

Lesson 03 Demo 03

Create a React Program to Implement a Timer

Objective: To create a React program to implement a timer

Tools Required: Node terminal, React app, and Visual Studio Code

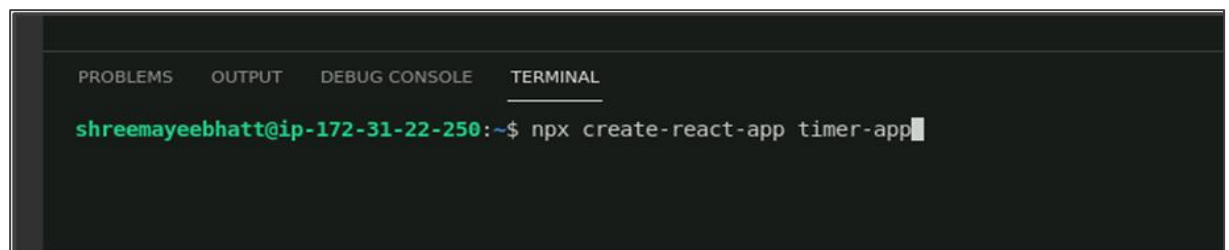
Prerequisites: Knowledge of creating a React app and understanding of the folder structure

Steps to be followed:

1. Create a new **React** app
2. Configure the file **src/App.js**
3. Create a new file called **Timer.js**
4. Run the app and verify the functionality

Step 1: Create a new React app

- 1.1. Open your terminal and run the following command to create a new **React** app:
npx create-react-app timer-app

A screenshot of a terminal window with a dark background. At the top, there are tabs labeled 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL'. The 'TERMINAL' tab is active. The terminal shows a prompt 'shreemayeebhatt@ip-172-31-22-250:~\$' followed by the command 'npx create-react-app timer-app' and a cursor at the end of the line.

This will create a new **React** app in a directory named **timer-app**.

- 1.2. Navigate to the newly created directory by running the command **cd timer-app**

Step 2: Configure the file src/App.js

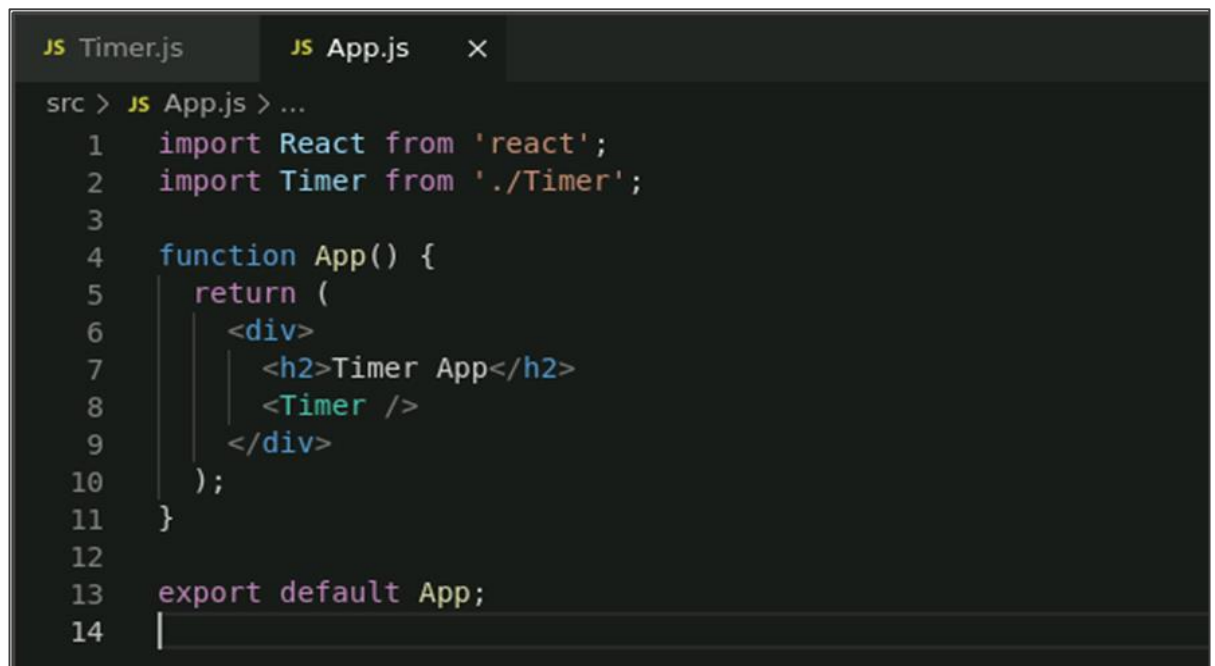
- 2.1 Open the React project in the Visual Studio code and navigate through the project directory of **timer-app** to open the **src/App.js** file. and replace the code in **App.js** with the following code:

```
import React from 'react';
import Timer from './Timer';

function App() {
  return (
    <div>
      <h2>Timer App</h2>
      <Timer />

    </div>
  );
}

export default App;
```



```
JS Timer.js JS App.js ×
src > JS App.js > ...
1  import React from 'react';
2  import Timer from './Timer';
3
4  function App() {
5    return (
6      <div>
7        <h2>Timer App</h2>
8        <Timer />
9      </div>
10   );
11 }
12
13 export default App;
14 |
```

