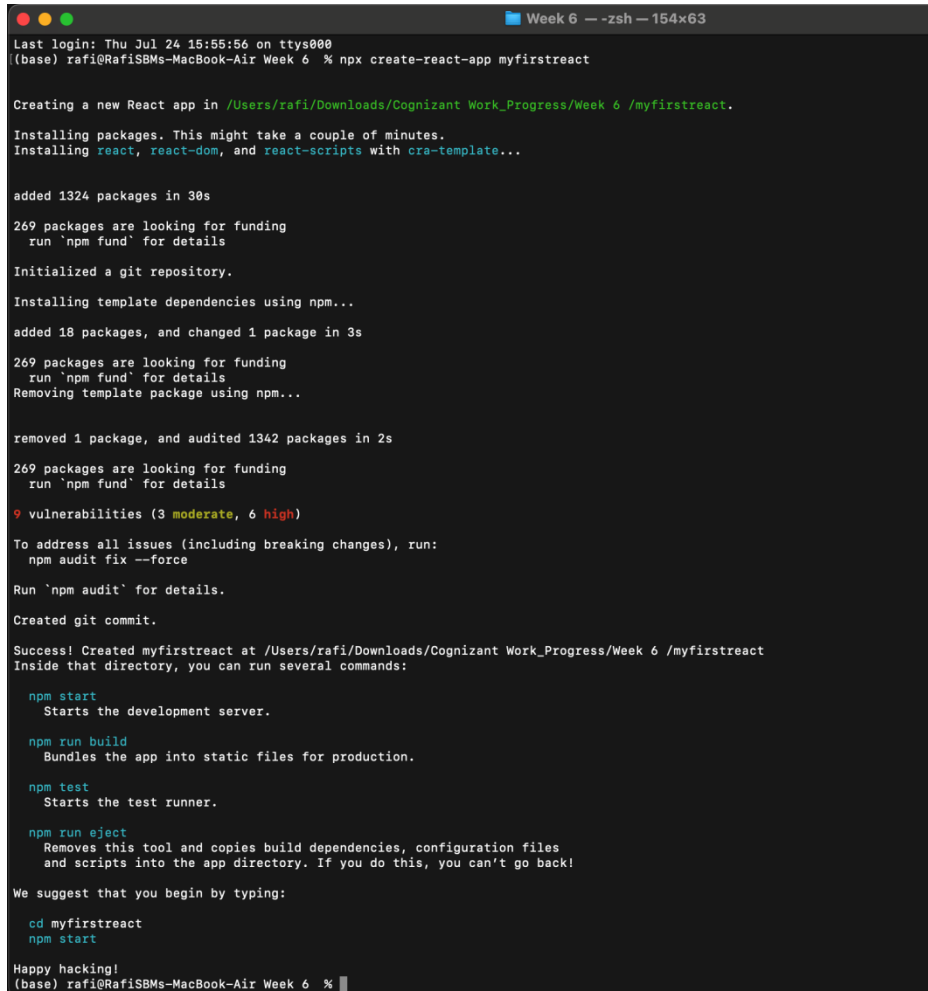


HANDSON EXERCISES - WEEK 6**Skill : React****File : 1. ReactJS-HOL.docx****Exercise : My First React Application**A terminal window titled 'Week 6 -- zsh -- 154x63' showing the command 'npx create-react-app myfirstreact' being executed. The output shows the creation of a new React app, installation of packages (react, react-dom, react-scripts), and a successful git commit. It also lists several npm commands like 'npm start', 'npm run build', 'npm test', and 'npm run eject' with their descriptions. The terminal ends with 'Happy hacking!' and the prompt '(base) rafi@RafisBMs-MacBook-Air Week 6 %'.

```
Last login: Thu Jul 24 15:55:56 on ttys000
(base) rafi@RafisBMs-MacBook-Air Week 6 % npx create-react-app myfirstreact

Creating a new React app in /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /myfirstreact.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

added 1324 packages in 30s
269 packages are looking for funding
  run `npm fund` for details

Initialized a git repository.
Installing template dependencies using npm...
added 18 packages, and changed 1 package in 3s
269 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...

removed 1 package, and audited 1342 packages in 2s
269 packages are looking for funding
  run `npm fund` for details
9 vulnerabilities (3 moderate, 6 high)
To address all issues (including breaking changes), run:
  npm audit fix --force
Run `npm audit` for details.
Created git commit.

Success! Created myfirstreact at /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /myfirstreact
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd myfirstreact
  npm start

Happy hacking!
(base) rafi@RafisBMs-MacBook-Air Week 6 %
```

App.js :

```
import React from 'react';
```

```
function App() {
```

```
  return (
```

```
    <div>
```

```
      <h1>Welcome to the first session of React</h1>
```

