**Lesson 02 Demo 02**

**Programmatically routing with login page as well as nested routing concept.**

**Objective:** To demonstrate the react routing to navigate home component after successfully login with credential and nested concept in home component.

**Tools required:** Node JS and React JS

**Prerequisites:** HTML, CSS, JavaScript ES5/ES6, Basic React Concept

**Note** : All react js project already created with version 18.x with Sample App.js file

**Steps to be followed:**

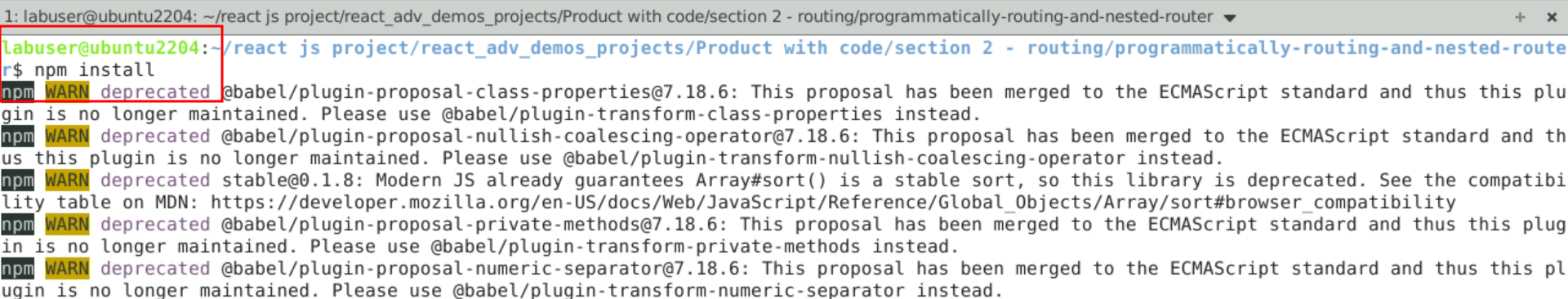
1. Set up for react js project
2. Using npm command install routing dependencies.
3. Enable BrowserRouter features in index.js file
4. Now you need to create LoginPage.js, Home.js, Customer.js, Products.js, Product.js and Order.js file
5. Add the bootstrap features to project
6. Import all component in app.js file and write the writing rules in App.js file
7. Now test the application

**Step 1: Set up for react js project**

1. Open a terminal window inside a React JS pre-created project ie **simple-react-app-routing**

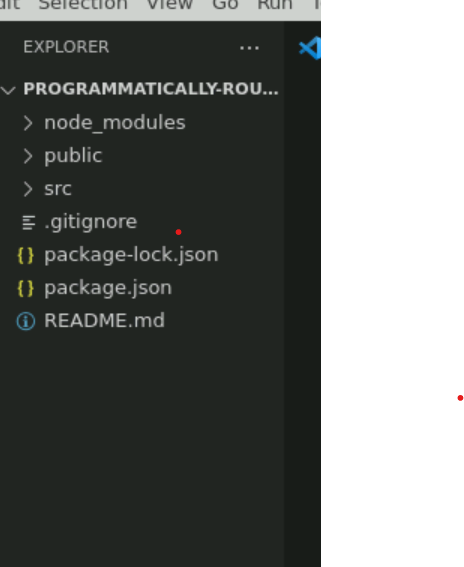


1. Now you need to run the command as **npm install.** This command helps us to installed all required dependencies mention in package.json file in local machine in the form of node\_module folder.



1. Now open **programmatically-routing-and-nested-router** folder in VS Code Editor

Note: short cut to open write **code .**

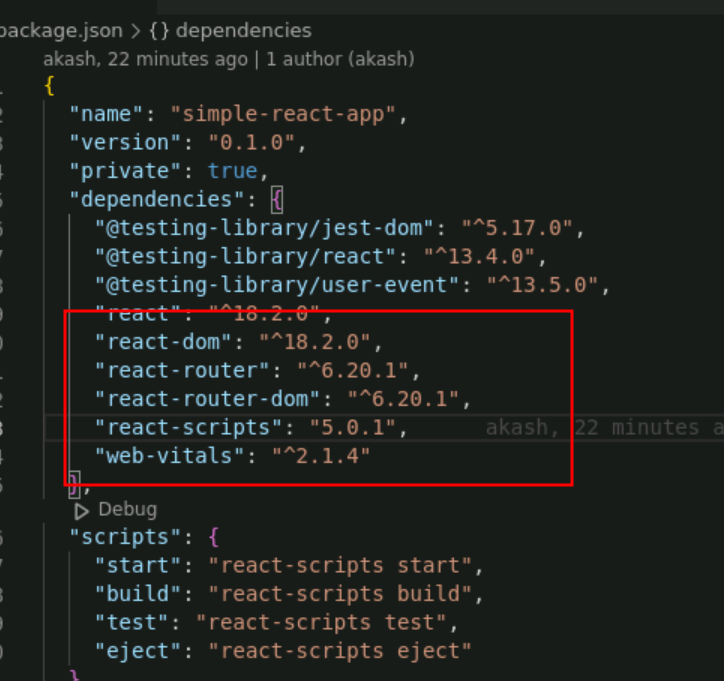
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**Step 2:** Using npm command install routing dependencies.

