**Digital Nurture 4.0**

**Week 7- React**

# **Mandatory HandsOn**

# ***File name: 9. ReactJS-HOL***

**STEP 1: Install & Setup Project**

npx create-react-app cricketapp

**STEP 2: Create Component Files**

Inside the src folder in cricketapp:

* ListofPlayers.js
* IndianPlayers.js

**STEP 3: ListofPlayers.js**

import React from 'react';

const ListofPlayers = () => {

const players = [

{ name: 'Virat', score: 85 },

{ name: 'Rohit', score: 55 },

{ name: 'Rahul', score: 90 },

{ name: 'Pant', score: 45 },

{ name: 'Jadeja', score: 75 },

{ name: 'Shami', score: 35 },

{ name: 'Bumrah', score: 95 },

{ name: 'Ashwin', score: 60 },

{ name: 'Gill', score: 80 },

{ name: 'Surya', score: 65 },

{ name: 'Ishan', score: 50 },

];

const lowScorers = players.filter(player => player.score < 70);

return (

<div>

<h2>All Players</h2>

<ul>

{players.map((player, index) => (

<li key={index}>{player.name} - {player.score}</li>

))}

</ul>

<h3>Players with score below 70</h3>

<ul>

{lowScorers.map((player, index) => (

<li key={index}>{player.name} - {player.score}</li>

))}

</ul>

</div>

);

};

export default ListofPlayers;

**STEP 4: IndianPlayers.js**

import React from 'react';

const IndianPlayers = () => {

const T20players = ['Kohli', 'Rohit', 'Bumrah', 'Surya'];

const RanjiPlayers = ['Prithvi', 'Iyer', 'Washington', 'Sarfaraz'];

const allPlayers = [...T20players, ...RanjiPlayers];

const oddTeam = allPlayers.filter((\_, index) => index % 2 !== 0);

const evenTeam = allPlayers.filter((\_, index) => index % 2 === 0);

return (

<div>

<h2>All Players: {allPlayers.join(', ')}</h2>

<h3>Odd Team Players:</h3>

<ul>

{oddTeam.map((p, i) => <li key={i}>{p}</li>)}

</ul>

<h3>Even Team Players:</h3>

<ul>

{evenTeam.map((p, i) => <li key={i}>{p}</li>)}

</ul>

</div>

);

};

export default IndianPlayers;

**STEP 5: Modify App.js**

import React, { useState } from 'react';

import './App.css';

import ListofPlayers from './ListofPlayers';

import IndianPlayers from './IndianPlayers';

function App() {

const [flag, setFlag] = useState(true);

return (

<div className="App">

<h1>🏏 Welcome to Cricket App</h1>

<button onClick={() => setFlag(!flag)}>

{flag ? 'Show Indian Players' : 'Show List of Players'}

</button>

<div className="container">

{flag ? <ListofPlayers /> : <IndianPlayers />}

</div>

</div>

);

}

export default App;

**STEP 6: Add Styling in App.css**

.App {

font-family: 'Segoe UI', sans-serif;

text-align: center;

padding: 20px;

background: #f2f2f2;

}

h1 {

color: #2c3e50;

margin-bottom: 30px;

}

button {

padding: 10px 20px;

font-size: 16px;

margin-bottom: 20px;

cursor: pointer;

border-radius: 5px;

border: none;

background-color: #3498db;

color: white;

}

.container {

background: white;

border-radius: 15px;

padding: 25px;

box-shadow: 0 4px 12px rgba(0,0,0,0.1);

max-width: 700px;

margin: 0 auto;

}

h2, h3 {

color: #2980b9;

}

ul {

text-align: left;

margin: 10px auto;

padding-left: 20px;

list-style: square;

}

**STEP 7: Run the App**

npm start

**Output:**

A screen shot of a computer code

AI-generated content may be incorrect.

**In Browser:**

* **Flag = true:**

A screenshot of a cricket application

AI-generated content may be incorrect.

* **Flag = false:**

A screenshot of a cricket app

AI-generated content may be incorrect.

