React.Lazy

What is React.Lazy ?

React.lazy is a feature in the React JS that allows to dynamically import and render components only when they are needed.
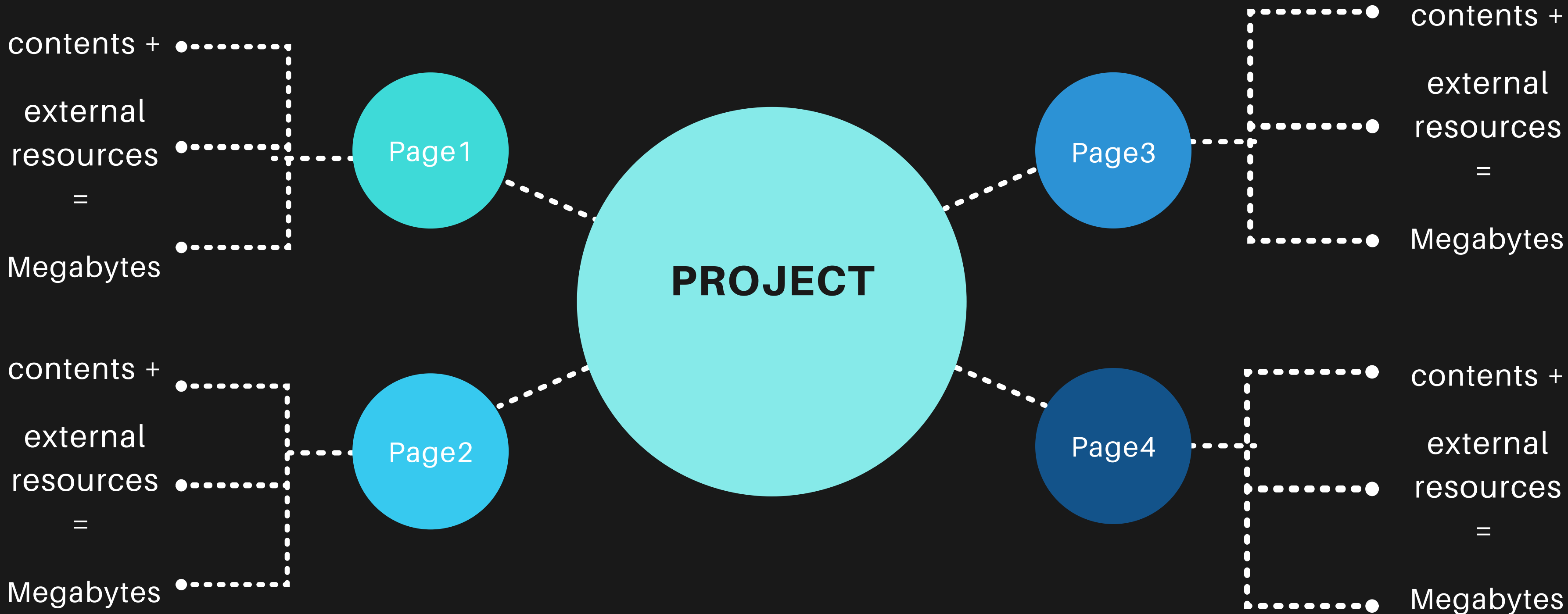

EVERY DROPS COUNTS !!!

As with water, every MB counts in a project!

Why React.Lazy ?

Import dynamically components can improve the performance of your application by reducing the amount of code that needs to be downloaded and parsed by the browser, especially for large applications with many big components.

Now let's look at an example

contents +

external
resources
=

Megabytes

Page1

contents +

external
resources
=

Megabytes

Page2

PROJECT

Page3

contents +

external
resources
=

Megabytes

Page4

contents +

external
resources
=

Megabytes

About the previous scheme

This is a typical scenario for a project where we have tot pages that contain external content and resources.

All of this takes up memory so it contains several megabytes.

All these megabytes (contained in everything we import) are loaded when we first load our project and are loaded every time we refresh the page.

This is a time-consuming and energy-consuming process most of the time unnecessary!

For this reason we need to use React.lazy!