This code defines the **App** component that renders the **Timer** component.

Step 3: Create a new file called Timer.js

3.1 In your code editor, create a new file called **Timer.js** inside the **src** directory

3.2 Copy and paste the provided code into the **Timer.js** file

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

class Timer extends Component {
  constructor(props) {
    super(props);
    this.state = {
      seconds: 0
    };
  }
  componentDidMount() {
    this.intervalId = setInterval(() => {
      this.setState(prevState => ({
        seconds: prevState.seconds + 1
      }));
    }, 1000);
  }
  componentWillUnmount() {
    clearInterval(this.intervalId);
  }
  render() {
    return (
      <div>
        <h1>Timer: {this.state.seconds} seconds</h1>
        <button onClick={() => this.setState({ seconds: 0 })}>Reset</button>
      </div>
    );
  }
}

export default Timer;
```

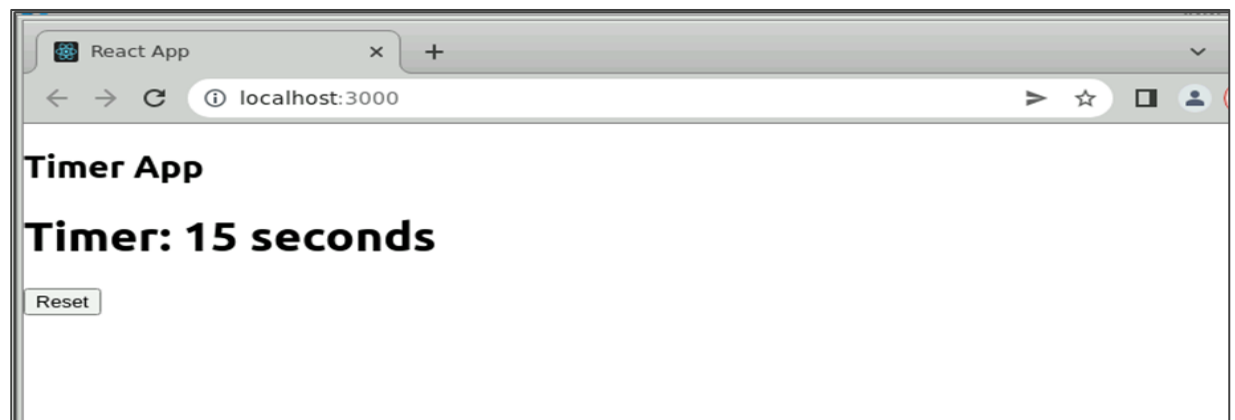
```

src > JS Timer.js
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3  class Timer extends Component {
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8      };
9    }
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11   componentDidMount() {
12     this.intervalId = setInterval(() => {
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25       <div>
26         <h1>Timer: {this.state.seconds} seconds</h1>
27         <button onClick={() => this.setState({ seconds: 0 })}>Reset</button>
28       </div>
29     );
30   }
31 }
32
33 export default Timer;
34

```

Step 4: Run the App and verify the functionality

- 4.1 Go to the terminal, and execute the command **npm start** within the project directory **timer-app** to run the app
- 4.2 Once the server starts successfully, open **http://localhost:3000** in your browser to view and check the functionality of the app



In the browser, you will see the heading **Timer App** and a display of the seconds elapsed in the timer, starting from 0. The timer will increment by 1 every second. You can click on the **Reset** button to set the timer back to 0.

With this, you've implemented a **Timer app** using React.