1. **npm install react-router-dom**



2.2. View the react-router-dom dependencies in package.json file



**Step 3:** Enable BrowserRouter features in index.js file

3.1 Now open the index.js file and add the BrowserRouter tag which help to enable to routing features to whole application. Ie Root tag.

Index.js code

import React from 'react';

import ReactDOM from 'react-dom/client';

import './index.css';

import App from './App';

import reportWebVitals from './reportWebVitals';

import {BrowserRouter} from 'react-router-dom'

const root = ReactDOM.createRoot(document.getElementById('root'));

root.render(

<React.StrictMode>

<BrowserRouter>

<App />

</BrowserRouter>

</React.StrictMode>

);

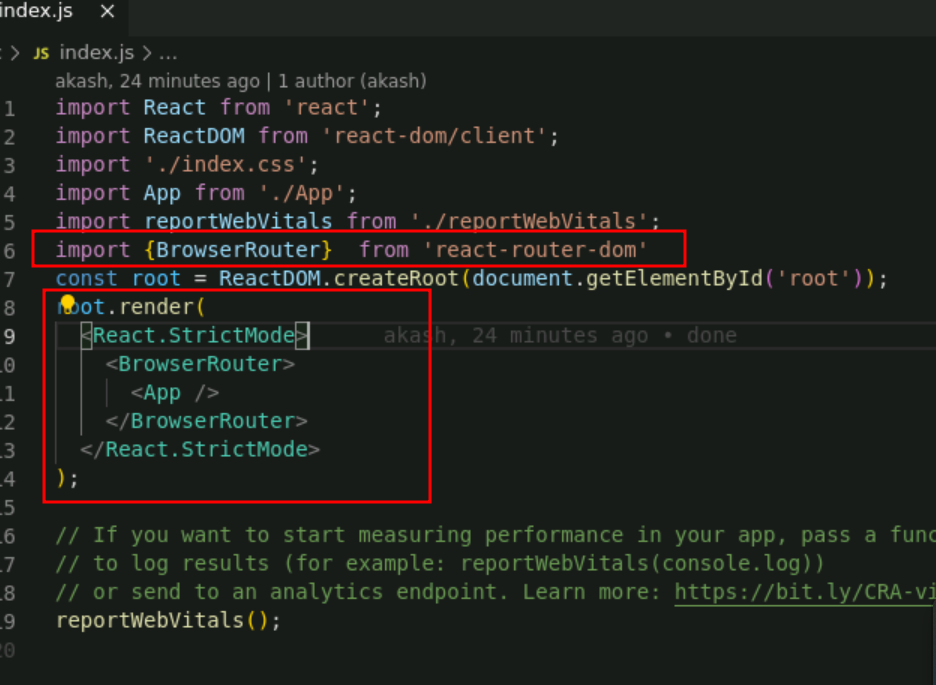
// If you want to start measuring performance in your app, pass a function

// to log results (for example: reportWebVitals(console.log))

// or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals

reportWebVitals();

3.2 Screen short for the changes done in App.js file



**Step 4: Now you need to create LoginPage, Home, Customer, Products, Product, Order, NotFound all component**

4.1 Create the LoginPage.js component file. This file user RegistrationForm component which contains form with emailed and password with hard coding email and password ie [admin@gmail.com](mailto:admin@gmail.com) and admin@123. If correct it will navigate to home page.

import React, { useState } from "react";

import "./App.css";

import { useNavigate } from "react-router-dom";

import RegistrationForm from "./RegistrationForm";

function LoginPage() {

const navigate = useNavigate();

const handleSubmit = (username, password) => {

//console.log(username, password);

if(username=="admin@gmail.com" && password=="admin@123"){

navigate("home");

