



Web Programming

Spring 2021



#25

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Topics

- The concepts of Web Services
- Web data protocols
 - HTTP, WebSocket, WebRTC
 - HTML, CSS
- Web JavaScript programming
- Cookies and sessions
- **Web Frontend frameworks**
- Web Backend frameworks
- RESTful API design





React / ReactJS

- React Ecosystem
- 開發環境
- 核心概念 — 元件(Components)
- 單向資料流 (Unidirectional data flow)
- Virtual DOM
- Declarative UI / JSX
- **React Router**

React Router

- 主要用來對應Browser上的URL發生改變時
 - React元件做出相對的改變
- 如果只有兩三頁面
 - 登入頁 首頁 主頁 著陸頁 等
 - 可以用簡單的 條件Render方式
 - 不需要搞到React Router

Landing Page 著陸頁



有行銷目的/要使用者做某件事



React Conditional Rendering

```
function UserGreeting(props) {  
  return <h1>Welcome back, CGUER!</h1>;  
}
```

```
function GuestGreeting(props) {  
  return <h1>Hi CGUer, please sign up.</h1>;  
}
```

```
function Greeting(props) {  
  const isLoggedIn = props.isLoggedIn;  
  return props.isLoggedIn ? <UserGreeting /> : <GuestGreeting />;  
}
```

```
ReactDOM.render(  
  <Greeting isLoggedIn={false} />,  
  document.getElementById('root')  
)
```

React Conditional Rendering



HTML

CSS

JS (Babel)

```
1 function UserGreeting(props) {  
2   return <h1>Welcome back, CGUER!</h1>;  
3 }  
4  
5 function GuestGreeting(props) {  
6   return <h1>Hi CGUer, please sign up.</h1>;  
7 }
```

Hi CGUer, please sign up.



React Conditional Rendering

```
JS (Babel)
1 function UserGreeting(props) {
2   return <h1>Welcome back, CGUER!</h1>;
3 }
4
5 function GuestGreeting(props) {
6   return <h1>Hi CGUer, please sign up.</h1>;
7 }
```

Welcome back, CGUER!



React Inline 三元運算子

```
render() {  
  const isLoggedIn = this.state.isLoggedIn;  
  return (  
    <div>  
      {isLoggedIn ? (  
        <LogoutButton onClick={this.handleLogoutClick} />  
      ) : (  
        <LoginButton onClick={this.handleLoginClick} />  
      )}  
    </div>  
  );  
}
```

Conditional Rendering



```
function WarningBanner(props) {  
  if (!props.warn) {  
    return null;  
  }  
  return (  
    <div className="warning">  
      Warning!  
    </div>  
  );  
}
```

```
class Page extends React.Component {  
  constructor(props) {  
    super(props);  
    this.state = {showWarning: true}  
    this.handleClick = this.handleClick.bind(this);  
  }  
  handleClick() {  
    this.setState(prevState => ({  
      showWarning: !prevState.showWarning  
    }));  
  }  
  render() {  
    return (  
      <div>  
        <WarningBanner warn={this.state.showWarning} />  
        <button onClick={this.handleClick}>  
          {this.state.showWarning ? 'Hide' : 'Show'}  
        </button>  
      </div>  
    );  
  }  
}
```

```
ReactDOM.render(<Page />, document.getElementById('root'))  
);
```

React Component 不要顯示元素

HTML

CSS



JS (Babel)

```
1  ...warningName: (props) => {  
2    if (!props.warn) {  
3      return null;  
4    }  
5    return (  
6      <div className="warning">  
7        Warning!  
8      </div>  
9    );  
10 }  
11
```

Warning!