# ***File name: 10. ReactJS-HOL***

**Step 1: Create React App**

npx create-react-app officespacerentalapp

**Step 2: Download & Rename Image**

Downloaded an image and saved as officeroom.jpg

**Step 3: Copy Image into src Folder**

Open the src folder

Pasted the image file (officeroom.jpg) inside src

**Step 4: Import Image in App.js**

import officeImage from './officeroom.jpg';

**Step 5:Modify App.js**

**App.js:**

import React from 'react';

import officeImage from './officeroom.jpeg';

function App() {

  const office = {

    name: 'DBS',

    rent: 50000,

    address: 'Chennai',

    image: 'https://cdn.pixabay.com/photo/2016/03/31/19/14/meeting-1293984\_960\_720.jpg',

  };

  const rentStyle = {

    color: office.rent < 60000 ? 'red' : 'green',

    fontWeight: 'bold',

  };

  return (

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

      <h1><b>Office Space , at Affordable Range</b></h1>

      <img

        src={officeImage}

        alt="Office Space"

        style={{ width: '300px', height: '200px', margin: '20px 0' }}

      />

      <div style={{ fontSize: '18px' }}>

        <p><b>Name:</b> {office.name}</p>

        <p style={rentStyle}>Rent: Rs. {office.rent}</p>

        <p><b>Address:</b> {office.address}</p>

      </div>

    </div>

  );

}

export default App;

**Step 6:Modify App.css**

.App {

  text-align: center;

  font-family: 'Segoe UI', sans-serif;

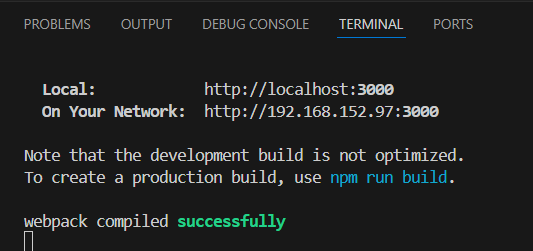
  padding: 20px;

}

**Step 7: Start the App**

npm start

**Output:**

****

**In Browser:**

**A screenshot of a computer

AI-generated content may be incorrect.**

# ***File name: 11. ReactJS-HOL***

**STEP 1: Create New React App**

npx create-react-app eventexamplesapp

**STEP 2: Create Component for Currency Converter**

In the src folder create a new file CurrencyConvertor.js

**STEP 3: Add Code in CurrencyConvertor.js**

**CurrencyConvertor.js:**

import React, { Component } from 'react';

class CurrencyConvertor extends Component {

constructor(props) {

super(props);

this.state = {

amount: '',

result: ''

};

}

handleChange = (e) => {

this.setState({ amount: e.target.value });

};

handleSubmit = () => {

const amount = parseFloat(this.state.amount);

const result = amount \* 80; // Convert to Rupees

alert(`Converting to Euro Amount is ${result}`);

this.setState({ result });

};

render() {

return (

<div>

<h2 style={{ color: 'green' }}>Currency Convertor!!!</h2>

<label>Amount: </label>

<input

type="number"

value={this.state.amount}

onChange={this.handleChange}

/>

<br /><br />

<label>Currency: </label>

<textarea value="Euro" readOnly />

<br /><br />

<button onClick={this.handleSubmit}>Submit</button>

</div>

);

}

}

export default CurrencyConvertor;

**STEP 4: Modify App.js**

import React, { Component } from 'react';

import CurrencyConvertor from './CurrencyConvertor';

class App extends Component {

constructor(props) {

super(props);

this.state = {

count: 0

};

}

handleIncrement = () => {

this.setState({ count: this.state.count + 1 });

alert("Hello Member1");

alert("Static Message!");

};

handleDecrement = () => {

this.setState({ count: this.state.count - 1 });

};

handleWelcome = (message) => {

alert(message);

};

handleClick = () => {

alert("I was clicked");

};

render() {

return (

<div style={{ margin: '30px' }}>

<h3>{this.state.count}</h3>

<button onClick={this.handleIncrement}>Increment</button>

<br /><br />

<button onClick={this.handleDecrement}>Decrement</button>

<br /><br />

<button onClick={() => this.handleWelcome("welcome")}>Say welcome</button>

<br /><br />

<button onClick={this.handleClick}>Click on me</button>

<hr />

<CurrencyConvertor />

</div>

);

}

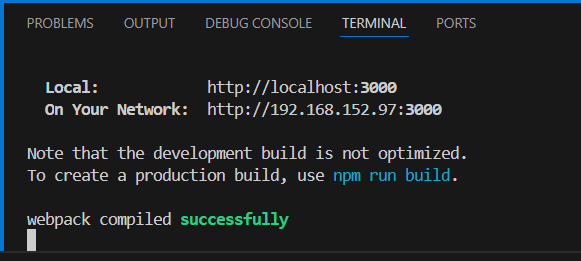
}

export default App;

**STEP 5: Run the App**

npm start

**Output:**



**In Browser:**

**Increment Button**

* Increases count by 1
* Shows:

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a chat

AI-generated content may be incorrect.

