React Router

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
  - BrouserRouter
  - Routes
  - Route
  - Link
  - ….

Configuration du Routeur

```jsx
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

```jsx
import {Routes, Route} from "react-router-dom"

function App() {
 return(
   <div className="App">
     <Nvbar/>
     <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

```jsx
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">

     <Nvbar/>

     <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}=useParames()

    return(

        <>

            <h1>Titre id:{id}</h1>

        </>

    )

}
```

La priorité des routes

```jsx
import {Routes, Route} from "react-router-dom"
function App() {
 return(
    <div className="App">
      <Nvbar/>
      <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

```jsx
function App() {
 return(
   <div className="App">
     <Nvbar/>
     <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>
```
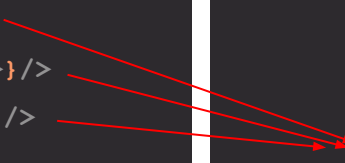
Outlet

```
function App() {
 return(
   <div className="App">
     <Nvbar/>
     <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">
     <Nvbar/>
     <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}=useParames()
    let context=useOutletContext()
    return(
       <>
          <h1>Titre id:{id}</h1>
          <h1>Context:{context.key}</h1>
       </>
    )
```

useRoute Hook

```jsx
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 /> }


     ]
   }
 ])
```