Code Example

```
import React, { Suspense } from 'react';

const MyComponent = React.lazy(() => import('./MyComponent'));

function App() {
 return (
  <Suspense fallback={<div>Loading...</div>}>
   <MyComponent />
  </Suspense>
 );
}
```

What's going on ?

In this example, the MyComponent component will only be imported and rendered when the App component is rendered. The Suspense component is used to specify a fallback component to render while the dynamic import is being resolved.

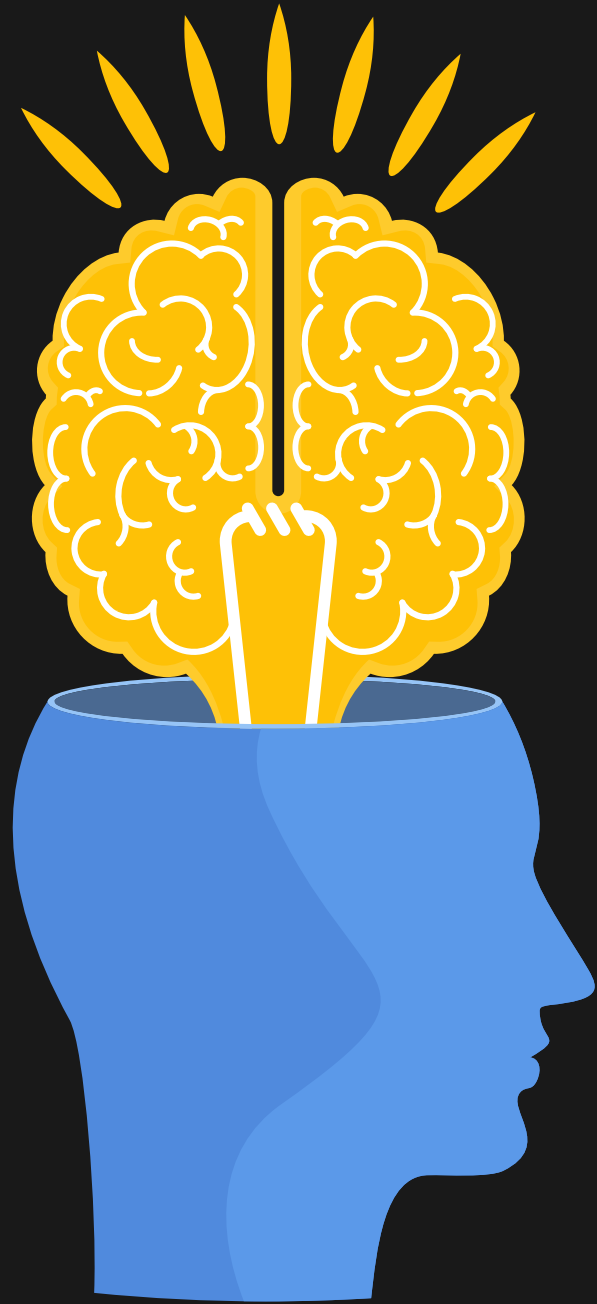With it you can create a loading-animation for example using a spinner.

`<Suspense fallback={<Spinner/>}>`

Common use of React.lazy

Usually this feature binds to react-router-dom thus loading only the pages where we navigate.

```jsx
import { Fragment, lazy, Suspense } from "react";
import { Route, Routes } from "react-router-dom";
import { MoonLoader } from "react-spinners";
import "./App.scss";

const AboutUs = lazy(() => import("./pages/AboutUs"));
const BlogPage = lazy(() => import("./pages/BlogPage"));
const Contact = lazy(() => import("./pages/Contact"));
const HomePage = lazy(() => import("./pages/HomePage"));

function App() {
  return (
    <Fragment>
      <Suspense fallback={<MoonLoader color="green" />}>
        <Routes>
          <Route path="/about-us" element={<AboutUs />} />
          <Route path="/contact/*" element={<Contact />} />
          <Route path="/blogs" element={<BlogPage />} />
          <Route path="/" element={<HomePage />} />
        </Routes>
      </Suspense>
    </Fragment>
  );
}

export default App;
```

Import Suspese and Lazy

Import dynamically the components

Create a loading animation with a spinner

Wrap all routes with <Suspense />

Test if this works

You may notice that loading the project will import only the home page (dev-tool-inspect/sources).
This means that React.lazy worked!