**React Task 3**

1. **App.js:**

import React from "react";

import "bootstrap/dist/css/bootstrap.min.css";

// Higher-Order Component (HOC) to wrap a component with a Bootstrap table

const withTable = (WrappedComponent, columns) => {

  return ({ data }) => (

    <div className="container mt-4">

      <h3>{WrappedComponent.name} Table</h3>

      <table className="table table-bordered table-striped">

        <thead className="table-dark">

          <tr>

            {columns.map((col, index) => (

              <th key={index}>{col}</th>

            ))}

          </tr>

        </thead>

        <tbody>

          <WrappedComponent data={data} />

        </tbody>

      </table>

    </div>

  );

};

// Product List Component

const ProductList = ({ data }) => {

  return data.map((product) => (

    <tr key={product.id}>

      <td>{product.id}</td>

      <td>{product.name}</td>

      <td>{product.price}</td>

    </tr>

  ));

};

// Employee List Component

const EmployeeList = ({ data }) => {

  return data.map((employee) => (

    <tr key={employee.id}>

      <td>{employee.id}</td>

      <td>{employee.name}</td>

      <td>{employee.department}</td>

    </tr>

  ));

};

// Define column headers

const productColumns = ["ID", "Name", "Price"];

const employeeColumns = ["ID", "Name", "Department"];

// Wrap components with the HOC

const ProductTable = withTable(ProductList, productColumns);

const EmployeeTable = withTable(EmployeeList, employeeColumns);

// Main App Component

const HOCList = () => {

  const products = [

    { id: 1, name: "Laptop", price: "$1200" },

    { id: 2, name: "Phone", price: "$800" },

    { id: 3, name: "Tablet", price: "$500" },

  ];

  const employees = [

    { id: 1, name: "Alice", department: "HR" },

    { id: 2, name: "Bob", department: "Engineering" },

    { id: 3, name: "Charlie", department: "Marketing" },

  ];

  return (

    <div>

      <ProductTable data={products} />

      <EmployeeTable data={employees} />

    </div>

  );

};

export default HOCList;

**3 . App.js :**

import React from "react";

import { BrowserRouter as Router, Routes, Route } from "react-router-dom";

import HomePage from "./components/HomePage";

import LoginComponent from "./components/LoginComponent";

import SignupComponent from "./components/SignupComponent";

const App = () => {

  return (

    <Router>

      <Routes>

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

        <Route path="/login" element={<LoginComponent />} />

        <Route path="/signup" element={<SignupComponent />} />

      </Routes>

    </Router>

  );

};

export default App;

HomePage.js:

import React from "react";

const HomePage = () => {

  return <h1>Welcome to the Home Page</h1>;

};

export default HomePage;

LoginComponent.js:

import React from "react";

const LoginComponent = () => {

  return <h1>Login Page</h1>;

};

export default LoginComponent;

SignupComponent.js :

import React from "react";

const SignupComponent = () => {

  return <h1>Signup Page</h1>;

};

export default SignupComponent;