REACT ROUTER

React is a JavaScript library for building user interfaces. We can also extend it to build multi-page applications with the help of React Router. This is a third-party library that enables routing in our React apps.

Routing is the capacity to show different pages to the user. That means the user can move between different parts of an application by entering a URL or clicking on an element.

By default, React comes without routing. And to enable it in our project, we need to add a library named react-router.

Need of React Router

React Router plays an important role to display multiple views in a single page application. Without React Router, it is not possible to display multiple views in React applications. Most of the social media websites like Facebook, Instagram uses React Router for rendering multiple views.

React Router Installation

1. **react-router-dom:** It is used for web applications design.
2. **npm install react-router-dom --save**

Adding React Router Components:

The main Components of React Router are:

1. **BrowserRouter:** BrowserRouter is a router implementation that uses the HTML5 history API (pushState, replaceState and the popstate event) to keep your UI in sync with the URL. It is the parent component that is used to store all of the other components.
2. **Route:** Route is the conditionally shown component that renders some UI when its path matches the current URL.
3. **Link:** Link component is used to create links to different routes and implement navigation around the application. It works like HTML anchor tag.
4. **Switch:** Switch component is used to render only the first route that matches the location rather than rendering all matching routes. Although there is no defying functionality of SWITCH tag in our application because none of the LINK paths are ever going to coincide. But let's say we have a route (Note that there is no EXACT in here), then all the Route tags are going to be processed which start with '/' (all Routes start with /). This is where we need SWITCH statement to process only one of the statements.

```
import {BrowserRouter as Router, Route, Link, Switch} from "react-router-dom";
```

Example Program

App.js

```
import React from 'react';
import {BrowserRouter as Router,Route} from "react-router-dom";
import Home from './Home';
import About from './About'
import Contact from './Contact'
class App extends React.Component
{
render()
{
return(
<Router>
    <div>
      <h1>React Router Example</h1>
      <Route path="/" component={Home} />
      <Route path="/about" component={About} />
      <Route path="/contact" component={Contact} />
    </div>
  </Router>
);
}
}

export default App;
```

Home.js

```
import React from 'react'
class App extends React.Component {
  render() {
    return (
      <div>
        <h1>Home page</h1>
      </div>
    )
  }
}
export default App
```

Contact.js

```
import React from 'react'
class Contact extends React.Component {
  render() {
    return <h1>Contact us</h1>
```

```
  }
}
export default Contact
```

About.js

```
import React from 'react'
class About extends React.Component {
  render() {
    return <h1>Welocome to PES UNIVERSITY</h1>
  }
}
export default About
```