}else {

alert("failure try once again")

}

};

return (

<div className="App">

<RegistrationForm onSubmit={handleSubmit} />

</div>

);

}

export default LoginPage;

4.2 Create RegistrationForm.js component with below code

**RegistrationForm.js**

import { useState } from "react";

function RegistrationForm({ onSubmit }) {

const [username, setUsername] = useState("");

const [password, setPassword] = useState("");

const [isEnable, setEnable] = useState(true);

const handleKeyUp = () => {

if (username.length > 0 && password.length > 0) setEnable(false);

else setEnable(true);

};

return (

<div className="container" style={{"marginTop":"100px"}}>

<div className="row offset-4">

<div className="col-6">

<h2>Login Page</h2>

</div>

</div>

<form className="form-group">

<div className="row offset-4">

<div className="col-3">

<label>User Name</label>

</div>

<div className="col-3">

<input

type="text"

id="username-input"

placeholder="username"

value={username}

onKeyUp={handleKeyUp}

onChange={(event) => setUsername(event.target.value)}

className="form-control"

/>

</div>

</div>

<div className="row offset-4">

<div className="col-3">

<label>Password</label>

</div>

<div className="col-3">

<input

type="password"

id="password-input"

placeholder="Password"

onKeyUp={handleKeyUp}

value={password}

onChange={(event) => setPassword(event.target.value)}

className="form-control"

/>

</div>

</div>

<div className="row offset-4">

<div className="col-3">

<button

type="submit"

id="button-input"

disabled={isEnable}

onClick={() => onSubmit(username, password)}

className="btn btn-primary"

>

Register

</button>

</div>

<div className="col-3">

<button

type="reset"

id="button-input"

onClick={() => {

setUsername("")

setPassword("")

}

}

className="btn btn-danger"

>

Reset

</button>

</div>

</div>

</form>

</div>

);

}

export default RegistrationForm;

4.3 Create Home.js component with below code which contains sub routing link as customer, order, products and logout link

Create Home.js component file

import { useNavigate } from "react-router-dom";

import { Outlet } from "react-router-dom";

function Home() {

const navigate = useNavigate();

return(

<div className="container">

<nav className="navbar navbar-inverse">

<div className="container-fluid">

<div className="navbar-header" style={{"textAlign":"center"}}>

<a className="navbar-brand" href="#" onClick={()=>navigate("customer")}>Customer</a>

<a className="navbar-brand" href="#" onClick={()=>navigate("products")}>Product</a>

<a className="navbar-brand" href="#" onClick={()=>navigate("order")}>Order</a>

<a className="navbar-brand" href="#" onClick={()=>navigate("/")}>Logout</a>

</div>

</div>

</nav>

<hr/>

<h2>Welcome to Home Component</h2>

<div style={{"margin":"50px"}}>

<Outlet/>

</div>

</div>

)

}

export default Home;

4.4. Create Customer.js component file. This contains simple static information

function Customer() {

return(

<div>

<h4>Customer Information</h4>

</div>

)

}

export default Customer;

4.5 Create Products.js file this file provide nested routing link with view specific product information with help of Product.js file

**Products.js**

import { Link, Outlet, useParams } from "react-router-dom";

import Product from "./Product";

function Products() {

let params = useParams() || 100;

let products = [

{"pid":101,"pname":"TV","price":56000},

{"pid":102,"pname":"Computer","price":45000},

{"pid":103,"pname":"Laptop","price":90000},

]

return(

<div>

<h4>Product Information</h4>

{products.map(p=>

<Link to={`product/${p.pid}`}>{p.pname}</Link>

)}

<Product params={params} products={products}/>

</div>

)

}

export default Products;

4.6 Create Product.js file. This file product specific product details using routing path param features.

**Product.js file**

function Product({params,products}) {

console.log(params)

console.log(products)

return(

<div>

{products.filter(p=>p.pid==eval(params.pid)).map(p=>

<div>

PId {p.pid} PName {p.pname} Price {p.price}

</div>

)}

</div>

)

}

export default Product;

4.6 Create Order.js file. This file contains static contents.

**Order.js file**

function Order() {

return(

<div>

<h4>Order Information</h4>

</div>

)

