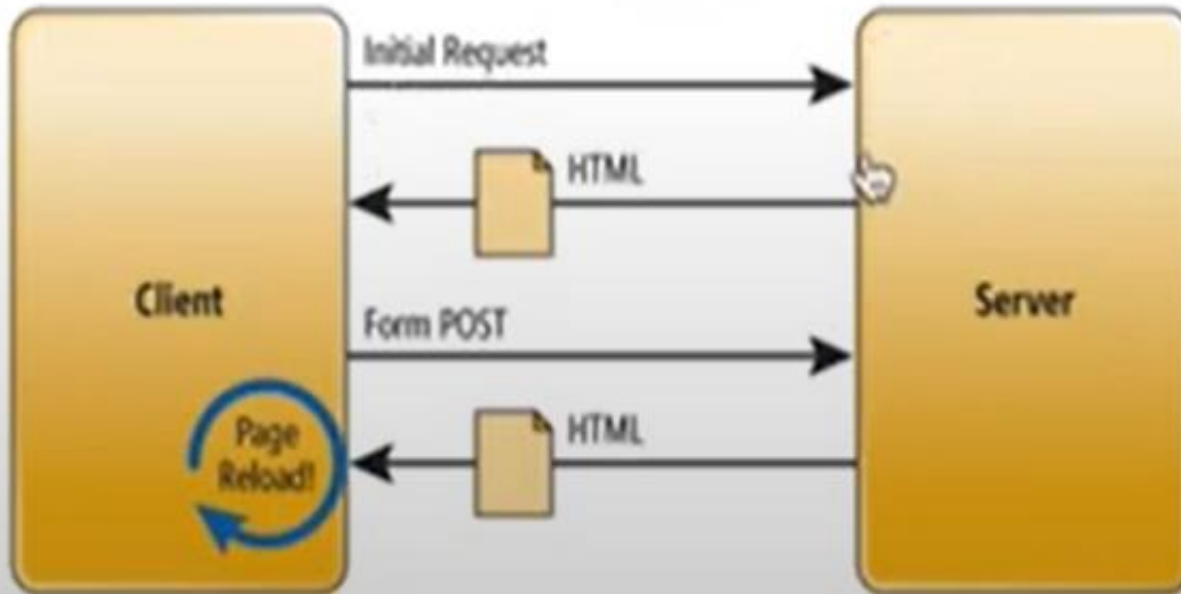
SINGLE PAGE APP WITH REACT ROUTER



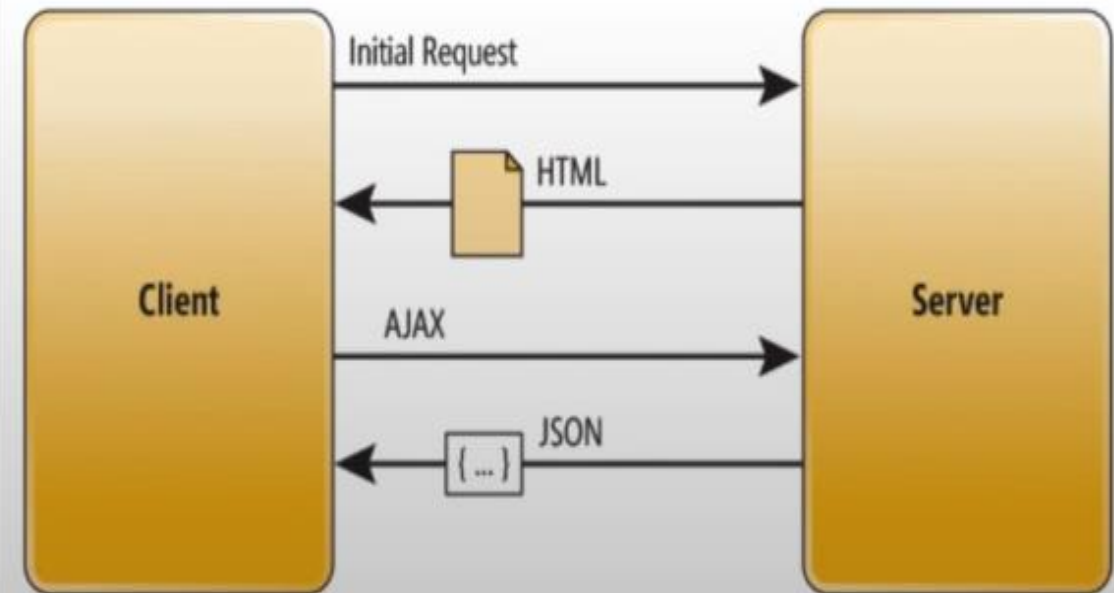
MULTI PAGES APP

SINGLE PAGE APP (SPA)