A screenshot of a chat

AI-generated content may be incorrect.

**Decrement Button**

* Decreases count by 1
* Shows:

A screenshot of a computer

AI-generated content may be incorrect.

**Say Welcome Button**

* Shows: welcome alert

A screenshot of a computer

AI-generated content may be incorrect.

**Click on Me Button**

* Shows: I was clicked

A screenshot of a chat

AI-generated content may be incorrect.

**Currency Convertor:**

Entered Amount: 80

Shows:

A screenshot of a chat

AI-generated content may be incorrect.

# ***File name: 12. ReactJS-HOL***

**STEP 1: Create a New React App**

npx create-react-app ticketbookingapp

**STEP 2: Modify App.js code**

**App.js:**

import React, { Component } from 'react';

class App extends Component {

constructor(props) {

super(props);

this.state = {

isLoggedIn: false

};

}

handleLogin = () => {

this.setState({ isLoggedIn: true });

};

handleLogout = () => {

this.setState({ isLoggedIn: false });

};

render() {

let content;

if (this.state.isLoggedIn) {

content = (

<div>

<h2>Welcome User</h2>

<p>Book your flight tickets</p>

<button onClick={this.handleLogout}>Logout</button>

</div>

);

} else {

content = (

<div>

<h2>Welcome Guest</h2>

<p>Please Login to Continue</p>

<button onClick={this.handleLogin}>Login</button>

</div>

);

}

return (

<div style={{ padding: '30px', textAlign: 'center' }}>

<h1>Ticket Booking App</h1>

<hr />

{content}

</div>

);

}

}

export default App;

**STEP 3: Run the React App**

npm start

**Output:**

A screen shot of a computer code

AI-generated content may be incorrect.

**In Browser:**

* **Initial Output (Guest Not Logged In):**

A screen shot of a ticketing application

AI-generated content may be incorrect.

* **After Clicking [Login] Button:**

A screenshot of a ticketing app

AI-generated content may be incorrect.

# ***File name: 13. ReactJS-HOL***

**Step 1: Create the React App**

npx create-react-app bloggerapp

**Step 2: Modify code in App.js**

**App.js:**

import React from 'react';

import './App.css';

const books = [

{ id: 101, bname: 'Master React', price: 670 },

{ id: 102, bname: 'Deep Dive into Angular 11', price: 800 },

{ id: 103, bname: 'Mongo Essentials', price: 450 }

];

const courses = [

{ name: 'Angular', date: '4/5/2021' },

{ name: 'React', date: '6/3/20201' }

];

const blogs = [

{

title: 'React Learning',

author: 'Stephen Biz',

content: 'Welcome to learning React!'

},

{

title: 'Installation',

author: 'Schewzdenier',

content: 'You can install React from npm.'

}

];

function App() {

const bookdet = (

<>

{books.map((book) => (

<div key={book.id}>

<h3>{book.bname}</h3>

<h4>{book.price}</h4>

</div>

))}

</>

);

const coursedet = (

<>

{courses.map((course, index) => (

<div key={index}>

<h3>{course.name}</h3>

<h4>{course.date}</h4>

</div>

))}

</>

);

const content = (

<>

{blogs.map((blog, index) => (

<div key={index}>

<h3>{blog.title}</h3>

<h4>{blog.author}</h4>

<p>{blog.content}</p>

</div>

))}

</>

);

return (

<div className="container">

<div className="column">

<h1>Course Details</h1>

{coursedet}

</div>

<div className="column border">

<h1>Book Details</h1>

{bookdet}

</div>

<div className="column">

<h1>Blog Details</h1>

{content}

</div>

</div>

);

}

export default App;

**Step 4: Add Styling in App.css**

**App.css:**

.container {

display: flex;

justify-content: center;

text-align: left;

margin-top: 50px;

}

.column {

flex: 1;

padding: 20px;

}

.border {

border-left: 4px solid green;

border-right: 4px solid green;

}

h1 {

font-size: 26px;

font-weight: bold;

margin-bottom: 20px;

}

h3 {

font-size: 20px;

margin: 0;

}

h4 {

font-size: 16px;

margin: 0 0 10px 0;

color: gray;

}

p {

font-size: 14px;

margin-bottom: 20px;

color: #444;

}

**Step 5: Run the React App**

npm start

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.