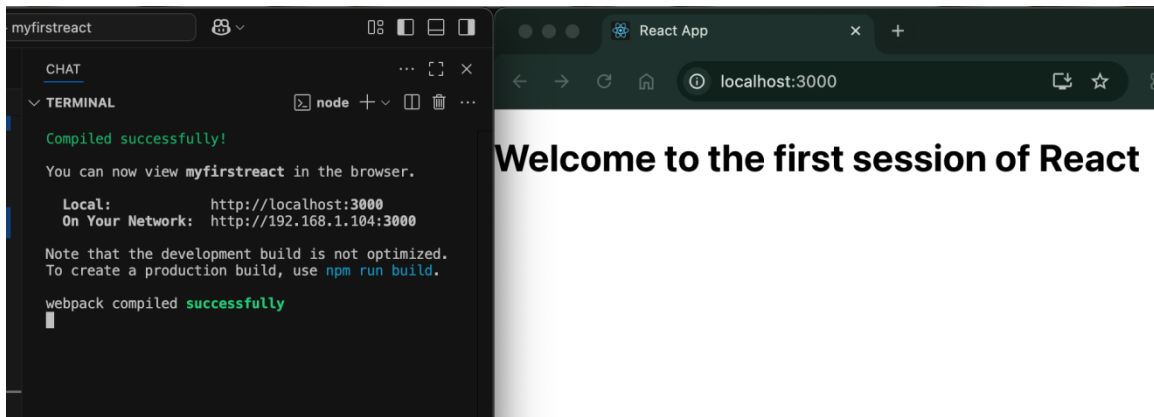
```
    </div>
```

```
  );
```

```
}
```

```
export default App;
```

Output :



File : 2. ReactJS-HOL.docx

Exercise : My First React Application

```
Week 6 --zsh-- 112x62
((base) rafi@RafisBMs-MacBook-Air Week 6 % npx create-react-app student-app

Creating a new React app in /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /student-app.
Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

added 1324 packages in 26s
269 packages are looking for funding
  run `npm fund` for details
Initialized a git repository.
Installing template dependencies using npm...
added 18 packages, and changed 1 package in 3s
269 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...

removed 1 package, and audited 1342 packages in 3s
269 packages are looking for funding
  run `npm fund` for details
9 vulnerabilities (3 moderate, 6 high)
To address all issues (including breaking changes), run:
  npm audit fix --force
Run `npm audit` for details.
Created git commit.

Success! Created student-app at /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /student-app
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd student-app
  npm start

Happy hacking!
(base) rafi@RafisBMs-MacBook-Air Week 6 %
```

Home.js :

```
import React from 'react';

function Home() {
  return (
    <div>
      <h2>Welcome to the Home page of Student Management Portal</h2>
    </div>
  );
}
export default Home;
```

About.js :

```
import React from 'react';

function About() {
  return (
    <div>
      <h2>Welcome to the About page of the Student Management Portal</h2>
    </div>
  );
}
export default About;
```

Contact.js :

```
import React from 'react';

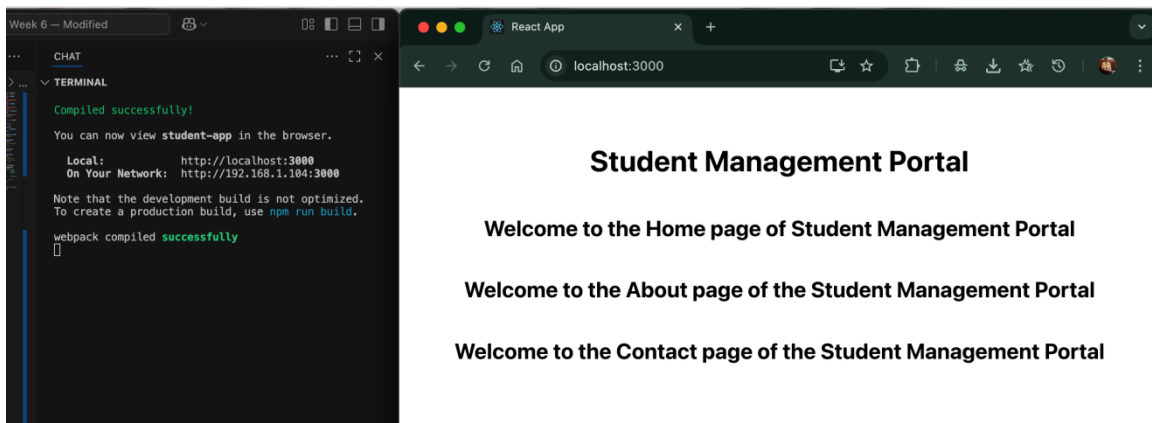
function Contact() {
  return (
    <div>
      <h2>Welcome to the Contact page of the Student Management Portal</h2>
    </div>
  );
}
export default Contact;
```