Traditional Page Lifecycle



SPA Lifecycle

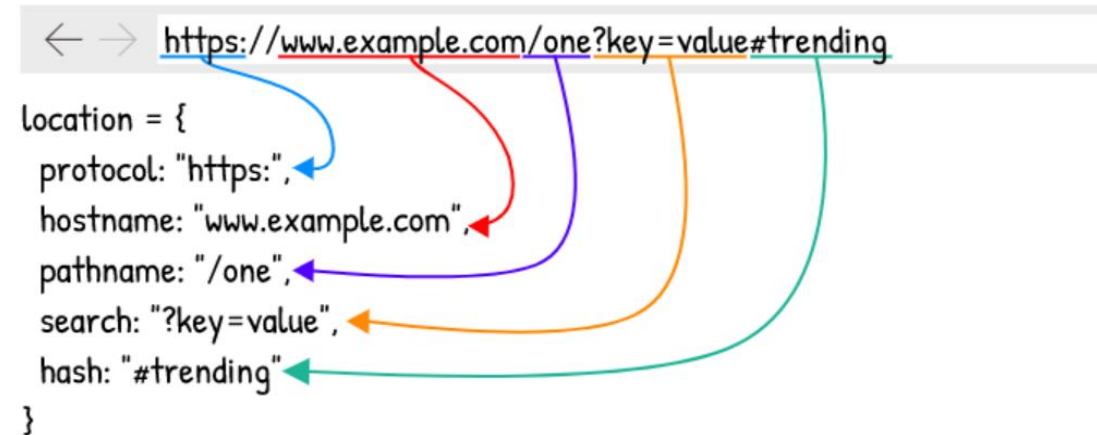


SINGLE PAGE APP

- A single-page application (SPA) is a website that re-renders its content in response to navigation actions (e.g. clicking a link) without making a request to the server to fetch new HTML.

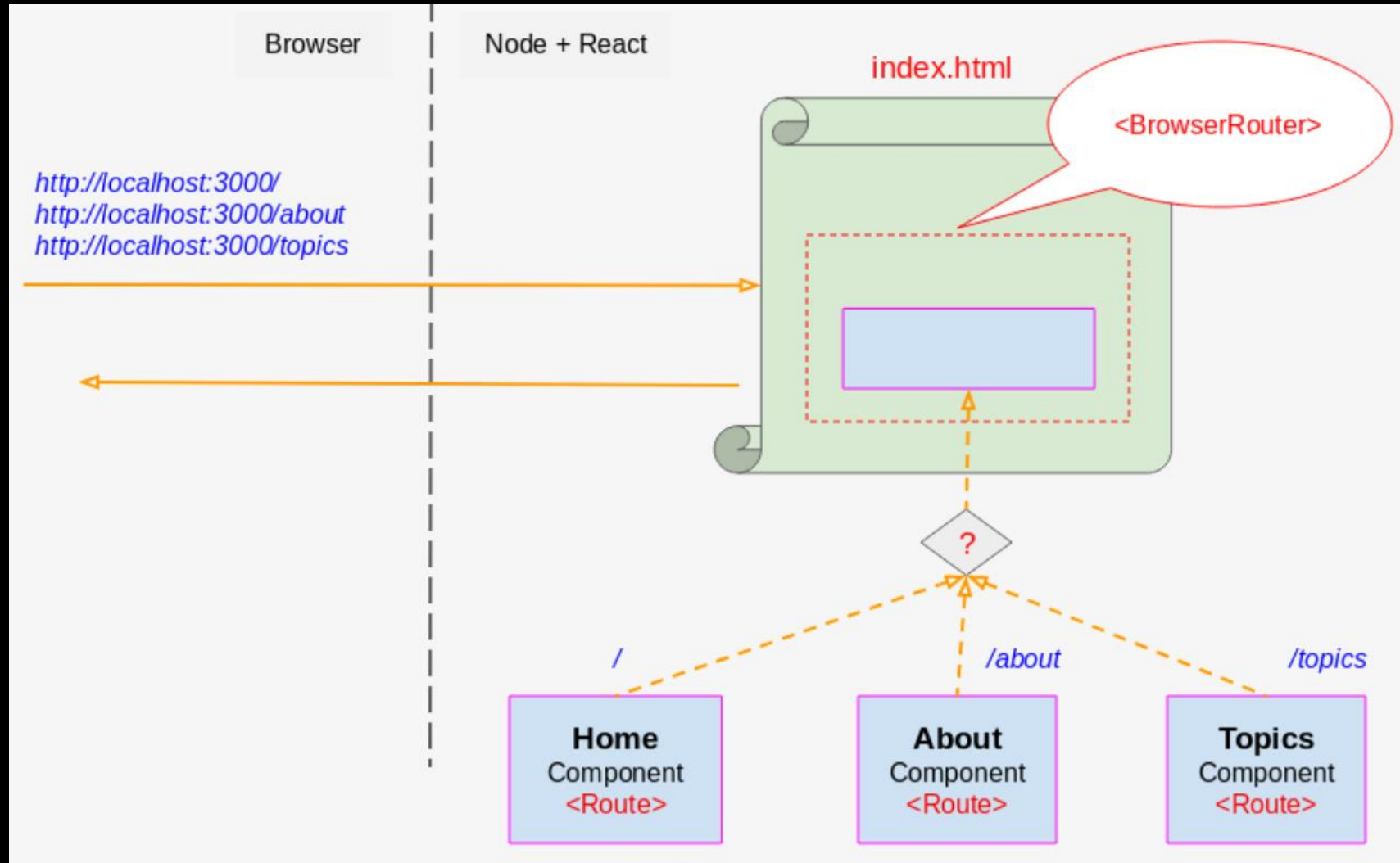
Location Primer

While the URL in the address bar is what users see and interact with, SPAs use window.location. This allows you to interact with the different parts of the URL without having to parse it yourself.

