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| --- |
| React Router |

**Run Complete Project**

* index.js

// import App from './App';

import App from './final/App';

**Docs**

[React Router Docs](https://reactrouter.com/docs/en/v6/getting-started/overview)

**Install**

npm install react-router-dom@6

**First Pages**

* App.js

import { BrowserRouter, Routes, Route } from 'react-router-dom';

function App() {

return (

<BrowserRouter>

<Routes>

<Route path='/' element={<div>home page</div>} />

<Route

path='testing'

element={

<div>

<h2>testing </h2>

</div>

}

/>

</Routes>

</BrowserRouter>

);

}

export default App;

**Components**

* App.js

import { BrowserRouter, Routes, Route } from 'react-router-dom';

import Home from './pages/Home';

import About from './pages/About';

import Products from './pages/Products';

function App() {

return (

<BrowserRouter>

<Routes>

<Route path='/' element={<Home />} />

<Route path='about' element={<About />} />

<Route path='products' element={<Products />} />

</Routes>

</BrowserRouter>

);

}

export default App;

**Links**

* Home.js, About.js

import { Link } from 'react-router-dom';

const Home = () => {

return (

<div>

<h2>Home Page</h2>

<Link to='/about' className='btn'>

About

</Link>

<a href="">

</div>

);

};

export default Home;

**Error Page**

* App.js

function App() {

return (

<BrowserRouter>

<Routes>

<Route path='/' element={<Home />} />

<Route path='about' element={<About />} />

<Route path='products' element={<Products />} />

<Route path='\*' element={<Error />} />

</Routes>

</BrowserRouter>

);

}

<http://localhost:3000/home>

<http://localhost:3000/about>

<http://localhost:3000/products>

* Error.js

import { Link } from 'react-router-dom';

const Error = () => {

return (

<section className='section'>

<h2>404</h2>

<p>page not found</p>

<Link to='/'>back home</Link>

</section>

);

};

export default Error;

**Nested Pages**

* will refactor few times
* App.js

function App() {

return (

<BrowserRouter>

<Routes>

<Route path='/home' element={<Home />}>

<Route path='about' element={<About />} />

<Route path='products' element={<Products />} />

<Route path='\*' element={<Error />} />

</Route>

</Routes>

</BrowserRouter>

);

}

<http://localhost:3000/home>

<http://localhost:3000/home/about>

http://localhost:3000/home/products

**Shared Layout**

* Home.js

import { Link, Outlet } from 'react-router-dom';

const Home = () => {

return (

<section className='section'>

<h2>Home Page</h2>

<Outlet />

</section>

);

};

export default Home;

**Navbar**

* Navbar.js

import { Link } from 'react-router-dom';

const Navbar = () => {

return (

<nav className='navbar'>

<Link to='/'>Home</Link>

<Link to='/about'>About</Link>

<Link to='/products'>Products</Link>

</nav>

);

};

export default Navbar;

* Home.js

import { Link, Outlet } from 'react-router-dom';

import Navbar from '../components/Navbar';

const Home = () => {

return (

<>

<Navbar />

<section className='section'>

<Outlet />

</section>

</>

);

};

export default Home;

**Index Routes**

* Index routes render in the parent routes outlet at the parent route's path.
* Index routes match when a parent route matches but none of the other children match.
* Index routes are the default child route for a parent route.
* Index routes render when the user hasn't clicked one of the items in a navigation list yet.
* copy Home.js content
* SharedLayout.js

import { Link, Outlet } from 'react-router-dom';

import Navbar from '../components/Navbar';

const SharedLayout = () => {

return (

<>

<Navbar />

<section className='section'>

<Outlet />

</section>

</>

);

};

export default SharedLayout;

* Home.js

const Home = () => {

return (

<section className='section'>

<h2>Home Page</h2>

</section>

);

};

export default Home;

* App.js

function App() {

return (

<BrowserRouter>

<Routes>

<Route path='/' element={<SharedLayout />}>

<Route index element={<Home />} />

<Route path='about' element={<About />} />

<Route path='products' element={<Products />} />

<Route path='\*' element={<Error />} />

</Route>

</Routes>

</BrowserRouter>

);