App.js :

```
import React from 'react';
import Home from './Components/Home';
import About from './Components/About';
import Contact from './Components/Contact';

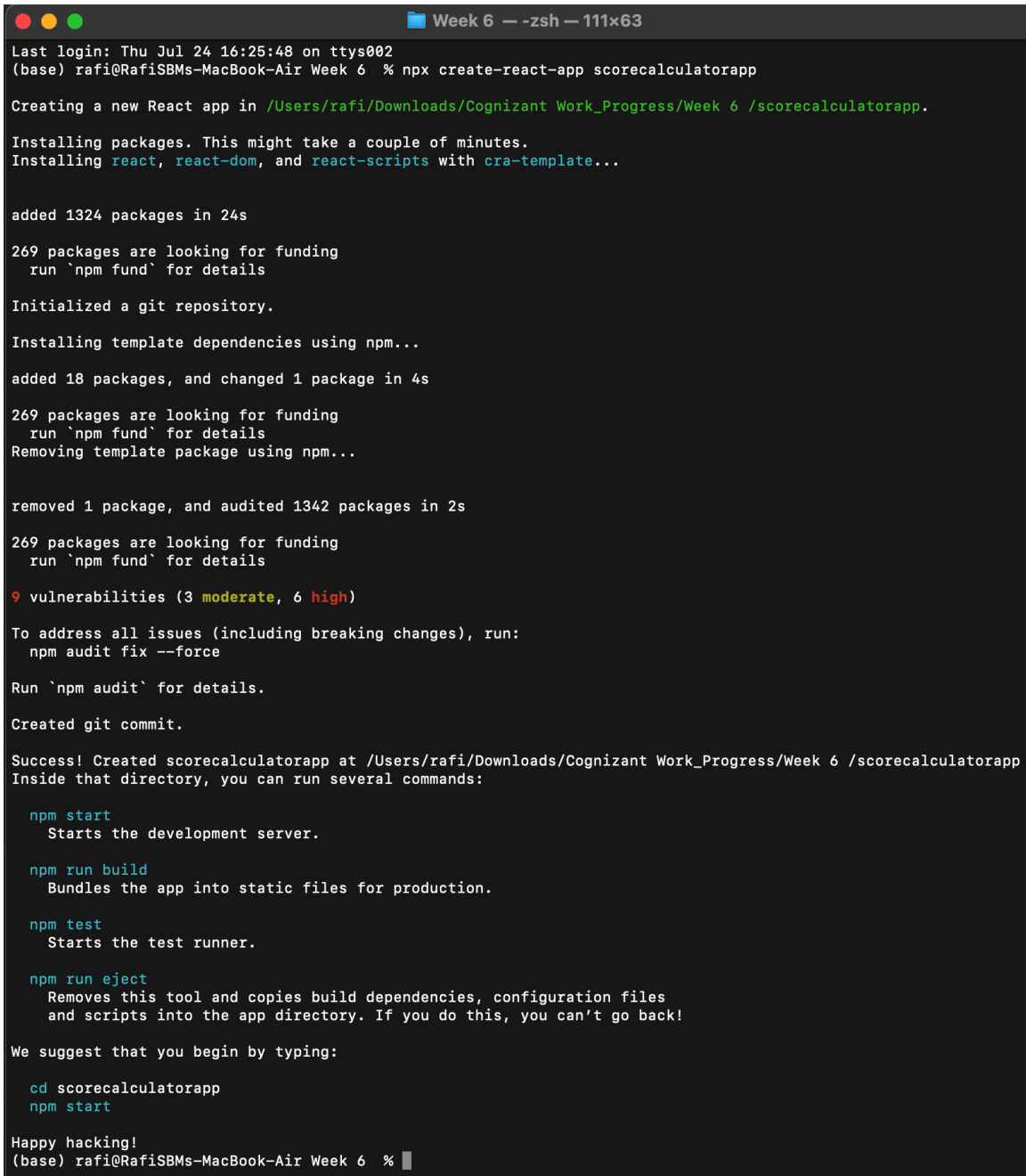
function App() {
  return (
    <div style={{
      display: 'flex',
      flexDirection: 'column',
      alignItems: 'center',    // horizontal center
      textAlign: 'center',
      marginTop: '40px'      // spacing from the top
    }}>
      <h1>Student Management Portal</h1>
      <Home />
      <About />
      <Contact />
    </div>
  );
}

export default App;
```

OUTPUT :

File : 3. ReactJS-HOL.docx

Exercise : Funcitonal Component with Props and External Styles



```
Week 6 --zsh-- 111x63
Last login: Thu Jul 24 16:25:48 on ttys002
(base) rafi@RafisBMs-MacBook-Air Week 6 % npx create-react-app scorecalculatorapp

Creating a new React app in /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /scorecalculatorapp.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

added 1324 packages in 24s
269 packages are looking for funding
  run `npm fund` for details
Initialized a git repository.
Installing template dependencies using npm...
added 18 packages, and changed 1 package in 4s
269 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...

removed 1 package, and audited 1342 packages in 2s
269 packages are looking for funding
  run `npm fund` for details
9 vulnerabilities (3 moderate, 6 high)

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

Created git commit.

Success! Created scorecalculatorapp at /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /scorecalculatorapp
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd scorecalculatorapp
  npm start

Happy hacking!
(base) rafi@RafisBMs-MacBook-Air Week 6 %
```

CalculateScore.js :

```
import React from 'react';

import '../Stylesheets/mystyle.css';

function CalculateScore(props) {
  const average = props.Total / props.Goal;
```

```
return (  
  <div className="score-box">  
    <h2>Student Score Report</h2>  
    <p><strong>Name:</strong> {props.Name}</p>  
    <p><strong>School:</strong> {props.School}</p>  
    <p><strong>Total Score:</strong> {props.Total}</p>  
    <p><strong>Goal:</strong> {props.Goal}</p>  
    <p><strong>Average Score:</strong> {average.toFixed(2)}</p>  
  </div>  
);  
}  
export default CalculateScore;
```

mystyle.css :