**In Browser:**

**A screenshot of a computer

AI-generated content may be incorrect.**

# **Additional Mandatory HandsOn**

# ***File name: 13. ReactJS-HOL***

**Step 1: Create the React App**

npx create-react-app bloggerapp

**Step 2: Modify code in App.js**

**App.js:**

import React from 'react';

import './App.css';

const books = [

{ id: 101, bname: 'Master React', price: 670 },

{ id: 102, bname: 'Deep Dive into Angular 11', price: 800 },

{ id: 103, bname: 'Mongo Essentials', price: 450 }

];

const courses = [

{ name: 'Angular', date: '4/5/2021' },

{ name: 'React', date: '6/3/20201' }

];

const blogs = [

{

title: 'React Learning',

author: 'Stephen Biz',

content: 'Welcome to learning React!'

},

{

title: 'Installation',

author: 'Schewzdenier',

content: 'You can install React from npm.'

}

];

function App() {

const bookdet = (

<>

{books.map((book) => (

<div key={book.id}>

<h3>{book.bname}</h3>

<h4>{book.price}</h4>

</div>

))}

</>

);

const coursedet = (

<>

{courses.map((course, index) => (

<div key={index}>

<h3>{course.name}</h3>

<h4>{course.date}</h4>

</div>

))}

</>

);

const content = (

<>

{blogs.map((blog, index) => (

<div key={index}>

<h3>{blog.title}</h3>

<h4>{blog.author}</h4>

<p>{blog.content}</p>

</div>

))}

</>

);

return (

<div className="container">

<div className="column">

<h1>Course Details</h1>

{coursedet}

</div>

<div className="column border">

<h1>Book Details</h1>

{bookdet}

</div>

<div className="column">

<h1>Blog Details</h1>

{content}

</div>

</div>

);

}

export default App;

**Step 4: Add Styling in App.css**

**App.css:**

.container {

display: flex;

justify-content: center;

text-align: left;

margin-top: 50px;

}

.column {

flex: 1;

padding: 20px;

}

.border {

border-left: 4px solid green;

border-right: 4px solid green;

}

h1 {

font-size: 26px;

font-weight: bold;

margin-bottom: 20px;

}

h3 {

font-size: 20px;

margin: 0;

}

h4 {

font-size: 16px;

margin: 0 0 10px 0;

color: gray;

}

p {

font-size: 14px;

margin-bottom: 20px;

color: #444;

}

**Step 5: Run the React App**

npm start

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.

**In Browser:**

**A screenshot of a computer

AI-generated content may be incorrect.**

# ***File name: 14. ReactJS-HOL***

**Step 1: Download & Unzip the Zip File**

Downloaded the zip file employeesapp.zip

Then Extract all and open it on visual code .

**Step 2: Install Dependencies**

npm install

**Step 3: Modify the App.js**

**App.js:**

import React, { useState } from 'react';

import EmployeesList from './EmployeesList';

import ThemeContext from './ThemeContext';

function App() {

const [theme, setTheme] = useState('light');

const toggleTheme = () => {

setTheme(prev => (prev === 'light' ? 'dark' : 'light'));

};

return (

<ThemeContext.Provider value={theme}>

<div style={{ padding: '30px' }}>

<h1>Employee Management</h1>

<button onClick={toggleTheme}>Toggle Theme</button>

<hr />

<EmployeesList />

</div>

</ThemeContext.Provider>

);

}

export default App;

**Step 4: Modified the EmployeesList.js**

**EmployeesList.js:**

import React from 'react';

import EmployeeCard from './EmployeeCard';

function EmployeesList() {

return (

<div>

<h2>Employee List</h2>

<EmployeeCard name="Alice" />

<EmployeeCard name="Bob" />

</div>

);

}

export default EmployeesList;

**Step 5: Modify the EmployeeCard.js**

**EmployeeCard.js:**

import React, { useContext } from 'react';

import ThemeContext from './ThemeContext';

function EmployeeCard({ name }) {

const theme = useContext(ThemeContext);

return (

<div style={{ marginBottom: '15px' }}>

<h3>{name}</h3>

<button className={`${theme}-btn`}>View Profile</button>

</div>

);

}

export default EmployeeCard;

**Step 6: Create the file** **ThemeContext.js inside src folder**

**ThemeContext.js:**

import React from 'react';

const ThemeContext = React.createContext('light');

export default ThemeContext;