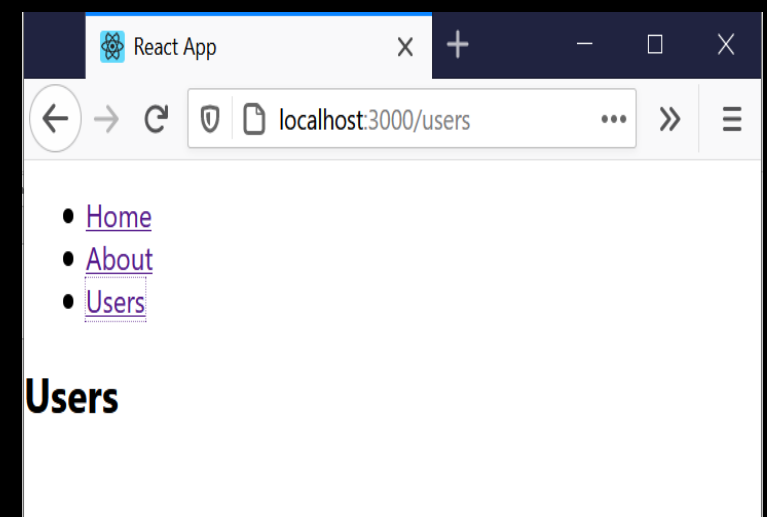
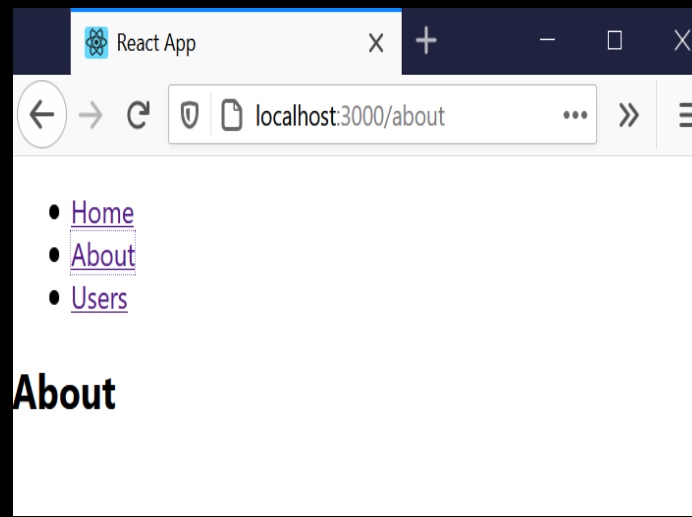
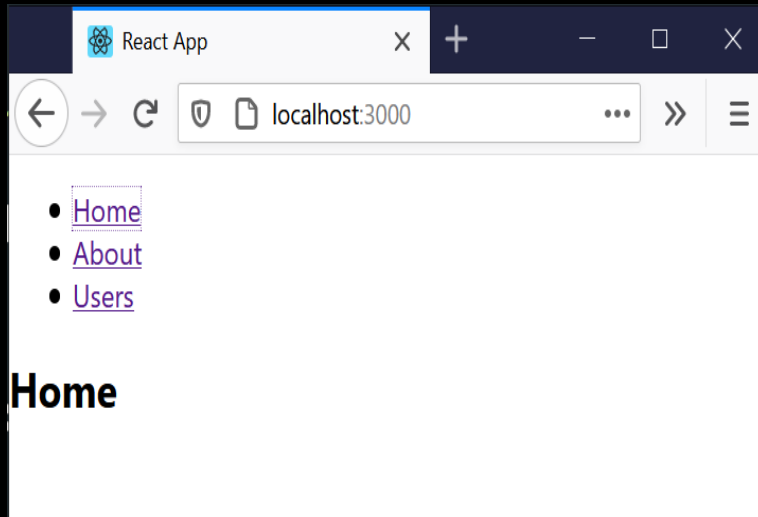