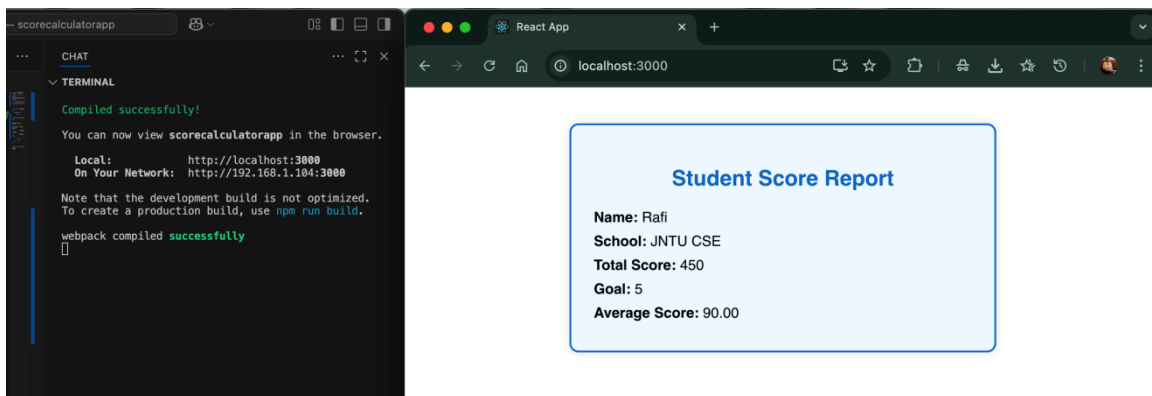
```
.score-box {  
  width: 50%;  
  margin: 40px auto;  
  padding: 25px;  
  background-color: #f0f8ff;  
  border: 2px solid #007acc;  
  border-radius: 10px;  
  box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);  
  text-align: left;  
  font-family: 'Segoe UI', sans-serif;  
}  
  
.score-box h2 {  
  text-align: center;  
  color: #007acc;  
}  
  
.score-box p {  
  font-size: 16px;  
  margin: 8px 0;  
}
```

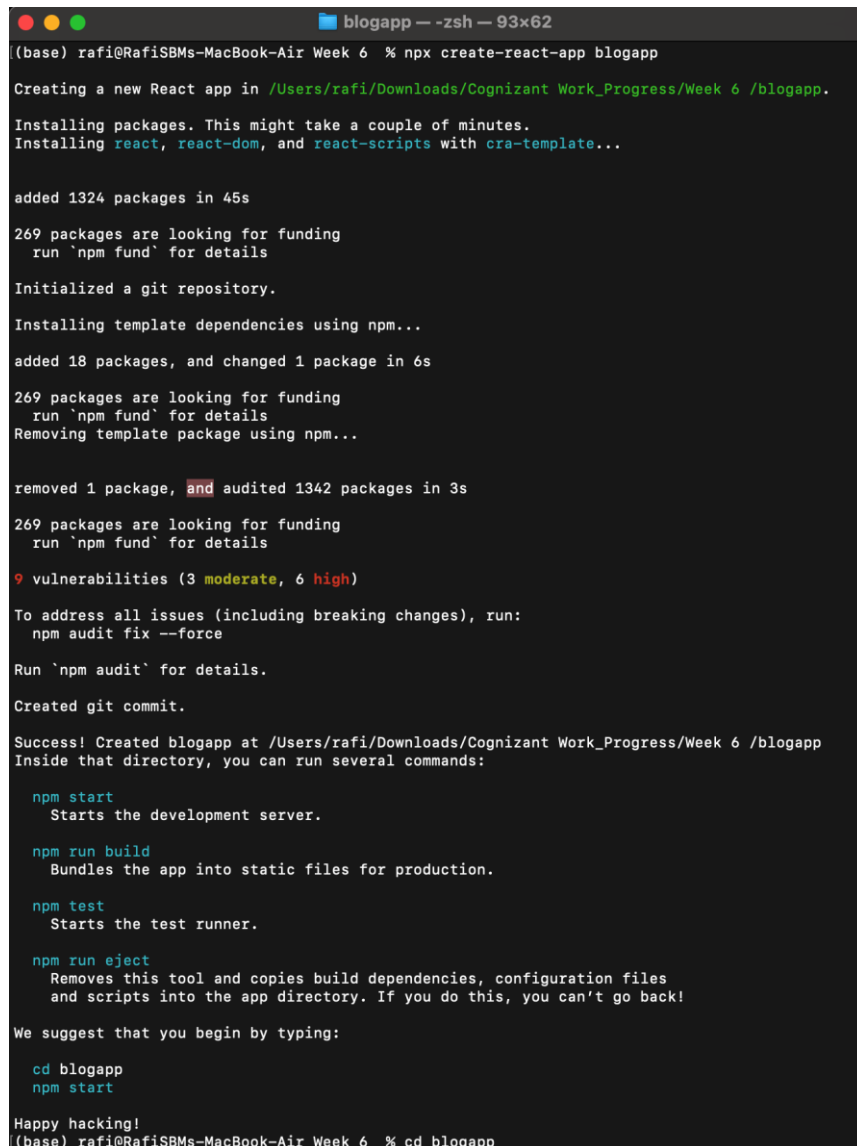
App.js :

```
import React from 'react';
import CalculateScore from './Components/CalculateScore';

function App() {
  return (
    <div>
      <CalculateScore
        Name="Rafi"
        School="JNTU CSE"
        Total={450}
        Goal={5}
      />
    </div>
  );
}

export default App;
```

OUTPUT :

