
React Router

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ISIL 2021-2022

Introduction

- React Router est une librairie qui affiche vos composants en fonction de l'URL de votre navigateur.
- Indispensable pour faire une SPA et que vous voulez que l'utilisateur puisse croire que c'est un site normal qu'il peut partager, bookmarker, etc.

React-router

- Il existe deux version de react-router
 - React-router-dom : Pour l'utilisation dans un browser
 - React-router-native : pour react native
- Dans les diapos suivants on traitera react-router-dom
- Pour installer react-router-dom
 - `$npm install react-router-dom`
- Ce module comporte plusieurs composantes
 - BrowserRouter
 - Routes
 - Route
 - Link
 -

Configuration du Routeur

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import {BrowserRouter} from "react-router-dom"
import App from './App';

const root = ReactDOM.createRoot(document.getElementById('root'));

root.render(
  <React.StrictMode>
    <BrowserRouter>
      <App />
    </BrowserRouter>
  </React.StrictMode>
);
```

Définition des routes

```
import {Routes, Route} from "react-router-dom"
function App() {
  return (
    <div className="App">
      <Navbar/>
      <Routes>
        <Route path="/" element={<Home/>}/>           /* http://localhost:3000/home */
        <Route path="/articles" element={<About/>}/> /* http://localhost:3000/about */
        <Route path="/*" element={<Home/>}/>
      </Routes>
    </div>
  );
}
```

Prise en charge de la navigation

```
import { Link } from "react-router-dom"
export default function Navbar() {
  return (
    <div>
      <Link to="/"><button>Home</button></Link>
      <Link to="/articles"><button>About</button></Link>
      <Link to="/contact"><button>Contact</button></Link>
    </div>
  )
}
```

Les routes dynamiques

```
import {Routes, Route} from "react-router-dom"
function App() {
  return (
    <div className="App">
      <Navbar/>
      <Routes>
        <Route path="/" element={<Home/>}/* http://localhost:3000/home */
        <Route path="/articles" element={<About/>}/* http://localhost:3000/about */
        <Route path="/articles/:id" element={<Article/>}/>
      </Routes>
    </div>
  );
}
```

Les routes dynamiques

```
import { useParams } from "react-router"

function Article() {
  let {id}=useParams()

  return (
    <>
      <h1>Titre id:{id}</h1>
    </>
  )
}
```


La priorité des routes

```
import {Routes, Route} from "react-router-dom"
function App() {
  return (
    <div className="App">
      <Navbar/>
      <Routes>
        <Route path="/" element={<Home/>}/>           /* http://localhost:3000/home */
        <Route path="/articles" element={<Articles/>}/> /* http://localhost:3000/about */
        <Route path="/articles/:id" element={<Article/>}/>
        <Route path="/articles/add" element={<AddArt/>}/> /*plus prioritaire que :id*/
      </Routes>
    </div>
  );
}
```

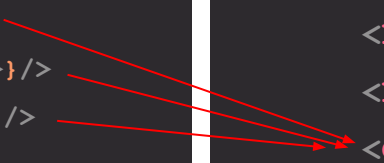
Les routes imbriquées

```
function App() {  
  return(  
    <div className="App">  
      <Navbar/>  
      <Routes>  
        <Route path="/" element={<Home/>}/>  
        <Route path="/articles">  
          <Route index element={<Articles/>}/>  
          <Route path=":id" element={<Article/>}/>  
          <Route path="add" element={<AddArt/>}/>  
        </Route>  
        <Route path="/*" element={<PageNotFound/>}/>  
      </Routes>  
    </div>  
  )  
}
```

Outlet

```
function App() {  
  return(  
    <div className="App">  
      <Navbar/>  
      <Routes>  
        <Route path="/" element={<Home/>}/>  
        <Route path="/articles" element={<ArticleLayout/>}>  
          <Route index element={<Articles/>}/>  
          <Route path=":id" element={<Article/>}/>  
          <Route path="add" element={<AddArt/>}/>  
        </Route>  
        <Route path="/*" element={<PageNotFound/>}/>  
      </Routes>  
    </div>  
  );  
}
```

```
import { Outlet } from  
"react-router-dom"  
function ArticleLayout(){  
  return(  
    <>  
      <h1>Articles</h1>  
      <hr/>  
      <Outlet/>  
    </>  
  )  
}
```



Outlet context

```
function App() {  
  return(  
    <div className="App">  
      <Navbar/>  
      <Routes>  
        <Route path="/" element={<Home/>}/>  
        <Route path="/articles" element={<ArticleLayout/>}>  
          <Route index element={<Articles/>}/>  
          <Route path=":id" element={<Article/>}/>  
          <Route path="add" element={<AddArt/>}/>  
        </Route>  
        <Route path="/*" element={<PageNotFound/>}/>  
      </Routes>  
    </div>  
  );  
}
```

```
import { Outlet } from "react-router-dom"  
  
function ArticleLayout() {  
  return(  
    <>  
      <h1>Articles</h1><hr/>  
      <Outlet context={{key:"value"}}/>  
    </>  
  )  
}
```

```
import { useParams, useOutletContext } from "react-router"  
  
function Article() {  
  let {id}=useParams()  
  let context=useOutletContext()  
  return(  
    <>  
      <h1>Titre id:{id}</h1>  
      <h1>Context:{context.key}</h1>  
    </>  
  )  
}
```

useRoute Hook

```
import { Route, Routes, useRoutes } from "react-router-dom"
export function App() {
  const element = useRoutes([
    {
      path: "/",
      element: <Home />
    },
    {
      path: "/articles",
      children: [
        { index: true, element: <ArticlesLayout /> },
        { path: ":id", element: <Articles /> },
        { path: "add", element: <AddArt /> }
      ]
    }
  ])
}
```