}

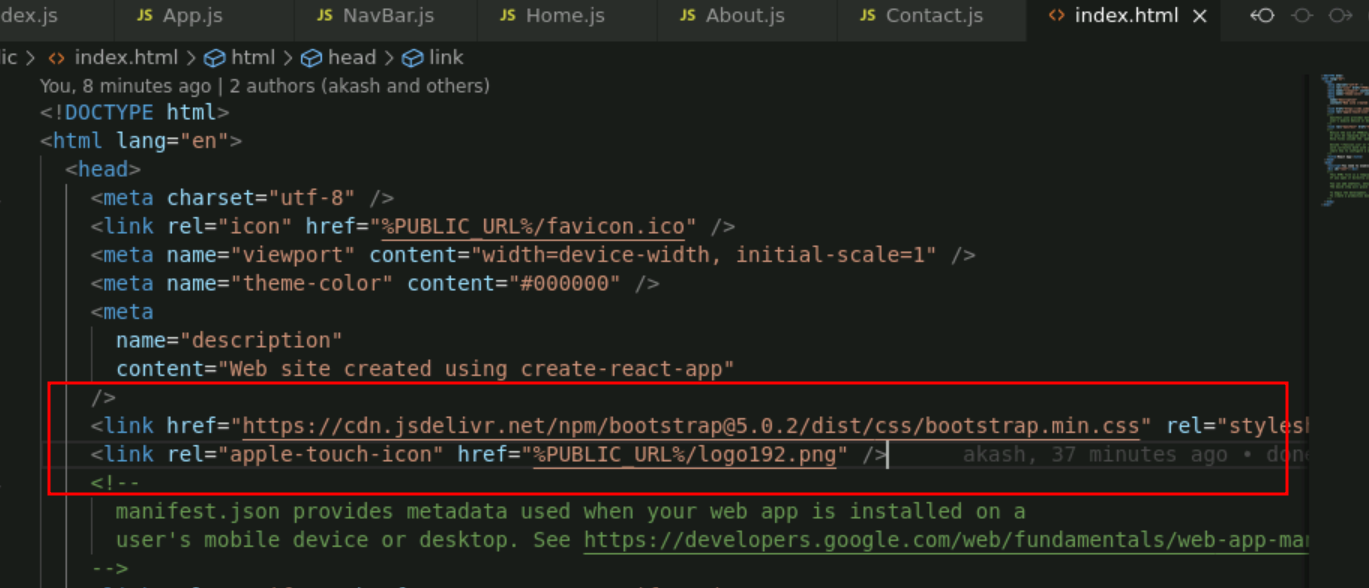
export default Order;

**Step 5: Add the bootstrap features to project**

5.1 Add the bootstrap CDN link in index.html page

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous">

5.2 Screen short of index.html page code after added link of bootstrap



**Step 6 : Import all component in app.js file and write the writing rules in App.js file**

6.1 open the app.js file.

App.js file : inside this file contains all component Route rules ie all component link which help to navigate.

import logo from './logo.svg';

import './App.css';

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

import Home from './Home';

import LoginPage from './LoginPage';

import Customer from './Customer';

import Products from './Products';

import NotFound from './NofFound';

import Product from './Product';

import Order from './Order';

function App() {

return (

<div className="App">

<Routes>

<Route path='/' element={<LoginPage/>}></Route>

<Route path='/home' element={<Home/>}>

<Route path='customer' element={<Customer/>}></Route>

<Route path='products' element={<Products/>}>

<Route path='product/:pid' element={<Product/>}></Route>

</Route>

<Route path='order' element={<Order/>}></Route>

</Route>

<Route path='\*' element={<NotFound/>}></Route>

</Routes>

</div>

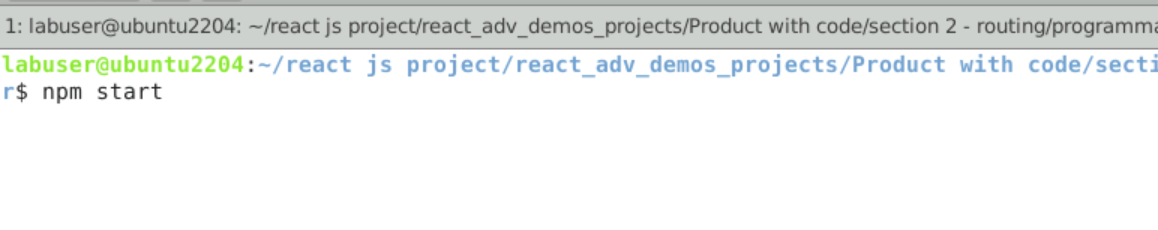
);