**Step 7: Modify the index.js**

**index.js:**

import React from 'react';

import ReactDOM from 'react-dom/client';

import './index.css';

import App from './App';

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

root.render(<App />);

**Step 8: Modify the App.css**

**App.css:**

.light-btn {

background-color: white;

color: black;

padding: 8px 16px;

border: 2px solid #999;

border-radius: 5px;

font-weight: bold;

cursor: pointer;

}

.dark-btn {

background-color: #222;

color: white;

padding: 8px 16px;

border: 2px solid #ccc;

border-radius: 5px;

font-weight: bold;

cursor: pointer;

}

**Step 9: Run the app**

npm start

**Output:**

**A screen shot of a computer

AI-generated content may be incorrect.**

**In Browser:**

1. **Before Click the toggle button:**

**A screenshot of a computer

AI-generated content may be incorrect.**

1. **After Click the toggle button:**

**A screenshot of a computer

AI-generated content may be incorrect.**

# ***File name: 15. ReactJS-HOL***

**Step1: Create React App**

npx create-react-app ticketraisingapp

**Step 2: Created a File ComplaintForm.js**

**ComplaintForm.js:**

import React, { useState } from 'react';

function ComplaintForm() {

const [name, setName] = useState('');

const [complaint, setComplaint] = useState('');

const handleSubmit = (e) => {

e.preventDefault();

const id = Math.floor(Math.random() \* 100); // 0–99 transaction ID

alert(`Thanks ${name}\nYour Complaint was Submitted.\nTransaction ID is: ${id}`)

setName('');

setComplaint('');

};

return (

<div style={{ textAlign: 'center', marginTop: '40px' }}>

<h2 style={{ color: 'red', fontWeight: 'bold' }}>

Register your complaints here!!!

</h2>

<form onSubmit={handleSubmit}>

<label><strong>Name:</strong></label>{' '}

<input

type="text"

value={name}

onChange={(e) => setName(e.target.value)}

required

/><br /><br />

<label><strong>Complaint:</strong></label>{' '}

<textarea

rows="3"

value={complaint}

onChange={(e) => setComplaint(e.target.value)}

required

/><br /><br />

<button type="submit">Submit</button>

</form>

</div>

);

}

export default ComplaintForm;

**Step 3: Update App.js**

**App.js:**

import React from 'react';

import ComplaintForm from './ComplaintForm';

function App() {

return (

<div>

<ComplaintForm />

</div>

);

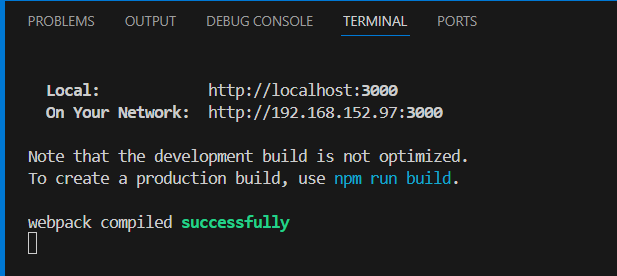
}

export default App;

**4. Start the App**

npm start

**Ouput:**



**In Browser:**

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

# ***File name: 16. ReactJS-HOL***

**STEP 1: Create React App**

npx create-react-app mailregisterapp

**STEP 2: Create a Component File**

Inside src, created a file named as Register.js

**STEP 3: Register.js**

import React, { useState } from 'react';

function Register() {

const [name, setName] = useState('');

const [email, setEmail] = useState('');

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

const handleSubmit = (e) => {

e.preventDefault();

if (name.length < 5) {

alert('Full Name must be 5 characters long!');

return;

}

if (!email.includes('@') || !email.includes('.')) {

alert('Email is not valid!');

return;

}

if (password.length < 8) {

alert('Password must be 8 characters!');

return;

}

alert(`Thanks ${name},\nYou have successfully registered.\nYour email is ${email}`);

setName('');

setEmail('');

setPassword('');

};

return (

<div style={{ textAlign: 'center', paddingTop: '40px' }}>

<h2 style={{ color: 'red', fontWeight: 'bold' }}>Register Here!!!</h2>

<form onSubmit={handleSubmit}>

<label><strong>Name:</strong></label>{' '}

<input

type="text"

value={name}

onChange={(e) => setName(e.target.value)}

required

/><br /><br />

<label><strong>Email:</strong></label>{' '}

<input

type="text" // 👈 not email – allows manual validation

value={email}

onChange={(e) => setEmail(e.target.value)}

required

/><br /><br />

<label><strong>Password:</strong></label>{' '}

<input

type="password"

value={password}

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

required

/><br /><br />

<button type="submit">Submit</button>

</form>

</div>

);

}

export default Register;

**STEP 4: Use This Component in App.js**

import React from 'react';

import Register from './Register';

function App() {

return (

<div>

<Register />

</div>

);

}

export default App;

**STEP 5: Run the App**

npm start

**Output:**

A screenshot of a computer

AI-generated content may be incorrect.