Hide

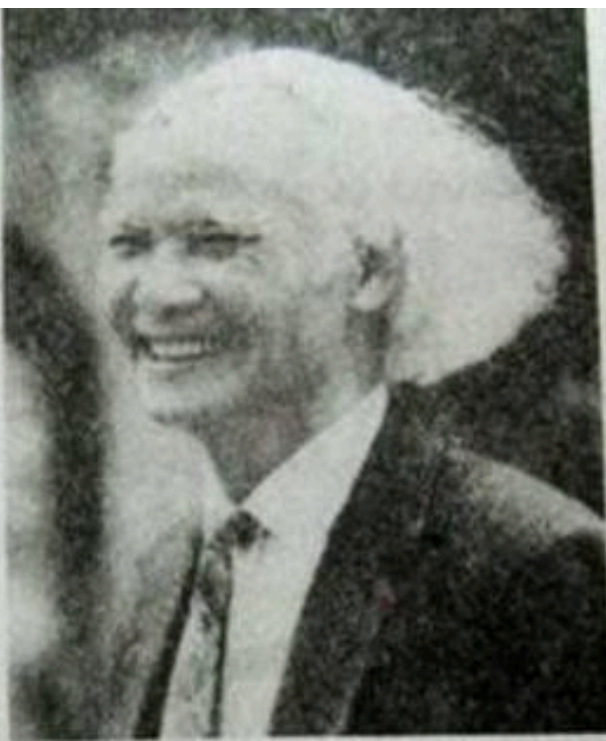
```
1  function warning(props) {  
2    if (!props.warn) {  
3      return null;  
4    }  
5    return (  
6      <div className="warning">  
7        Warning!  
8      </div>  
9    );  
10 }  
11
```

Show

休息一下

... tỉnh Nghệ An. Ông
... lịch sử tư tưởng và
... đại. Các công trình
... giai đoạn giao thời
... và văn học Việt Nam
... đại từ truyền thống
... hướng phương Đông
... học tặng Giải thưởng
... nghệ.

phần II, bài Về văn
... in trong cuốn Đèn
... than để đo người



TRẦN ĐÌNH HUỒU

React Router 函式庫

- react-router (核心函式)
 - react-router-dom
 - react-router-native

Package	Version	Docs	Description
<code>react-router</code>	npm <code>v5.2.0</code>	API Docs <code>site</code> API Docs <code>markdown</code>	The core of React Router
<code>react-router-dom</code>	npm <code>v5.2.0</code>	API Docs <code>site</code> API Docs <code>markdown</code>	DOM bindings for React Router
<code>react-router-native</code>	npm <code>v5.2.0</code>	API Docs <code>site</code> API Docs <code>markdown</code>	<code>React Native</code> bindings for React Router
<code>react-router-config</code>	npm <code>v5.1.1</code>	API Docs <code>readme</code>	Static route config helpers



react-router-dom 安裝

```
npm install react-router-dom
```

Where teams build faster, together

Create, share, and get feedback with collaborative sandboxes for rapid web development.



Create Sandbox

<https://codesandbox.io>

What's a Sandbox?



router in react-router-dom

- **HashRouter**
 - 頁面 url 會有 # 字, 透過 hash 來對路由進行控制
- **BrowserRouter**
 - 頁面 url 不會有 # 字, 它的原理是使用 HTML5 History API(pushState, replaceState, popState), 來使你的內容依照 url 做改變

HashRouter



```
import React from "react";  
import ReactDOM from "react-dom";  
import { HashRouter, Route, Switch } from "react-router-dom";
```

```
function App1() {  
  return <h1>Hello First Page</h1>;  
}  
function App2() {  
  return <h1>Hello Second Page</h1>;  
}
```

```
ReactDOM.render(  
  <HashRouter>  
    <Switch>  
      <Route exact path="/1" component={App1}/>  
      <Route exact path="/2" component={App2}/>  
    </Switch>  
  </HashRouter>,  
  document.getElementById("root")  
)
```

HashRouter



```
import React from "react";
import ReactDOM from "react-dom";
import { HashRouter, Route, Switch } from "react-router-dom";

function App1() {
  return <h1>Hello First Page</h1>;
}

function App2() {
  return <h1>Hello Second Page</h1>;
}

ReactDOM.render(
  <HashRouter>
    <Switch>
      <Route exact path="/1" component={App1}/>
      <Route exact path="/2" component={App2}/>
    </Switch>
  </HashRouter>,
  document.getElementById("root")
);
```



https://bnpsd.csb.app/#/1

Hello First Page

HashRouter



```
import React from "react";
import ReactDOM from "react-dom";
import { HashRouter, Route, Switch } from "react-router-dom";

function App1() {
  return <h1>Hello First Page</h1>;
}

function App2() {
  return <h1>Hello Second Page</h1>;
}

ReactDOM.render(
  <HashRouter>
    <Switch>
      <Route exact path="/1" component={App1}/>
      <Route exact path="/2" component={App2}/>
    </Switch>
  </HashRouter>,
  document.getElementById("root")
);
```