File : 4. ReactJS-HOL.docx**Exercise : Working with React Lifecycle Methods**

```
blogapp — zsh — 93x62
(base) rafi@RafiSBMs-MacBook-Air Week 6 % npx create-react-app blogapp
Creating a new React app in /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /blogapp.
Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

added 1324 packages in 45s
269 packages are looking for funding
  run `npm fund` for details
Initialized a git repository.
Installing template dependencies using npm...
added 18 packages, and changed 1 package in 6s
269 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...

removed 1 package, and audited 1342 packages in 3s
269 packages are looking for funding
  run `npm fund` for details
9 vulnerabilities (3 moderate, 6 high)
To address all issues (including breaking changes), run:
  npm audit fix --force
Run `npm audit` for details.
Created git commit.
Success! Created blogapp at /Users/rafi/Downloads/Cognizant Work_Progress/Week 6 /blogapp
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd blogapp
  npm start

Happy hacking!
(base) rafi@RafiSBMs-MacBook-Air Week 6 % cd blogapp
```

Post.js :

```
import React from 'react';
function Post({ title, body }) {
  return (
    <div className="post">
      <h3>{title}</h3>
      <p>{body}</p>
    </div>
  );
}
export default Post;
```


Posts.js :

```
import React, { Component } from 'react';
import Post from './Post';

class Posts extends Component {
  constructor(props) {
    super(props);
    this.state = {
      posts: [],
      hasError: false,
    };
  }
  componentDidMount() {
    this.loadPosts();
  }
  loadPosts() {
    fetch('https://jsonplaceholder.typicode.com/posts')
      .then(response => response.json())
      .then(data => this.setState({ posts: data.slice(0, 5) })) // limiting to 5 for display
      .catch(error => {
        console.error('Error fetching posts:', error);
        this.setState({ hasError: true });
      });
  }

  componentDidCatch(error, info) {
    alert("An error occurred: " + error.message);
    this.setState({ hasError: true });
  }

  render() {
    if (this.state.hasError) {
      return <h2>Something went wrong while loading posts.</h2>;
    }
  }
}
```

```

return (
  <div>
    <h1>Blog Posts</h1>
    {this.state.posts.map(post => (
      <Post key={post.id} title={post.title} body={post.body} />
    ))}
  </div>
);
}
}

```

export default Posts;

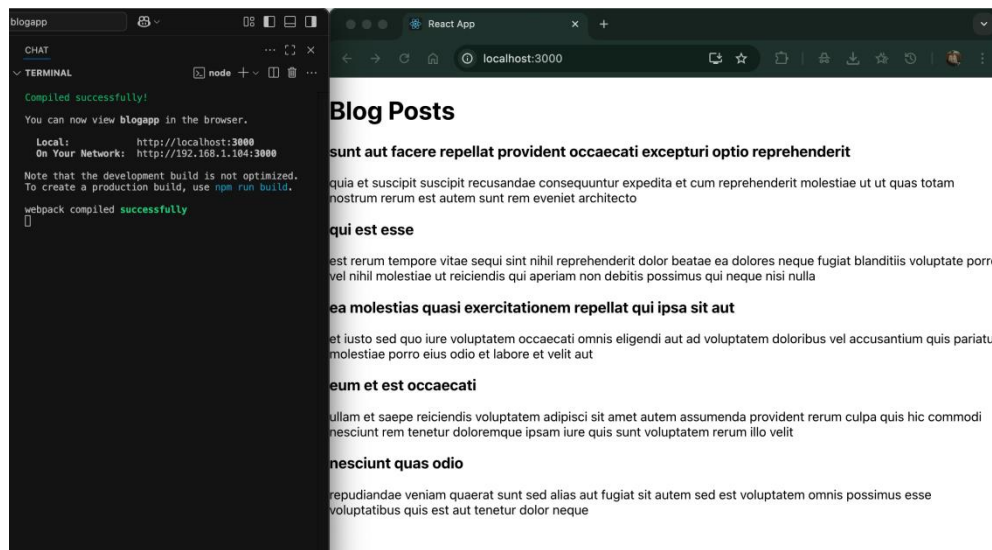
App.js :

```

import React from 'react';
import Posts from './Posts';
function App() {
  return (
    <div className="App">
      <Posts />
    </div>
  );
}
export default App;

```

OUTPUT :



File : 5. ReactJS-HOL.docx**Exercise : Styling React Components with CSS Modules & Inline Styles****src/components/CohortDetails.module.css :**

```
.box {  
  width: 300px;  
  display: inline-block;  
  vertical-align: top;  
  margin: 10px;  
  padding: 10px 20px;  
  border: 1px solid black;  
  border-radius: 10px;  
  font-family: 'Segoe UI', sans-serif;  
  text-align: left;  
}
```

```
dt {  
  font-weight: 500;  
  margin-top: 8px;  
}
```

src/components/CohortDetails.js :

```
import React from 'react';  
import styles from './CohortDetails.module.css';  
  
function CohortDetails({ name, status, startDate, coach, trainer }) {  
  const headingStyle = {  
    color: status.toLowerCase() === 'ongoing' ? 'green' : 'blue',  
    fontWeight: 'bold'  
  };  
};  
  
return (  
  <div className={styles.box}>  
    <h3 style={headingStyle}>{name}</h3>  
    <dl>  
      <dt>Started On</dt>
```

```
        <dd>{ startDate }</dd>
        <dt>Current Status</dt>
        <dd>{ status }</dd>
        <dt>Coach</dt>
        <dd>{ coach }</dd>
        <dt>Trainer</dt>
        <dd>{ trainer }</dd>
    </dl>
</div>
);
}
```

```
export default CohortDetails;
```

