Experiment 1

Student Name: Rohit Yadav **UID: 23BAI70628**
Branch: AIT_CSE **Section/Group: 23AIT_KRG_G2**
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

```
import './App.css'
import Dashboard from './Pages/dashboard.jsx';
import Logos from './Pages/logos.jsx';
import Low from './Pages/low.jsx';
const App=()=>{
   return(
   <div>
      <h1 style={{background:"green",color:"white"}}>EcoTrack</h1>
   <Dashboard/>
```

```
   <Logos/>
   <Low/>
   </div>)
};
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 },
  { id: 4, activity: "Bus Travel", carbon: 3 },
  { id: 5, activity: "Solar Energy Usage", carbon: 1 },
  { id: 6, activity: "Flight Travel", carbon: 8 },
];

export default logs;
```

=>dashboard.jsx

```
import logs from "./logs.js";
const Dashboard=()=>{
  const totalCarbon=logs.reduce((sum,log)=>sum+log.carbon,0)

return(
  <div>
    <h2>Dashboard</h2>
    <p>Total Carbon FootPrint: {totalCarbon} kg CO2</p>
    <ul>
      {
        logs.map((log)=>(
          <li  key={log.id}>
            {log.activity}= {log.carbon} kg CO2
          </li>

        ))
      }
    </ul>
  </div>
)};
export default Dashboard;
```

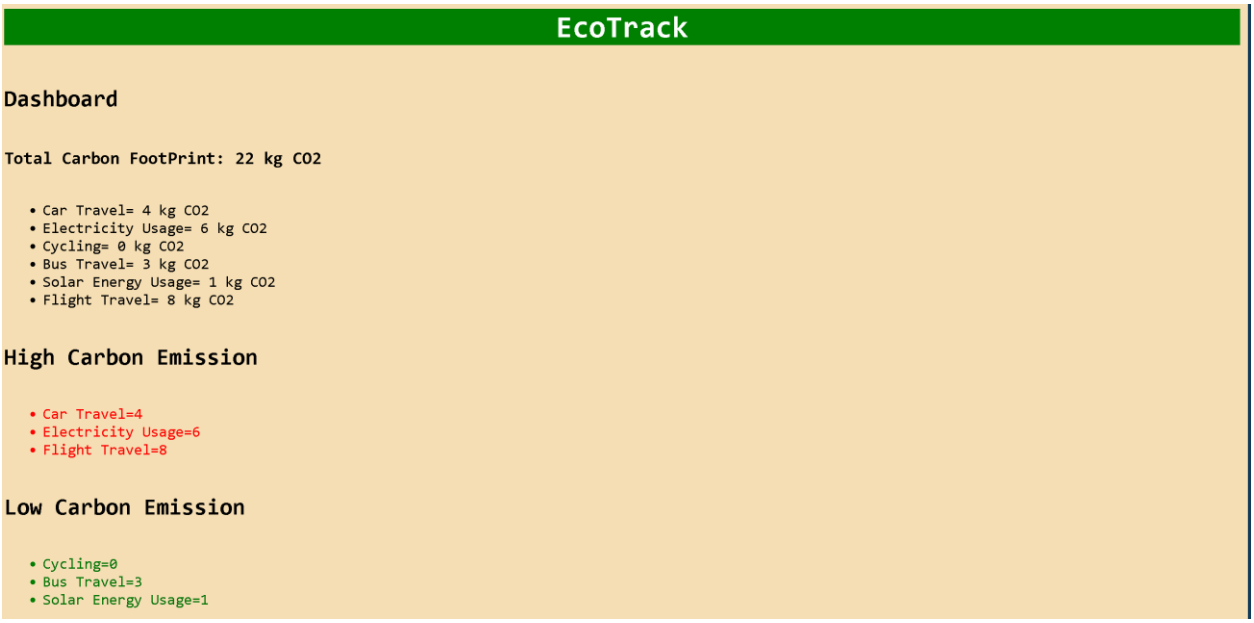
=>logos.jsx

```
import logs from "./logs.js";
const Logos=()=>{
return(
   <div>
      <h2 >High Carbon Emission</h2>
      <ul id="high">
         {
          logs.filter((log)=>log.carbon>=4).map((log)=>(
         <li key={log.id}>
         {log.activity}={log.carbon}
         </li>
      ))
         }
      </ul>
   </div>
)};
export default Logos;
```

=>low.jsx

```
import logs from "./logs.js";
const Low=()=>{
   return(
      <div>
         <h2 >Low Carbon Emission</h2>
         <ul id="low">
            {
            logs.filter((log)=>log.carbon<4).map((log)=>(
         <li key={log.id}>
         {log.activity}={log.carbon}
         </li>))}
         </ul>
      </div>
   )
};
export default Low;
```

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**