}

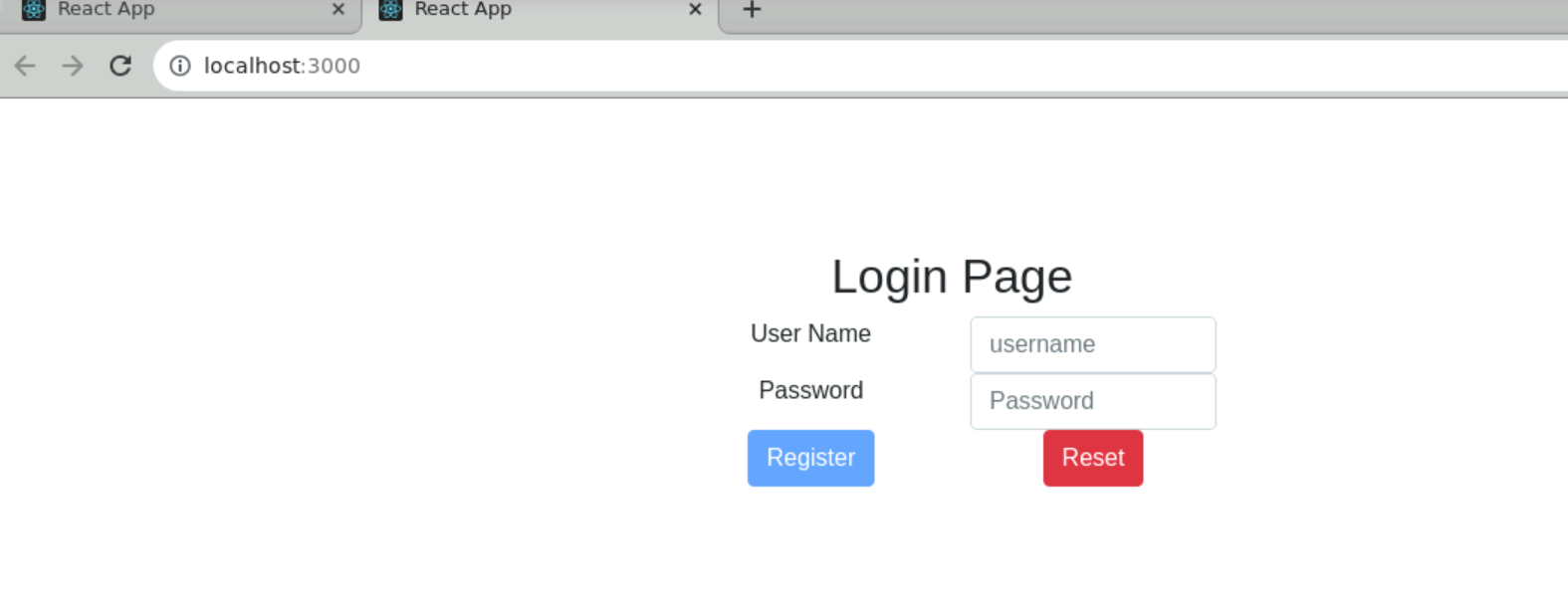
export default App;