App.js

```
import React from 'react';
import CohortDetails from './components/CohortDetails';

function App() {
  return (
    <div style={{ padding: '20px' }}>
      <h2 style={{ textAlign: 'left' }}>Cohorts Details</h2>

      <div>
        <CohortDetails
          name="INTADMDF10 - .NET FSD"
          status="Scheduled"
          startDate="22-Feb-2022"
          coach="Aathma"
          trainer="Jojo Jose"
        />

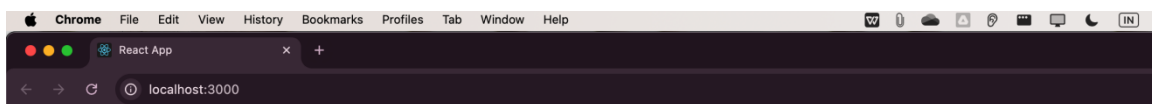
        <CohortDetails
          name="ADM21JF014 - Java FSD"
          status="Ongoing"
```

```
        startDate="10-Sep-2021"
        coach="Apoorv"
        trainer="Elisa Smith"
    />

    <CohortDetails
        name="CDBJF21025 - Java FSD"
        status="Ongoing"
        startDate="24-Dec-2021"
        coach="Aathma"
        trainer="John Doe"
    />
</div>
</div>
);
}
```

export default App;

OUTPUT :



Cohorts Details

INTADMDF10 - .NET FSD	ADM21JF014 - Java FSD	CDBJF21025 - Java FSD
Started On 22-Feb-2022	Started On 10-Sep-2021	Started On 24-Dec-2021
Current Status Scheduled	Current Status Ongoing	Current Status Ongoing
Coach Aathma	Coach Apoorv	Coach Aathma
Trainer Jojo Jose	Trainer Elisa Smith	Trainer John Doe

File : 6. ReactJS-HOL.docx**Exercise : Implementing Navigation & Parameterized Routes in React
trainer.js :**

```
class Trainer {  
  constructor(TrainerId, Name, Email, Phone, Technology, Skills) {  
    this.TrainerId = TrainerId;  
    this.Name = Name;  
    this.Email = Email;  
    this.Phone = Phone;  
    this.Technology = Technology;  
    this.Skills = Skills;  
  }  
}  
  
export default Trainer;
```

TrainersMock.js :

```
import Trainer from "../trainer";  
  
const trainers = [  
  new Trainer(101, "Aathma", "aathma@abc.com", "9876543210", "Java", ["Spring",  
    "Hibernate"]),  
  new Trainer(102, "Jojo", "jojo@abc.com", "9876543211", "React", ["Hooks",  
    "Redux"]),  
  new Trainer(103, "John", "john@abc.com", "9876543212", "Python", ["Flask",  
    "Django"]),  
];  
  
export default trainers;
```

components/Home.js :

```
import React from 'react';  
  
function Home() {  
  return (  

```

```
<div>
  <h2>Welcome to Cognizant Trainer Portal</h2>
  <p>This SPA shows the list of trainers and their details.</p>
</div>

);
}
```

export default Home;

components/TrainerList.js :

```
import React from 'react';
import { Link } from 'react-router-dom';
import trainers from '../TrainerMock';

function TrainerList() {
  return (
    <div>
      <h2>Trainer List</h2>
      <ul>
        {trainers.map((t) => (
          <li key={t.TrainerId}>
            <Link to={`/${trainers}/${t.TrainerId}`}>{t.Name}</Link>
          </li>
        ))}
      </ul>
    </div>
  );
}
```

export default TrainerList;

components/TrainerDetails.js :

```
import React from 'react';
import { useParams } from 'react-router-dom';
import trainers from '../TrainerMock';

function TrainerDetails() {
```

```
const { id } = useParams();
const trainer = trainers.find(t => t.TrainerId === parseInt(id));

if (!trainer) return <p>Trainer not found!</p>;

return (
  <div>
    <h2>{trainer.Name}</h2>
    <p><strong>Email:</strong> {trainer.Email}</p>
    <p><strong>Phone:</strong> {trainer.Phone}</p>
    <p><strong>Technology:</strong> {trainer.Technology}</p>
    <p><strong>Skills:</strong> {trainer.Skills.join(', ')}</p>
  </div>
);
}
```

export default TrainerDetails;

App.js :

```
import React from 'react';
import { BrowserRouter, Routes, Route, Link } from 'react-router-dom';
import Home from './components/Home';
import TrainerList from './components/TrainerList';
import TrainerDetails from './components/TrainerDetails';
```

```
function App() {
  return (
    <BrowserRouter>
      <div style={{ padding: "10px" }}>
        <nav>
          <Link to="/" style={{ marginRight: "15px" }}>Home</Link>
          <Link to="/trainers">Trainers</Link>
        </nav>
        <hr />
      </div>
    </BrowserRouter>
  );
}
```