**In Browser:**

* For Name:

A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.

* For Email:

A screenshot of a computer screen

AI-generated content may be incorrect.

* For Password:

A screenshot of a computer

AI-generated content may be incorrect.

* Final Output:

A screenshot of a computer screen

AI-generated content may be incorrect.

# ***File name: 17. ReactJS-HOL***

**Step 1: Create the React App**

npx create-react-app fetchuserapp

**Step 2: Move into the Project Folder**

cd fetchuserapp

**Step 3: Create a Component File**

Created a new file Getuser.js inside src

**Step 4: Add Code to Getuser.js**

**Getuser.js:**

import React from 'react';

class Getuser extends React.Component {

constructor() {

super();

this.state = {

user: null

};

}

componentDidMount() {

fetch('https://api.randomuser.me/')

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

.then(data => {

this.setState({ user: data.results[0] });

});

}

render() {

const { user } = this.state;

return (

<div>

<h1>Random User Details</h1>

{user ? (

<div>

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

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

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

</div>

) : (

<p>Loading user...</p>

)}

</div>

);

}

}

export default Getuser;

**Step 5: Modify App.js to Use Getuser**

**App.js:**

import React from 'react';

import './App.css';

import Getuser from './Getuser';

function App() {

return (

<div className="App">

<Getuser />

</div>

);

}

export default App;

**Step 6: Start the Application**

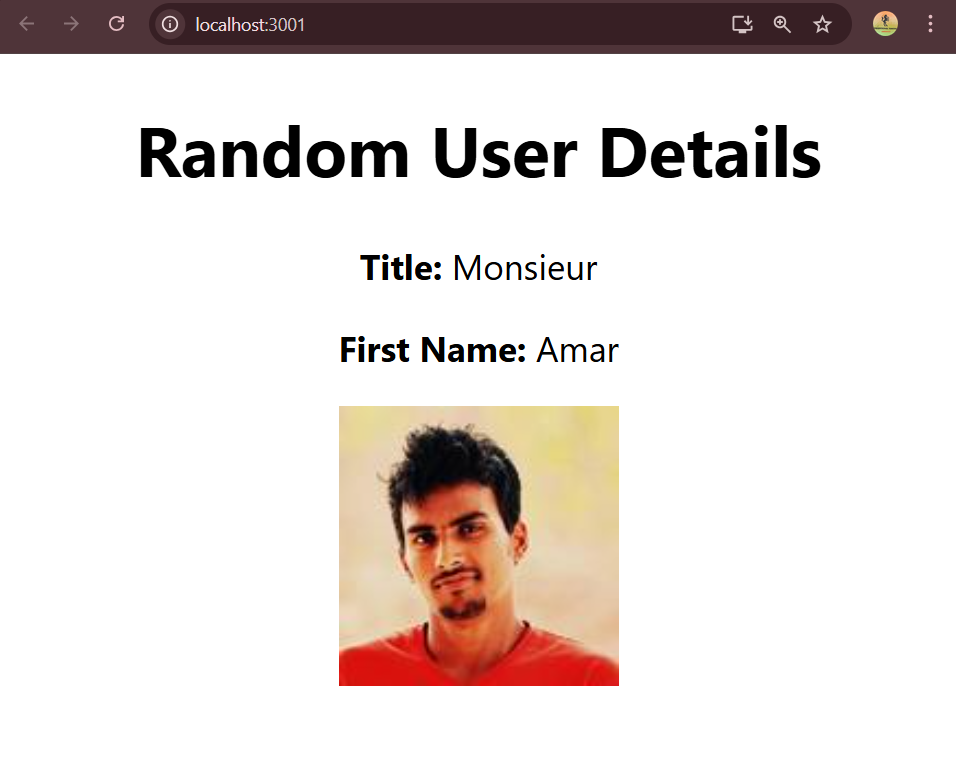
npm start

**Output:**

A screenshot of a computer program

AI-generated content may be incorrect.

**n Browser:**



A screenshot of a computer

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.