**Step 7. Now test the application**

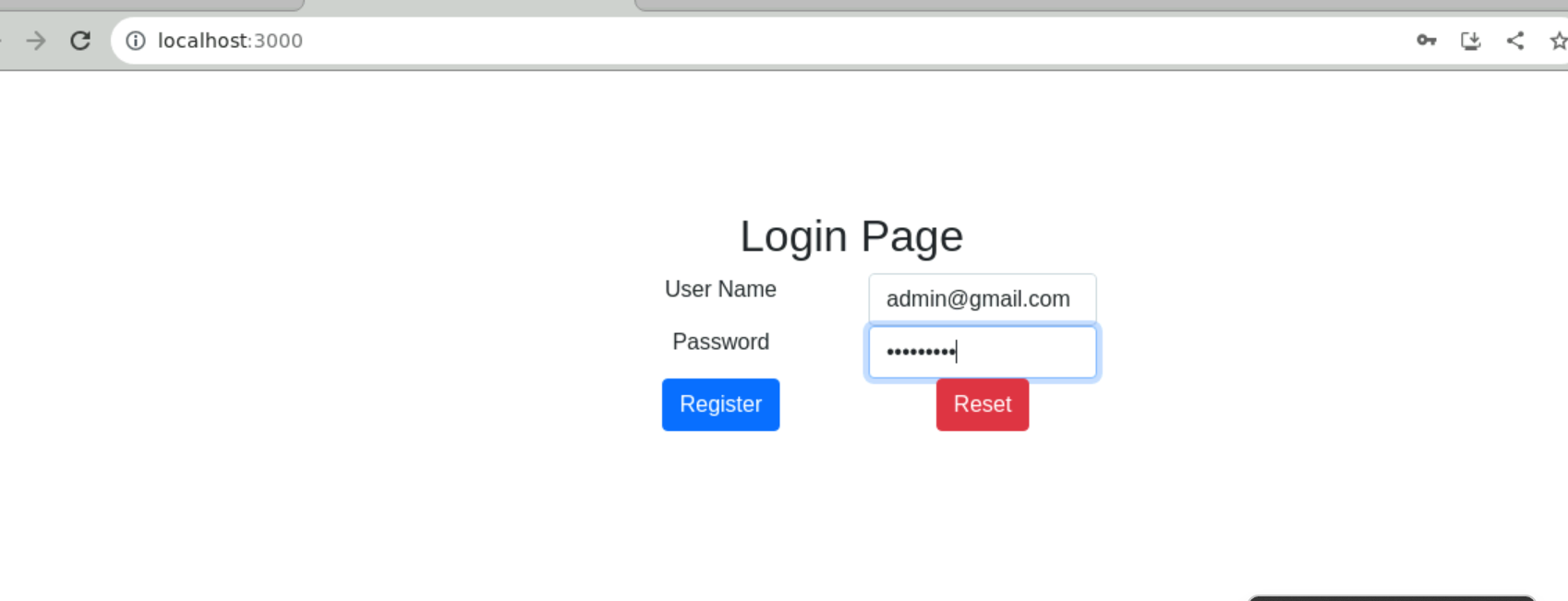
**7.1 npm start**



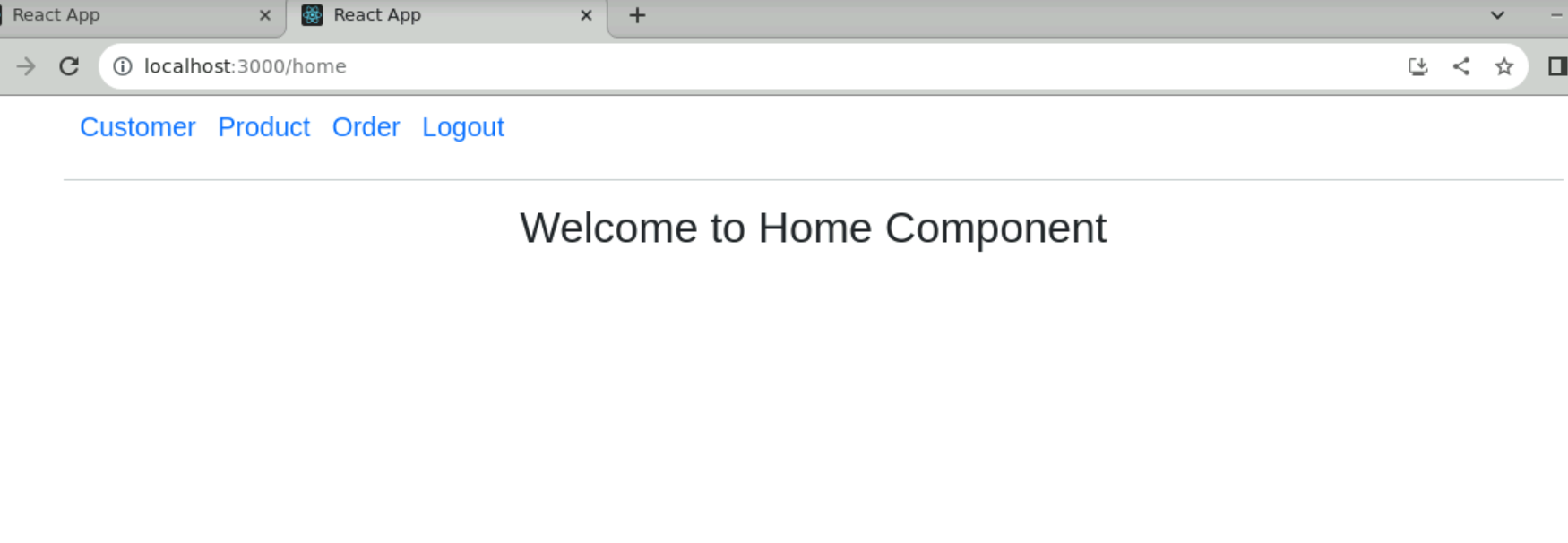
**7.2 See the output on browser**



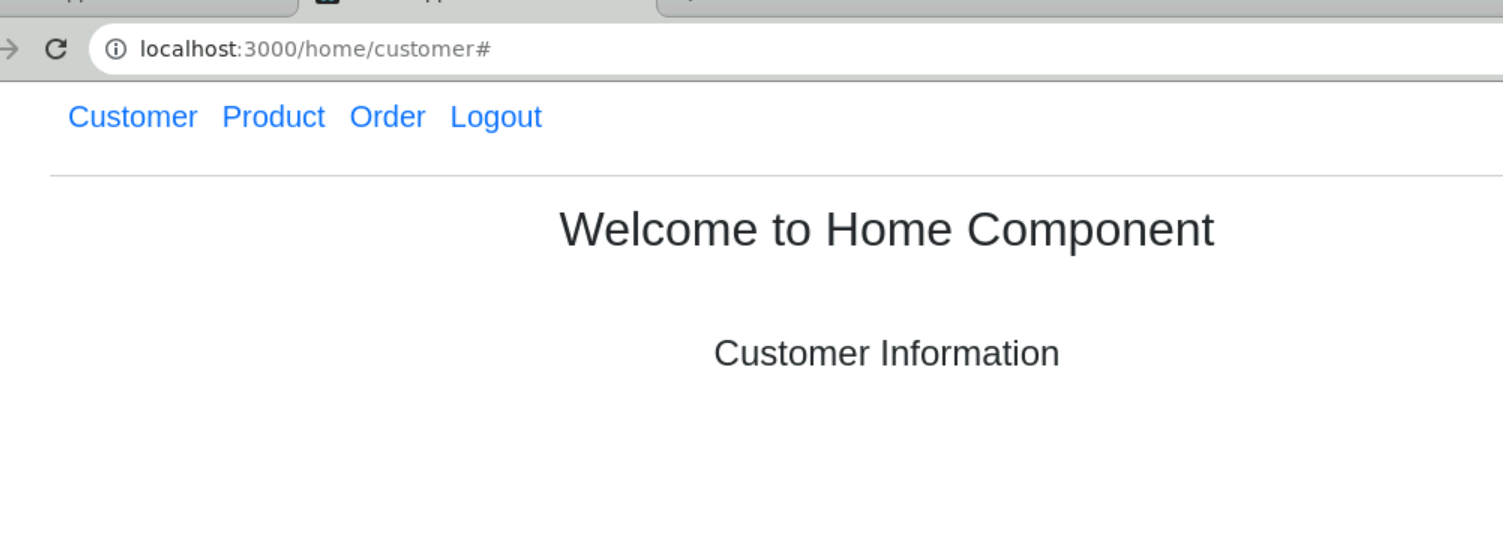