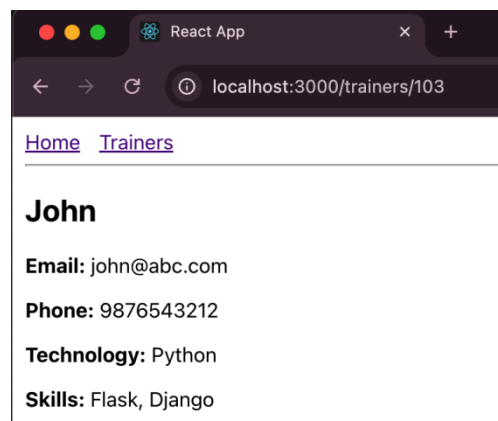
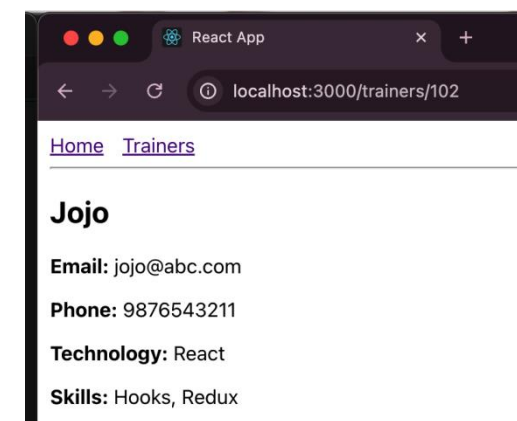
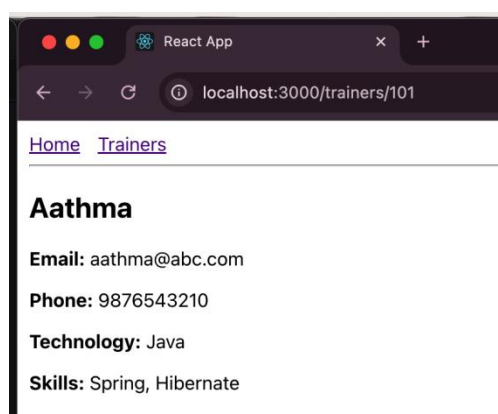
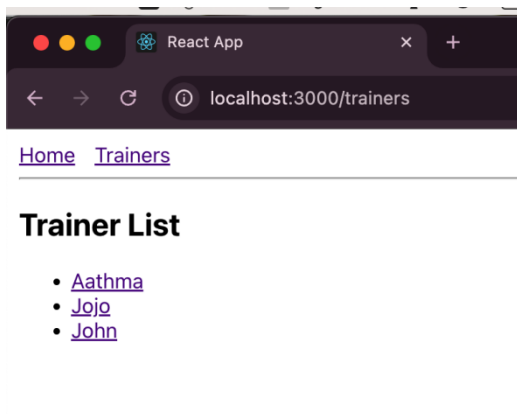
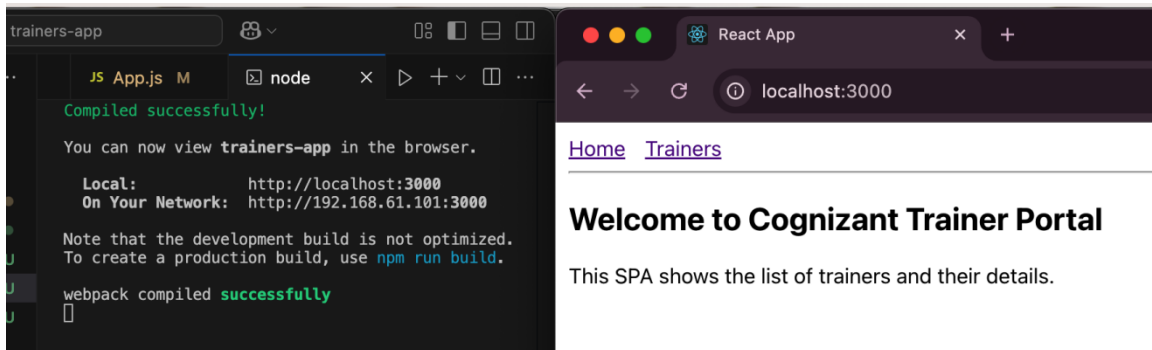
```

<Routes>
  <Route path="/" element={<Home />} />
  <Route path="/trainers" element={<TrainerList />} />
  <Route path="/trainers/:id" element={<TrainerDetails />} />
</Routes>
</div>
</BrowserRouter>
);
}

```

export default App;

OUTPUT :



File : 7. ReactJS-HOL.docx**Exercise : Building a ShoppingApp with Class Components and Props
in React****components/OnlineShopping.js :**

```
import React, { Component } from 'react';  
import Cart from './Cart';
```

```
class OnlineShopping extends Component {  
  render() {  
    const items = [  
      { itemname: "Laptop", price: 80000 },  
      { itemname: "TV", price: 120000 },  
      { itemname: "Washing Machine", price: 50000 },  
      { itemname: "Mobile", price: 30000 },  
      { itemname: "Fridge", price: 70000 }  
    ];  
  
    return (  
      <div style={{ textAlign: 'center', fontFamily: 'Segoe UI, sans-serif', marginTop:  
'40px' }}>  
        <h2 style={{  
          color: 'green',  
          fontWeight: '600',  
          fontSize: '22px',  
          marginBottom: '20px'  
        }}>  
          Items Ordered :  
        </h2>  
  
        <table style={{  
          margin: '0 auto',  
          borderCollapse: 'collapse',  
          border: '1px solid #ccc'  
        }}>
```

```
<thead>
  <tr>
    <th style={{
      border: '1px solid #ccc',
      padding: '6px 20px',
      color: 'seagreen',
      fontWeight: '600',
      fontSize: '14px'
    }}>
      Name
    </th>
    <th style={{
      border: '1px solid #ccc',
      padding: '6px 20px',
      color: 'seagreen',
      fontWeight: '600',
      fontSize: '14px'
    }}>
      Price
    </th>
  </tr>
</thead>
<tbody>
  {items.map((item, index) => (
    <Cart key={index} itemname={item.itemname} price={item.price} />
  ))}
</tbody>
</table>
</div>
);
}
```

```
export default OnlineShopping;
```

index.js :