The `window.location` properties map directly from the URL

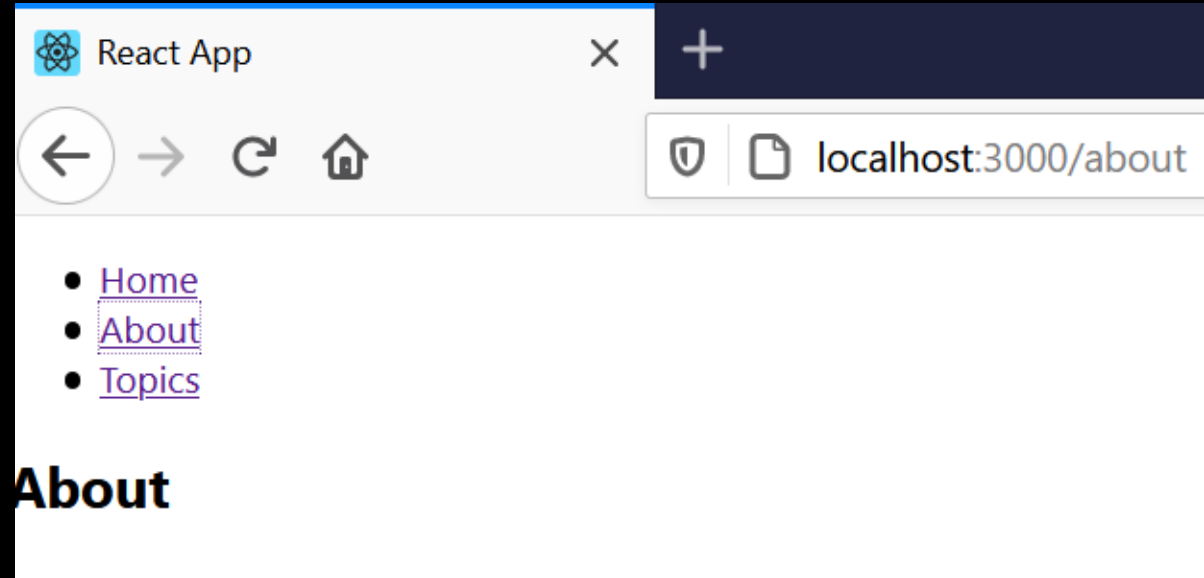
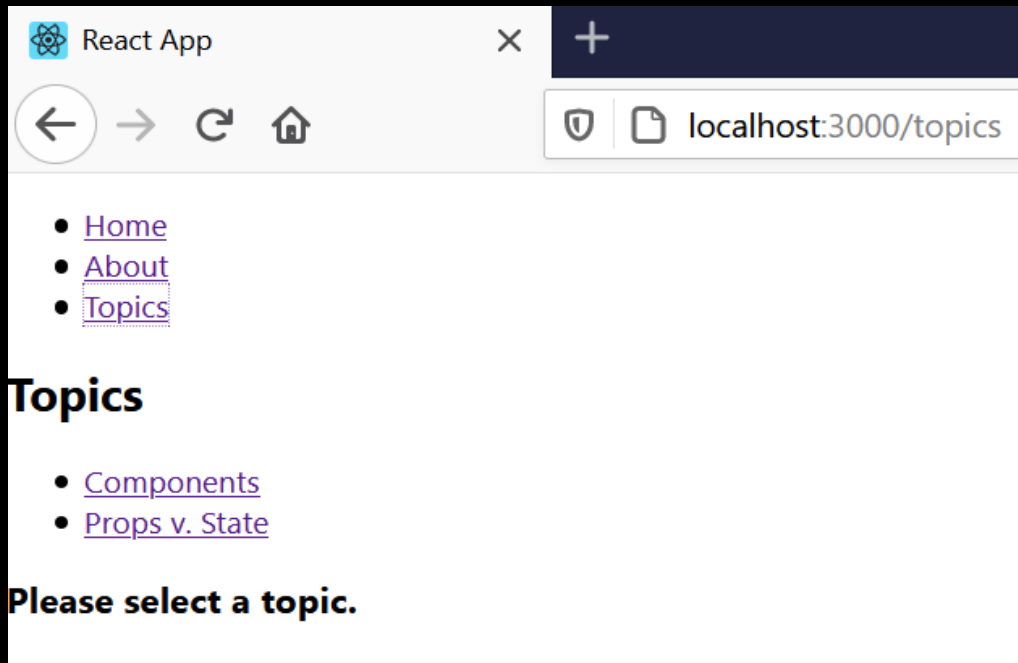
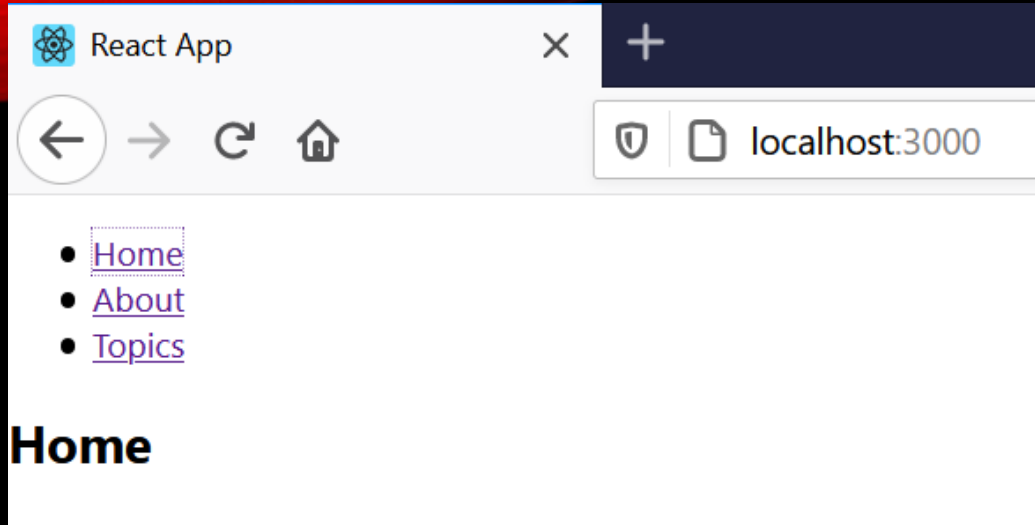
SPA – BASIC ROUTER