**8.3 The valid email id is** [**admin@gmail.com**](mailto:admin@gmail.com) **and password is admin@123.**

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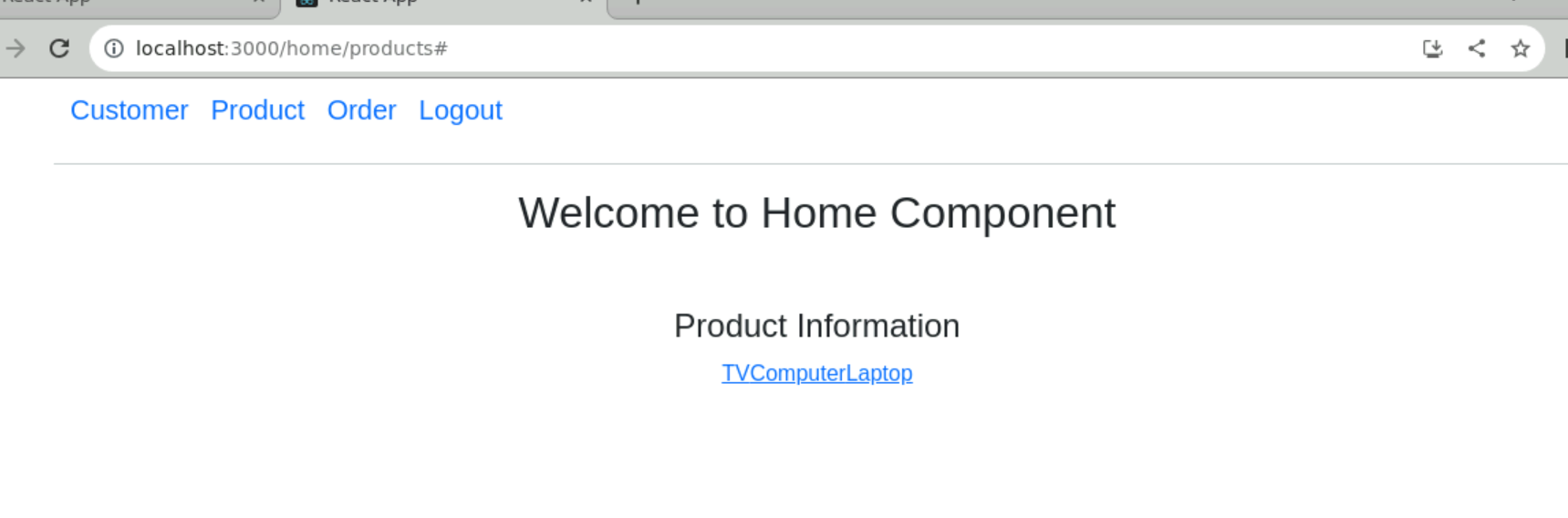
**8.4 After successfully login it will open home page**

