

import { RouterProvider } from "react-router-dom"

The `import { RouterProvider } from "react-router-dom";` statement is used in React applications to import the `RouterProvider` component from the `react-router-dom` library.

Functionality of `RouterProvider`:

- **Provides the Router Context:** The `RouterProvider` component is a core part of React Router v6. It acts as a wrapper for your entire application or the section of your application where routing is managed. It provides the router context to all nested components, allowing them to access routing functionalities like navigation, route matching, and data loading (with v6.4+ data APIs).
- **Receives a Router Object:** It takes a `router` prop, which is an object created using one of React Router's router creation functions, such as `createBrowserRouter` or `createHashRouter`. This router object contains the definition of your application's routes.
- **Enables Data APIs:** When used with `createBrowserRouter`, `RouterProvider` enables the use of React Router's data APIs (loaders, actions, fetchers) for efficient data management within your routes.
- **Centralized Route Management:** By wrapping your application with `RouterProvider`, you centralize the management of your application's routing logic, making it easier to define, organize, and maintain your routes.

Example Usage:

Code

```
import React from "react";
import ReactDOM from "react-dom/client";
import { createBrowserRouter, RouterProvider } from "react-router-dom";
```

```
import App from "./App";
import About from "./About";
import Contact from "./Contact";

const router = createBrowserRouter([
  {
    path: "/",
    element: <App />,
  },
  {
    path: "/about",
    element: <About />,
  },
  {
    path: "/contact",
    element: <Contact />,
  },
]);

ReactDOM.createRoot(document.getElementById("root")).render(
  <React.StrictMode>
    <RouterProvider router={router} />
  </React.StrictMode>
);
```

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