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import App from './App';

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<App />);
```

App.js :

```
import React from 'react';
import OnlineShopping from './components/OnlineShopping';
```

```
function App() {
  return (
    <div>
      <OnlineShopping />
    </div>
  );
}
```

```
export default App;
```

components/Cart.js :

```
import React, { Component } from 'react';
```

```
class Cart extends Component {
  render() {
    return (
      <tr>
        <td style={{
          border: '1px solid #ccc',
          padding: '6px 20px',
          color: 'seagreen',
          fontWeight: '500',
          fontSize: '14px',
```

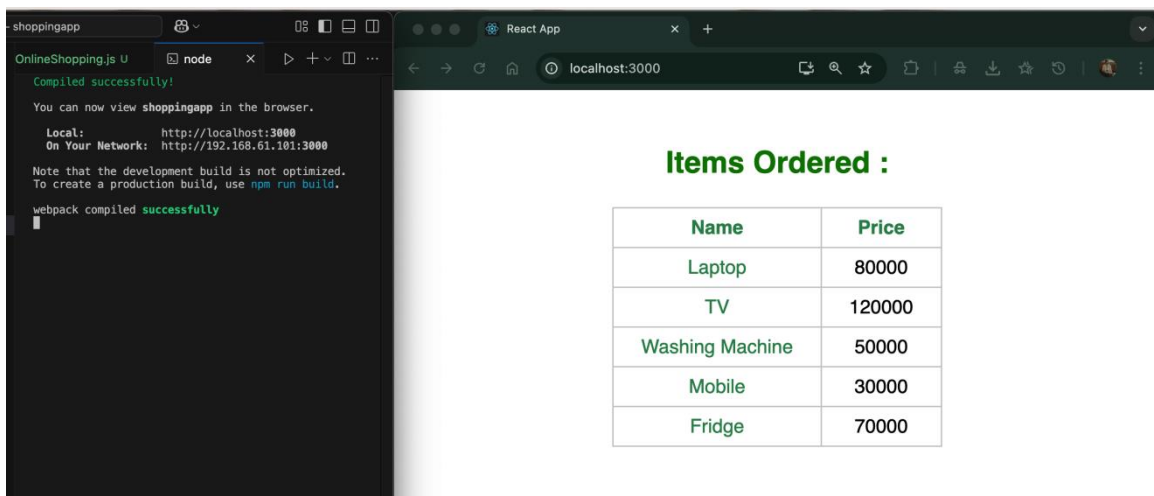
```

    fontFamily: 'Segoe UI, sans-serif',
    textAlign: 'center'
  }}>
    {this.props.itemname}
  </td>
  <td style={{
    border: '1px solid #ccc',
    padding: '6px 20px',
    fontSize: '14px',
    fontFamily: 'Segoe UI, sans-serif',
    textAlign: 'center'
  }}>
    {this.props.price}
  </td>
</tr>
);
}
}

```

export default Cart;

OUTPUT :



Items Ordered :

Name	Price
Laptop	80000
TV	120000
Washing Machine	50000
Mobile	30000
Fridge	70000

File : 8. ReactJS-HOL.docx**Exercise : Implementing State Management with Class Components in React****App.js :**

```
import React from 'react';  
import './App.css';
```

```
class CountPeople extends React.Component {  
  constructor(props) {  
    super(props);  
    this.state = {  
      entryCount: 0,  
      exitCount: 0  
    };  
  }  

```

```
  updateEntry = () => {  
    this.setState(prevState => ({  
      entryCount: prevState.entryCount + 1  
    }));  
  }  

```

```
  updateExit = () => {  
    this.setState(prevState => ({  
      exitCount: prevState.exitCount + 1  
    }));  
  }  

```

```
  render() {  
    return (  
      <div className="container">  
        <div className="counter">  
          <button className="login-btn" onClick={this.updateEntry}>Login</button>  
          <span>{this.state.entryCount} People Entered!!!</span>  

```

```
    </div>
    <div className="counter">
      <button className="exit-btn" onClick={this.updateExit}>Exit</button>
      <span>{this.state.exitCount} People Left!!!</span>
    </div>
  </div>
);
}
}
export default CountPeople;
```

App.css :

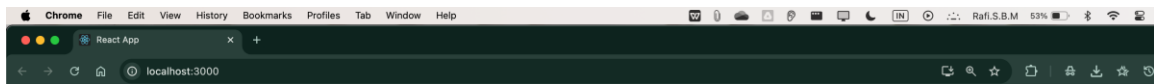
```
.container {
  display: flex;
  justify-content: space-around;
  align-items: center;
  margin-top: 100px;
  font-size: 18px;
  font-family: sans-serif;
}
```

```
.counter {
  display: flex;
  align-items: center;
  gap: 10px;
}
```

```
.login-btn,
.exit-btn {
  background-color: lightgreen;
  border: 1px solid green;
  padding: 5px 10px;
  font-weight: bold;
  cursor: pointer;
}
```

```
.login-btn:hover,  
.exit-btn:hover {  
  background-color: green;  
  color: white;  
}
```

OUTPUT :



Login 3 People Entered!!!

Exit 2 People Left!!!