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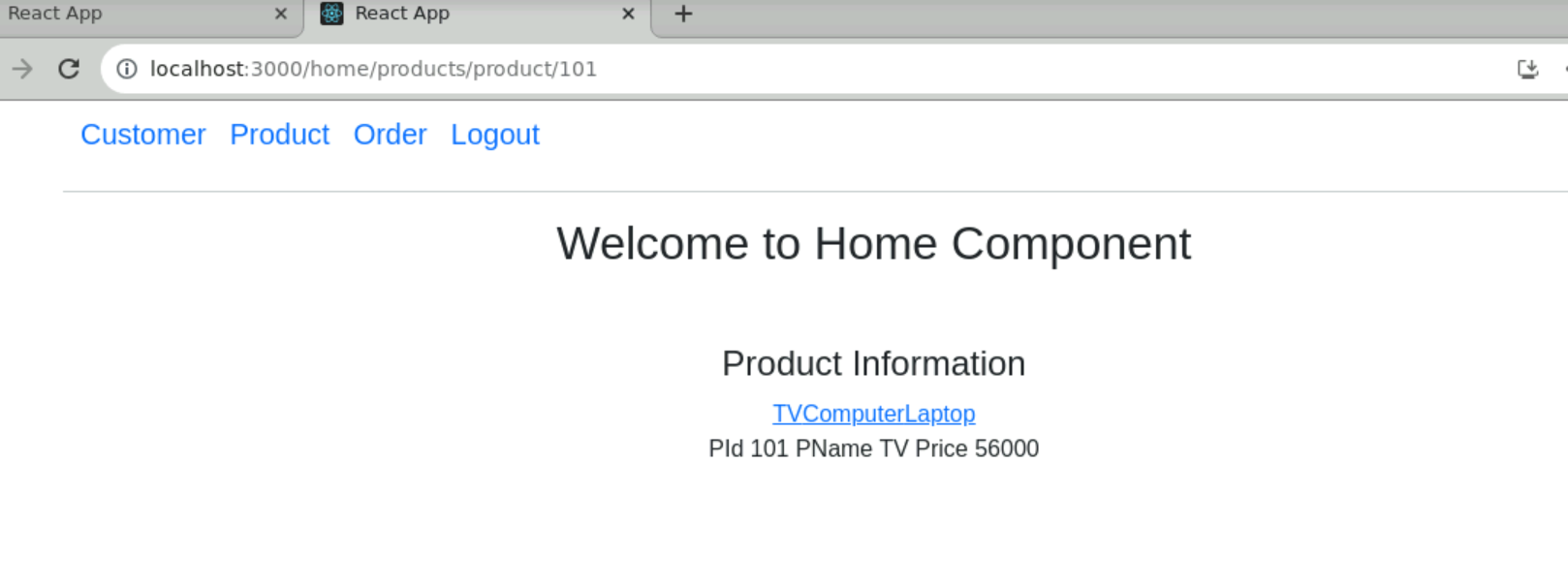
**8.5 Now you can click on customer, order link to view static data of these components.**

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**8.6 When you click on product link you can view product nested link to view specific product details.**

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**8.7 When click specific product link you can see the that product details.**



**8.8 Now you can logout**

