Experiment 1

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Semester: 6th **Date of Performance:**
Subject Name: Full Stack II **Subject Code: 23CSH-382**

1. Aim:

To design and develop a web-based Environmental Impact Tracker (EcoTrack) that calculates and categorizes carbon footprint based on different daily activities using ReactJS.

2. Objective:

The main objectives of this experiment are:

- To understand the use of React components for UI development
- To calculate total carbon footprint using JavaScript logic
- To classify activities into High Carbon and Low Carbon emissions
- To design a minimalist and user-friendly dashboard UI
- To improve understanding of arrays, filter, reduce, and conditional rendering

3. Implementation/Code:

=>App.jsx

```jsx
import DashBoard from "./pages/DashBoard.jsx";
import Log from "./pages/Log.jsx";



function App() {

  return (<>
    <DashBoard />
    <p>Welcome to EcoTrack!</p>
    {}
    <Log />
  </>
```

```
  )
}

export default App
```

=>logs.js

```
const logs = [
  { id: 1, activity: "Car Travel", carbon: 4 },
  { id: 2, activity: "Electricity Usage", carbon: 6 },
  { id: 3, activity: "Cycling", carbon: 0 },
];
export default logs;
```

=>dashboard.jsx

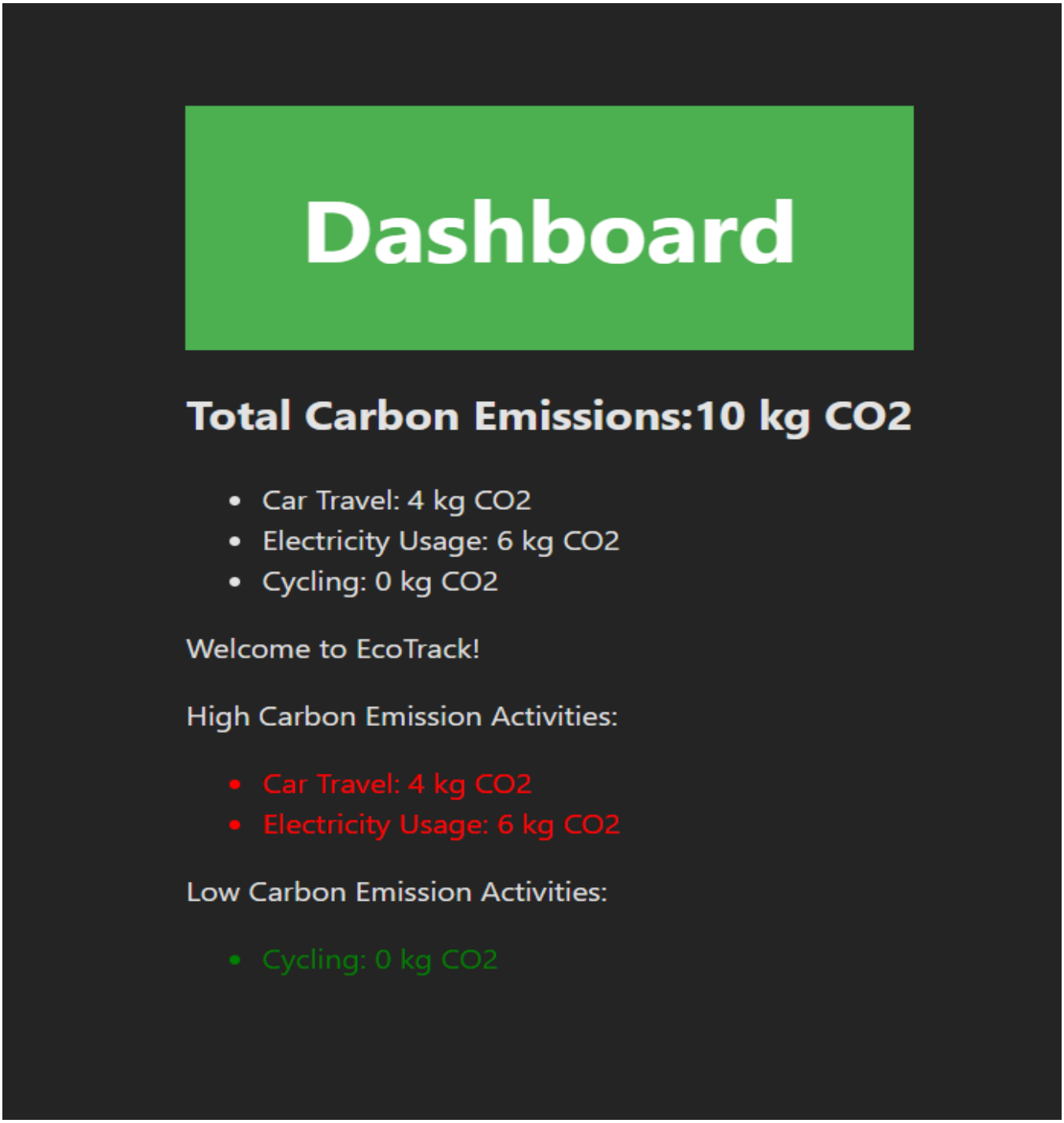
```
import Header from "../components/Header";
import logs from "../data/logs";

function DashBoard() {
  return <>
    <Header title="Dashboard"></Header>
    <div>
      <h2>Total Carbon Emissions:{logs.reduce((accumulator, currentValue) =>
accumulator + currentValue.carbon, 0)} kg CO2</h2>
    </div>
    <div>
        <ul>
        {logs.map(log => (
            <li key = {log.id}>
                {log.activity}: {log.carbon} kg CO2
            </li>
        ))}
        </ul>
    </div>
  </>;
}
export default DashBoard;
```

=>Log.jsx

```
import logs from "../data/logs";


function Log() {
    return (
        <div>
            <p>High Carbon Emission Activities:</p>
            <ul>
```

```
                {
                    logs.map((log) => {
                        if( log.carbon >= 4){
                            return (<li key = {log.id} style = {{color: 'red'}}>
                                {log.activity}: {log.carbon} kg CO2
                            </li>)
                        }
                        return null;
                    }

                    )
                }

            </ul>
            <p>Low Carbon Emission Activities:</p>
            <ul>
                {
                    logs.map((log) => {
                        if( log.carbon < 4){
                            return (<li key = {log.id} style = {{color: 'green'}}>
                                {log.activity}: {log.carbon} kg CO2
                            </li>)
                        }
                        return null;
                    }

                    )
                }

            </ul>
        </div>
    )
}

export default Log;
```

4. Output



5. Learning Outcome

- How to build reusable UI using **React components**
- Practical use of **map(), filter(), and reduce()**
- How to manage and display data dynamically in React
- Basics of **dashboard UI design** with CSS
- Understanding of **environmental impact awareness through technology**