}

**NavLink (style)**

* StyledNavbar.js

import { NavLink } from 'react-router-dom';

<nav className='navbar'>

<NavLink

to='/about'

style={({ isActive }) => {

return { color: isActive ? 'red' : 'grey' };

}}

>

Home

</NavLink>

</nav>;

**NavLink (className)**

* StyledNavbar.js

<nav className='navbar'>

<NavLink

to='/'

className={({ isActive }) => (isActive ? 'link active' : 'link')}

>

Home

</NavLink>

</nav>

**Reading URL Params**

* App.js

function App() {

return (

<BrowserRouter>

<Routes>

<Route path='/' element={<SharedLayout />}>

<Route index element={<Home />} />

<Route path='about' element={<About />} />

<Route path='products' element={<Products />} />

<Route path='products/:productId' element={<SingleProduct />} />

<Route path='\*' element={<Error />} />

</Route>

</Routes>

</BrowserRouter>

);

}

**Single Product**

* SingleProduct.js

import { Link, useParams } from 'react-router-dom';

import products from '../data';

const SingleProduct = () => {

const { productId } = useParams();

return (

<section className='section product'>

<h2>{productId}</h2>

<Link to='/products'>back to products</Link>

</section>

);

};

export default SingleProduct;

**Products Page**

* Products.js

import { Link } from 'react-router-dom';

import products from '../data';

const Products = () => {

return (

<section className='section'>

<h2>products</h2>

<div className='products'>

{products.map((product) => {

return (

<article key={product.id}>

<h5>{product.name}</h5>

<Link to={`/products/${product.id}`}>more info</Link>

</article>

);

})}

</div>

</section>

);

};

export default Products;

**Single Product**

* SingleProduct.js

import { Link, useParams } from 'react-router-dom';

import products from '../data';

const SingleProduct = () => {

const { productId } = useParams();

const product = products.find((product) => product.id === productId);

const { image, name } = product;

return (

<section className='section product'>

<img src={image} alt={name} />

<h5>{name}</h5>

<Link to='/products'>back to products</Link>

</section>

);

};

export default SingleProduct;

**useNavigate()**

[(?.) or Optional Chaining Explained](https://youtu.be/PuEGrylM1x8)

* App.js

function App() {

const [user, setUser] = useState(null);

return (

<BrowserRouter>

<Routes>

<Route path='/' element={<SharedLayout />}>

<Route index element={<Home />} />

<Route path='about' element={<About />} />

<Route path='products' element={<Products />} />

<Route path='products/:productId' element={<SingleProduct />} />

<Route path='login' element={<Login setUser={setUser} />} />

<Route path='dashboard' element={<Dashboard user={user} />} />

<Route path='\*' element={<Error />} />

</Route>

</Routes>

</BrowserRouter>

);

}

* Login.js

import { useState } from 'react';

import { useNavigate } from 'react-router-dom';

const Login = ({ setUser }) => {

const [name, setName] = useState('');

const [email, setEmail] = useState('');

const navigate = useNavigate();

const handleSubmit = async (e) => {

e.preventDefault();

if (!name || !email) return;

setUser({ name: name, email: email });

navigate('/dashboard');

};

[(?.) or Optional Chaining Explained](https://youtu.be/PuEGrylM1x8)

* Dashboard.js

const Dashboard = ({ user }) => {

return (

<section className='section'>

<h4>Hello, {user?.name}</h4>

</section>

);

};

export default Dashboard;

**Protected Route**

* App.js

<Route

path='dashboard'

element={

<ProtectedRoute user={user}>

<Dashboard user={user} />

</ProtectedRoute>

}

/>

* ProtectedRoute.js

import { Navigate } from 'react-router-dom';

const ProtectedRoute = ({ children, user }) => {

if (!user) {

return <Navigate to='/' />;

}

return children;

};

export default ProtectedRoute;