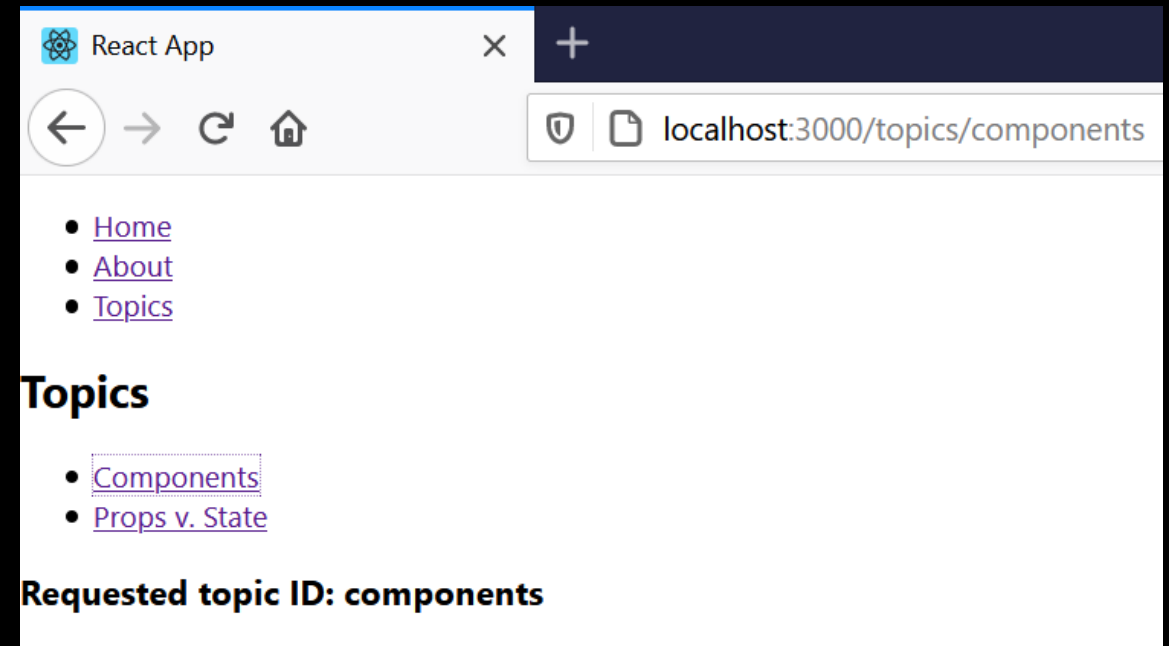
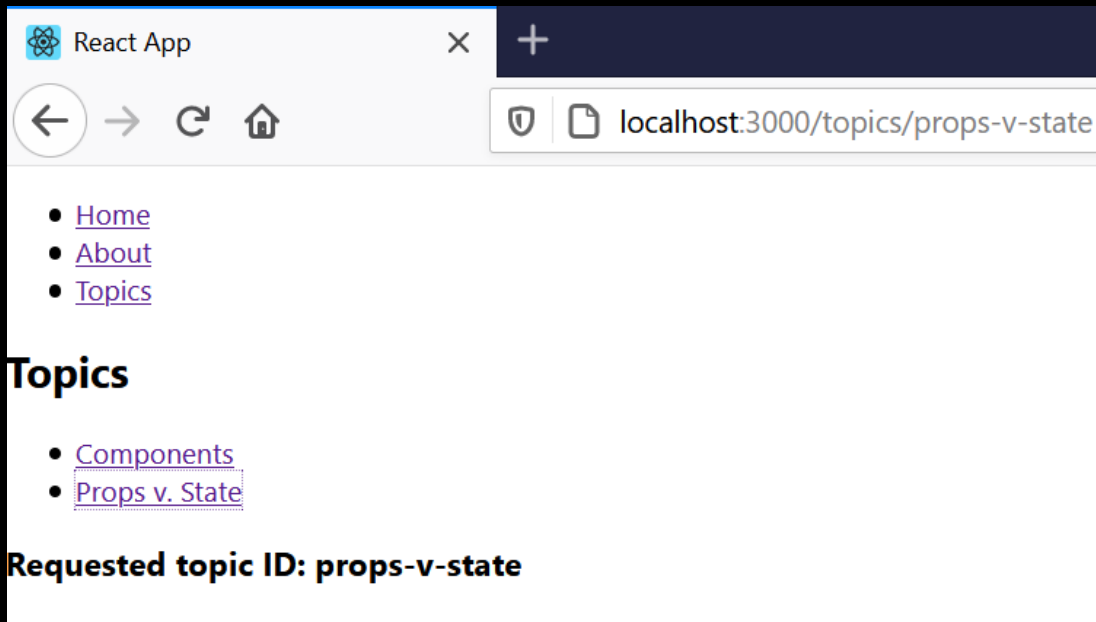
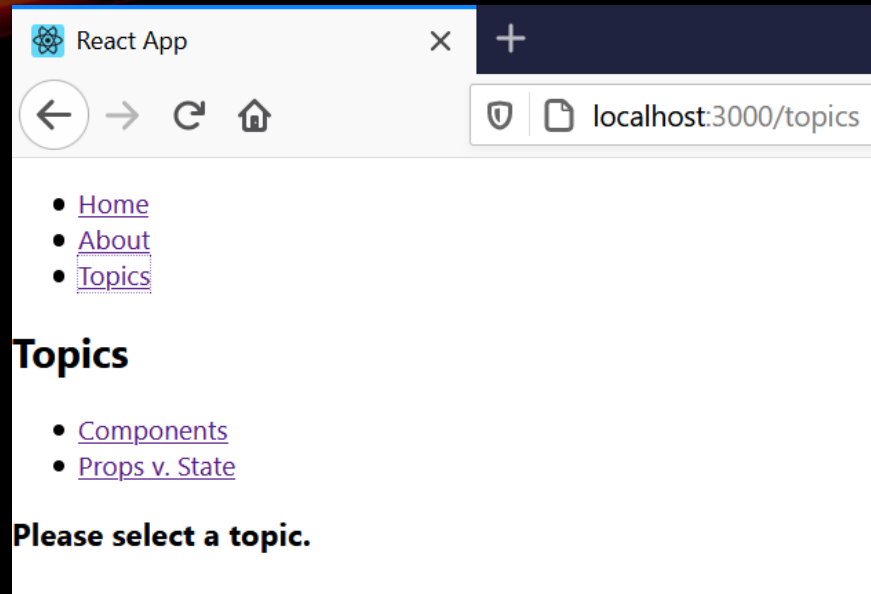
SPA – BASIC ROUTER



