**WEEK-6\_ReactJs-HOL**

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**Objectives**

Explain the need and benefits of React Router

**Need for React Router**

React doesn't handle routing by default. In Single Page Applications (SPAs), we need React Router to:

* Navigate between views without reloading the page
* Load components based on URL

### ****Benefits of React Router****

* **Seamless navigation** in SPAs
* **URL-based component rendering**
* **Declarative & reusable** route setup
* **Supports parameters, redirects, nested routes**

**Identify the Components in React Router**

React Router uses components like BrowserRouter for enabling routing, Routes and Route to define paths and views, Link for navigation without reload, and hooks like useParams and useNavigate for handling URL params and navigation programmatically.

**List the types of Router Components**

**Types of Router Components in React Router:**

1. BrowserRouter
2. HashRouter
3. MemoryRouter
4. StaticRouter

**Parameter passing via url**

**Parameter passing via URL** is done using dynamic segments like :id in the route (e.g., /trainer/:id)

**Cognizant Academy teams want to maintain a list of trainers along with their expertise in a SPA using React as the technology. You are assigned the task of creating this React app.**

**App.js**

import './App.css';

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

import Home from './Home';

import TrainersList from './TrainersList';

import TrainerDetails from './TrainerDetails';

import { Trainers } from './TrainersMock';

function App() {

return (

<BrowserRouter>

<div className="App">

<h1>TrainersApp</h1>

<nav>

<Link to="/">Home</Link> | <Link to="/trainers">Trainers</Link>

</nav>

<Routes>

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

<Route path="/trainers" element={<TrainersList data={Trainers} />} />

<Route path="/trainer/:id" element={<TrainerDetails />} />

</Routes>

</div>

</BrowserRouter>

);

}

export default App;

**OUTPUT:**





