**WEEK – 7(Additional HandsOn)**

**React**

**17. ReactJS-HOL**

**Objectives**

**• Explain how to consume REST APIs from React applications**

React apps can consume APIs using:

* The native fetch() API
* The popular axios library

**1. Using fetch()**

**Example: GET request to fetch data**

import React, { useEffect, useState } from 'react';

function UserList() {

const [users, setUsers] = useState([]);

useEffect(() => {

fetch('https://jsonplaceholder.typicode.com/users') // Sample API

.then((response) => response.json())

.then((data) => setUsers(data))

.catch((error) => console.error('Error:', error));

}, []);

return (

<ul>

{users.map(user => <li key={user.id}>{user.name}</li>)}

</ul>

);

}

**2. Using axios (Alternative to fetch)**

**Install axios:**

npm install axios

**Example:**

import React, { useEffect, useState } from 'react';

import axios from 'axios';

function PostList() {

const [posts, setPosts] = useState([]);

useEffect(() => {

axios.get('https://jsonplaceholder.typicode.com/posts')

.then(response => setPosts(response.data))

.catch(error => console.error(error));

}, []);

return (

<ul>

{posts.slice(0, 5).map(post => (

<li key={post.id}>{post.title}</li>

))}

</ul>

);

}

**3. Other HTTP Methods (POST, PUT, DELETE)**

**POST (Create Data)**

fetch('https://api.example.com/data', {

method: 'POST',

headers: { 'Content-Type': 'application/json' },

body: JSON.stringify({ name: 'New User' })

})

.then(res => res.json())

.then(data => console.log(data));

**CODE:**

**src/Getuser.js:**

import React, { Component } from 'react';

class Getuser extends Component {

  constructor(props) {

    super(props);

    this.state = {

      user: null,

      loading: true,

      error: null,

    };

  }

  async componentDidMount() {

    try {

      // Call the API to fetch user data

      const response = await fetch('https://randomuser.me/api/');

      if (!response.ok) {

        throw new Error('Network response was not ok');

      }

      const data = await response.json();

      // Extract the first user from results

      const user = data.results[0];

      this.setState({ user, loading: false });

    } catch (error) {

      this.setState({ error: error.message, loading: false });

    }

  }

  render() {

    const { user, loading, error } = this.state;

    if (loading) {

      return <div>Loading user data...</div>;

    }

    if (error) {

      return <div>Error: {error}</div>;

    }

    // Display title, first name and image of the user

    return (

      <div style={{ textAlign: 'center', marginTop: '20px' }}>

        <h2>User Details</h2>

        <p>

          <strong>Title:</strong> {user.name.title}

        </p>

        <p>

          <strong>First Name:</strong> {user.name.first}

        </p>

        <img src={user.picture.medium} alt="User" />

      </div>

    );

  }

}

export default Getuser;

**src/UserCard.js:**

import React from 'react';

function UserCard() {

  return (

    <div style={{ textAlign: 'center', marginTop: '80px' }}>

      <h1 style={{ fontWeight: 'bold', fontSize: '2.3rem', marginBottom: '24px' }}>

        Mr Donato Nunes

      </h1>

      {/\* Replace link with any user image or placeholder image \*/}

      <img

  src="https://randomuser.me/api/portraits/men/1.jpg"

  alt="Mr Donato Nunes"

  style={{ width: 150, height: 155, objectFit: 'cover', borderRadius: 10 }}

/>

    </div>

  );

}

export default UserCard;

**src/App.js:**

import React from 'react';

import UserCard from './UserCard';

function App() {

  return (

    <div>

      <UserCard />

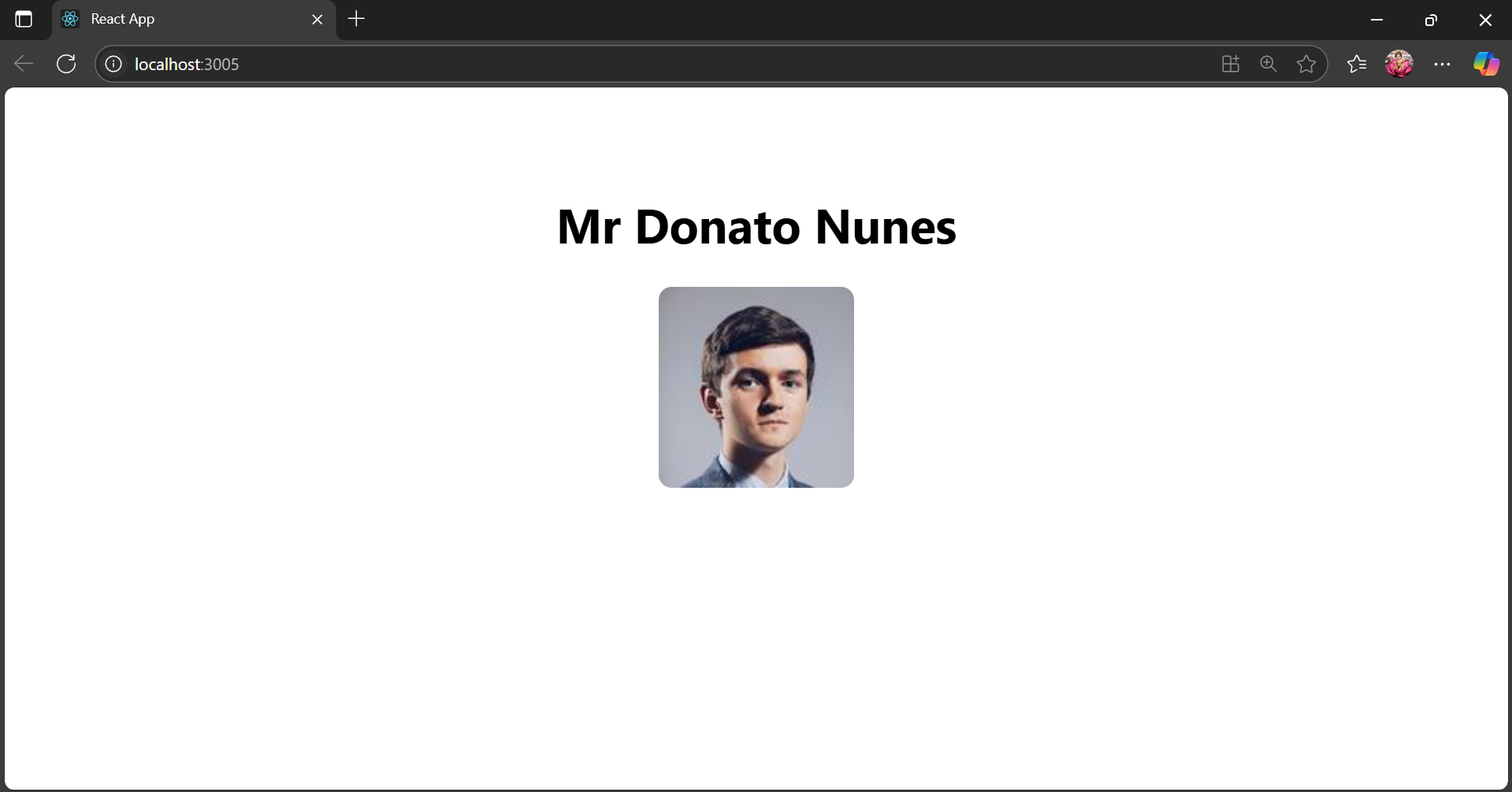
    </div>

  );

}

export default App;

**OUTPUT:**

****