ROUTING SPA



SPA -ROUTER



DEMO

```
PS D:\SeminarReactHooks\Slides\LabReact\Session4_SPA_Router> npm i react-router-dom
```

```
PS D:\SeminarReactHooks\Slides\LabReact\Session4_SPA_Router> create-react-app lab2-spa-router
```

```
{ You, 6 minutes ago • Initialize project
  "name": "lab2-spa-router",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@testing-library/jest-dom": "^4.2.4",
    "@testing-library/react": "^9.5.0",
    "@testing-library/user-event": "^7.2.1",
    "react": "^16.13.1",
    "react-dom": "^16.13.1",
    "react-scripts": "3.4.3"
  },
  > Debug
  "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": "react-app"
  },
  "browserslist": {
```

DEMO

JS App.js X

lab1-spa-router > src > JS App.js > App

You, a few seconds ago | 1 author (You)

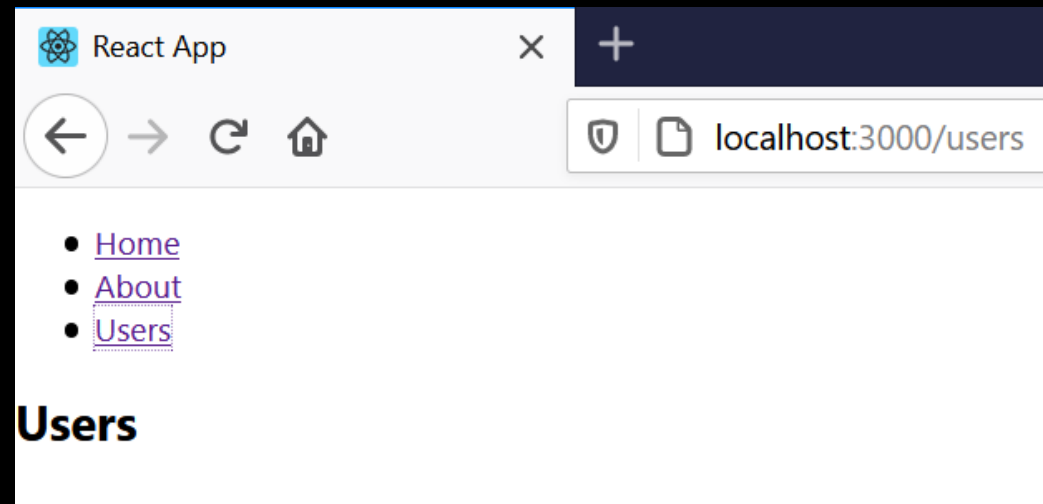
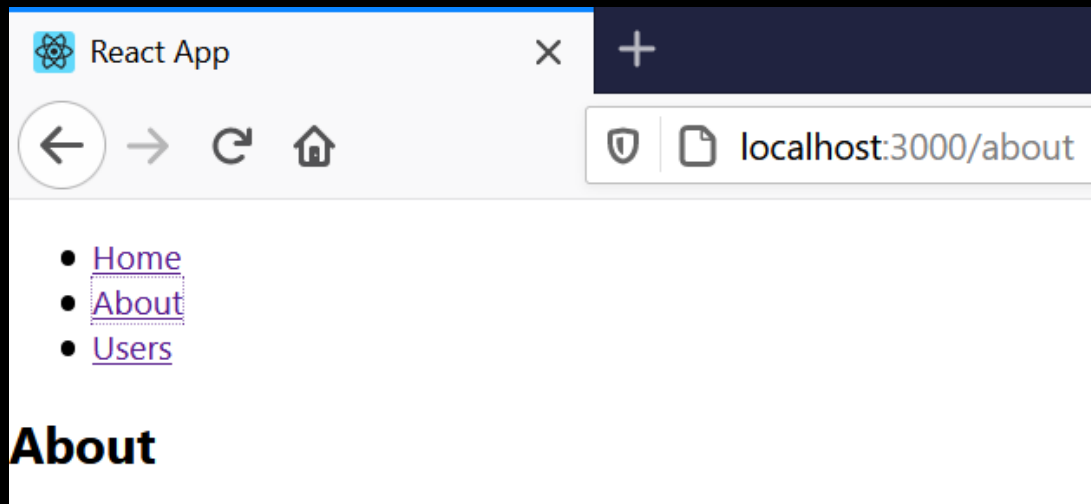
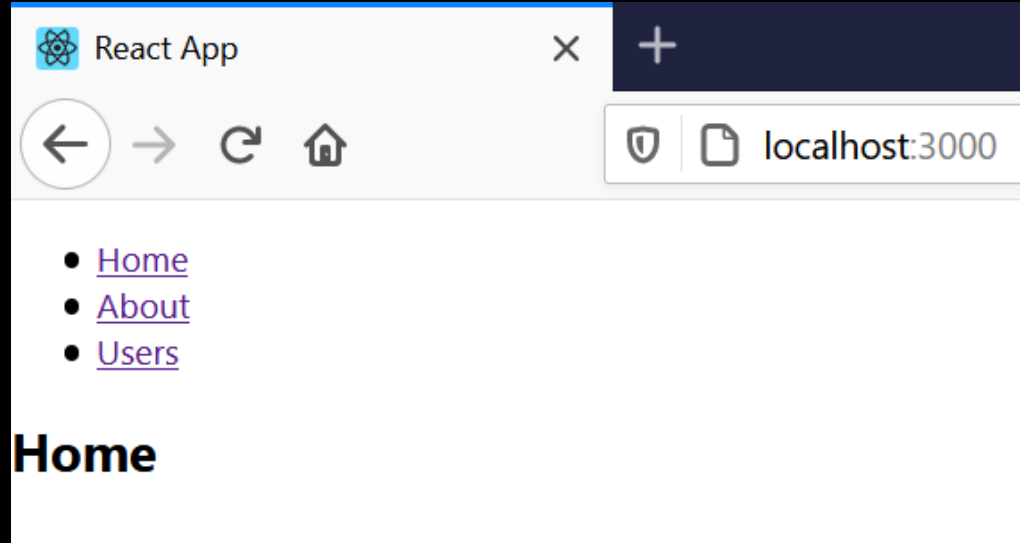
```
1 import React from 'react';
2 import {
3   BrowserRouter as Router,
4   Switch,
5   Route,
6   Link
7 } from "react-router-dom";
8 import './App.css';
```