https://bnpsd.csb.app/#/2

Hello Second Page

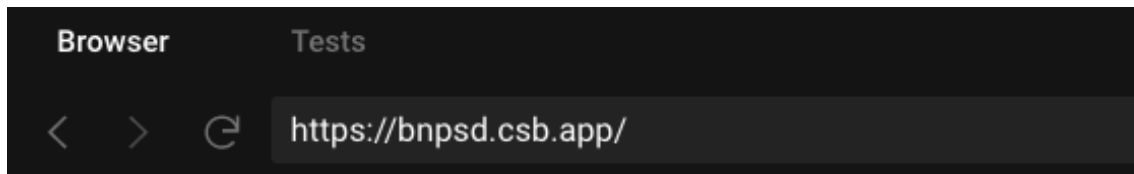


BrowserRouter

```
import React from "react";  
import {  
  BrowserRouter as Router,  
  Switch,  
  Route,  
  Link  
} from "react-router-dom";
```



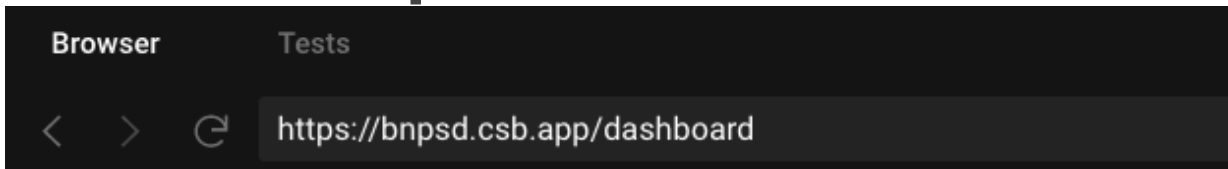
BasicExample



- [Home](#)
- [About](#)
- [Dashboard](#)

Home

BasicExample

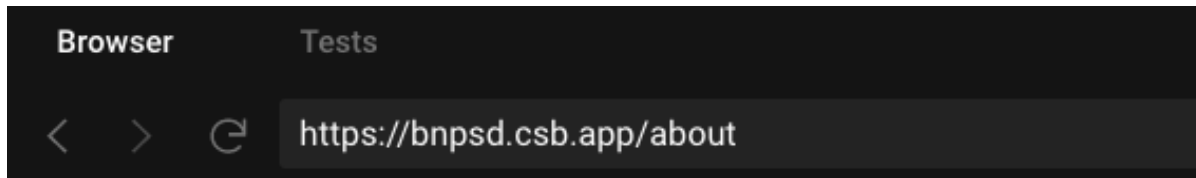


- [Home](#)
- [About](#)
- [Dashboard](#)

Dashboard



BasicExample



- [Home](#)
- [About](#)
- [Dashboard](#)

About



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

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

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

總共三頁

三個components



```
function BasicExample() {
```

```
  return (
```

```
    <Router>
```

```
      <div>
```

```
        <ul>
```

```
          <li>
```

```
            <Link to="/">Home</Link>
```

```
          </li>
```

```
          <li>
```

```
            <Link to="/about">About</Link>
```

```
          </li>
```

```
          <li>
```

```
            <Link to="/dashboard">Dashboard</Link>
```

```
          </li>
```

```
        </ul>
```

```
      <hr />
```

```
      <Switch>
```

```
        <Route exact path="/">
```

```
          <Home />
```

```
        </Route>
```

```
        <Route path="/about">
```

```
          <About />
```

```
        </Route>
```

```
        <Route path="/dashboard">
```

```
          <Dashboard />
```

```
        </Route>
```

```
      </Switch>
```

```
    </div>
```

```
  </Router>
```

```
);
```

```
}
```

```
}
```

- [Home](#)
- [About](#)
- [Dashboard](#)

指定router 頁面

可以換頁的元件



線上練習 VS code

<https://codesandbox.io>

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AI系

- >  build
- >  public
- >  server
- ✓  src
 - >  actions
 - ✓  components
 - >  app
 - >  auth
 - >  business
 - >  dashboard
 - >  ec
 - >  layout
 - ✓  live
 - >  common
 - >  finish
 - >  information
 - >  live
 - >  state
 - JS live.js
 - >  other

- >  user
- >  utilities
- >  layouts
- >  new
- >  pages
- >  reducers
- ✓  routes
 - JS index.js
- >  style
- >  tools
- >  utils
- JS App.js
- JS constants.js
- JS i18n.js
- JS index.js
- JS troublesome_i18n.js
-  .env.example
-  .gitignore
-  EasyLive_i18n.tsv
-  find_chinese.py
-  i18n_compare.py
-  make_i18n.py
-  package.json
-  README.md





Thanks!

Open for any questions

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