DEMO : SPA- BASIC ROUTER

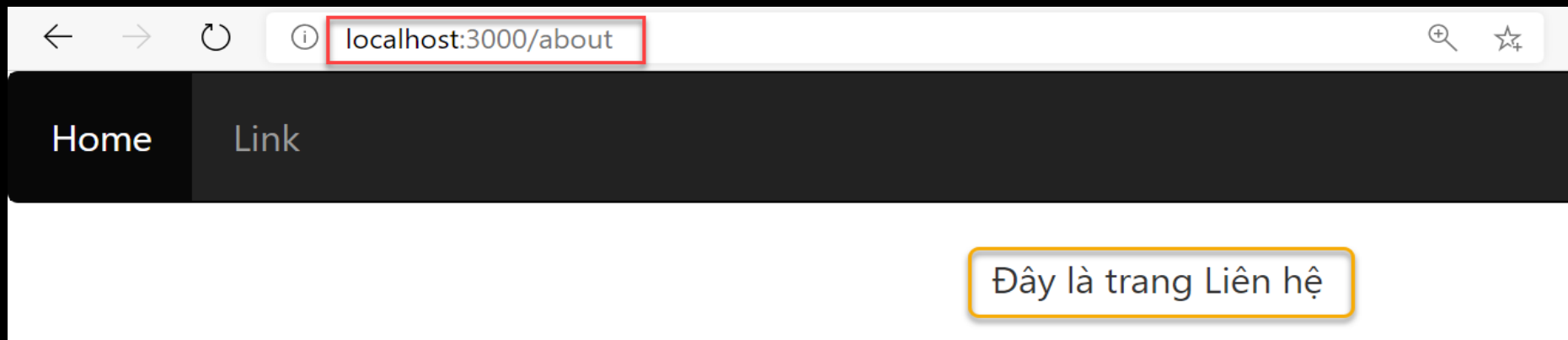
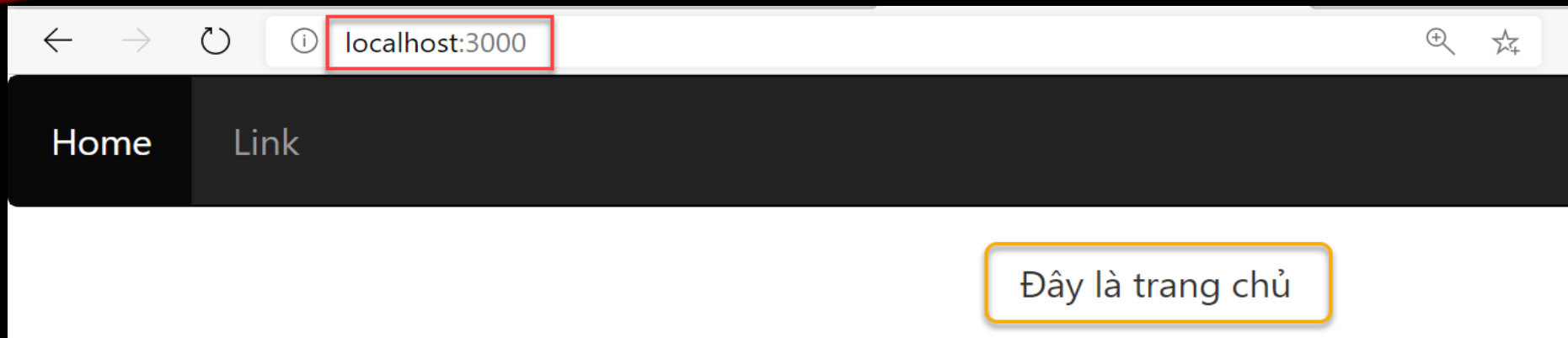
```
function App() {  
  return (  
    <Router>  
      <div> You, 6 minutes ago • Uncommit  
        <nav>  
          <ul>  
            <li>  
              <Link to="/">Home</Link>  
            </li>  
            <li>  
              <Link to="/about">About</Link>  
            </li>  
            <li>  
              <Link to="/users">Users</Link>  
            </li>  
          </ul>  
        </nav>  
      </div>  
    );  
}
```

```
    {  
      /* A <Switch> looks through its children <Route>s and  
       * renders the first one that matches the current URL. */  
      <Switch>  
        <Route path="/about">  
          <About />  
        </Route>  
        <Route path="/users">  
          <Users />  
        </Route>  
        <Route path="/">  
          <Home />  
        </Route>  
      </Switch>  
    </div>  
  </Router>  
);  
}
```

DEMO : SPA- BASIC ROUTER



DO IT YOURSELF



SOLUTION

```
import React, { Component } from 'react';
import './App.css'; import Router
import { BrowserRouter as Router, Route } from 'react-router-dom';

class App extends Component {
  render() {
    return (
      <div className="App">
        { /* Menu */ }
        <nav className="navbar navbar-inverse">
          <ul className="nav navbar-nav">
            <li className="active">
              <a>Trang Chủ</a>
            </li>
            <li>
              <a>Liên Hệ</a>
            </li>
          </ul>
        </nav>
        { /* Nội Dung */ }
      </div>
    );
  }
}
```

OUTPUT

DEBUG CONSOLE

TERMINAL

DEMO – ROUTER

✓ LAB5-ROUTER

- node_modules
- public
- src
 - App.css
 - App.js
 - App.test.js
 - index.css
 - index.js
 - logo.svg
 - serviceWorker.js
 - setupTests.js
- .gitignore
- package-lock.json
- package.json

```
JS App.js > ...  
You, a few seconds ago | 1 author (You)  
import React from "react";  
import {  
  BrowserRouter as Router,  
  Switch,  
  Route,  
  Link,  
  useRouteMatch,  
  useParams  
} from "react-router-dom";
```

```
export default function App() {  
  return (  
    <Router>  
      <div>  
        <ul>  
          <li>  
            <Link to="/">Home</Link>  
          </li>  
          <li>  
            <Link to="/about">About</Link>  
          </li>  
          <li>  
            <Link to="/topics">Topics</Link>  
          </li>  
        </ul>  
      </div>  
    </Router>  
  );  
}
```

Menu

DEMO - ROUTER

```
<Switch>
  <Route path="/about">
    <About />
  </Route>
  <Route path="/topics">
    <Topics />
  </Route>
  <Route path="/">
    <Home />
  </Route>
</Switch>
</div>
</Router>
);
}
```

routing

```
function Home() {
  return <h2>Home</h2>;
}

function About() {
  return <h2>About</h2>;
}
```

functional
components

```
function Topics() {
  let match = useRouteMatch();
  return (
    <div>
      <h2>Topics</h2>
      <ul>
        <li>
          <Link to={`/${match.url}/components`} >Components</Link>
        </li>
        <li>
          <Link to={`/${match.url}/props-v-state`} >
            Props v. State
          </Link>
        </li>
      </ul>
    </div>
  );
}
```

NESTED ROUTING

```
function Home() {  
  return <h2>Home</h2>;  
}
```

```
function About() {  
  return <h2>About</h2>;  
}
```

**functional
components**

```
function Topics() {  
  let match = useRouteMatch();  
  return (  
    <div>  
      <h2>Topics</h2>  
      <ul>  
        <li>  
          <Link to={`${match.url}/components`} >Components</Link>  
        </li>  
        <li>  
          <Link to={`${match.url}/props-v-state`} >  
            Props v. State  
          </Link>  
        </li>  
      </ul>  
    </div>  
  );  
}
```

```
<Switch>  
  <Route path={`${match.path}/:topicId`} >  
    <Topic />  
  </Route>  
  <Route path={match.path} >  
    <h3>Please select a topic.</h3>  
  </Route>  
</Switch>  
</div>  
</div>  
</div>
```

```
function Topic() {  
  let { topicId } = useParams();  
  return <h3>Requested topic ID: {topicId}</h3>;  
}
```

The image features a solid black background. At the top, there is a decorative border composed of several overlapping, wavy bands of color. From left to right, these bands transition through a spectrum: yellow, orange, red, and finally into shades of green and cyan on the far right. The colors are vibrant and have a slight gradient, giving the border a sense of movement and depth.

THE END