DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING
Discover. Learn. Empower.

Experiment 1

Student Name: Palash Mathur **UID: 23BAI70673**
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 (Eco_Track) 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:

=> Main.jsx

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


ReactDOM.createRoot(document.getElementById("root")).render(
  <React.StrictMode>
    <App />
  </React.StrictMode>
);
```

=>App.jsx

```jsx
import { HighImpact } from "./pages/logs";
import Header from './pages/Header';


function App() {
  return (
    <>
      <Header />
      <HighImpact />
    </>
  );
}

export default App;
```

=>Header.jsx

```jsx
const Header = () => {
    return (
        <div>
            <header>
                <h1 style={{color:"white", backgroundColor:"teal", padding:20, margin:0}}>
                    Welcome to Daily Logs
                </h1>
            </header>
        </div>
    );
};
export default Header;
```

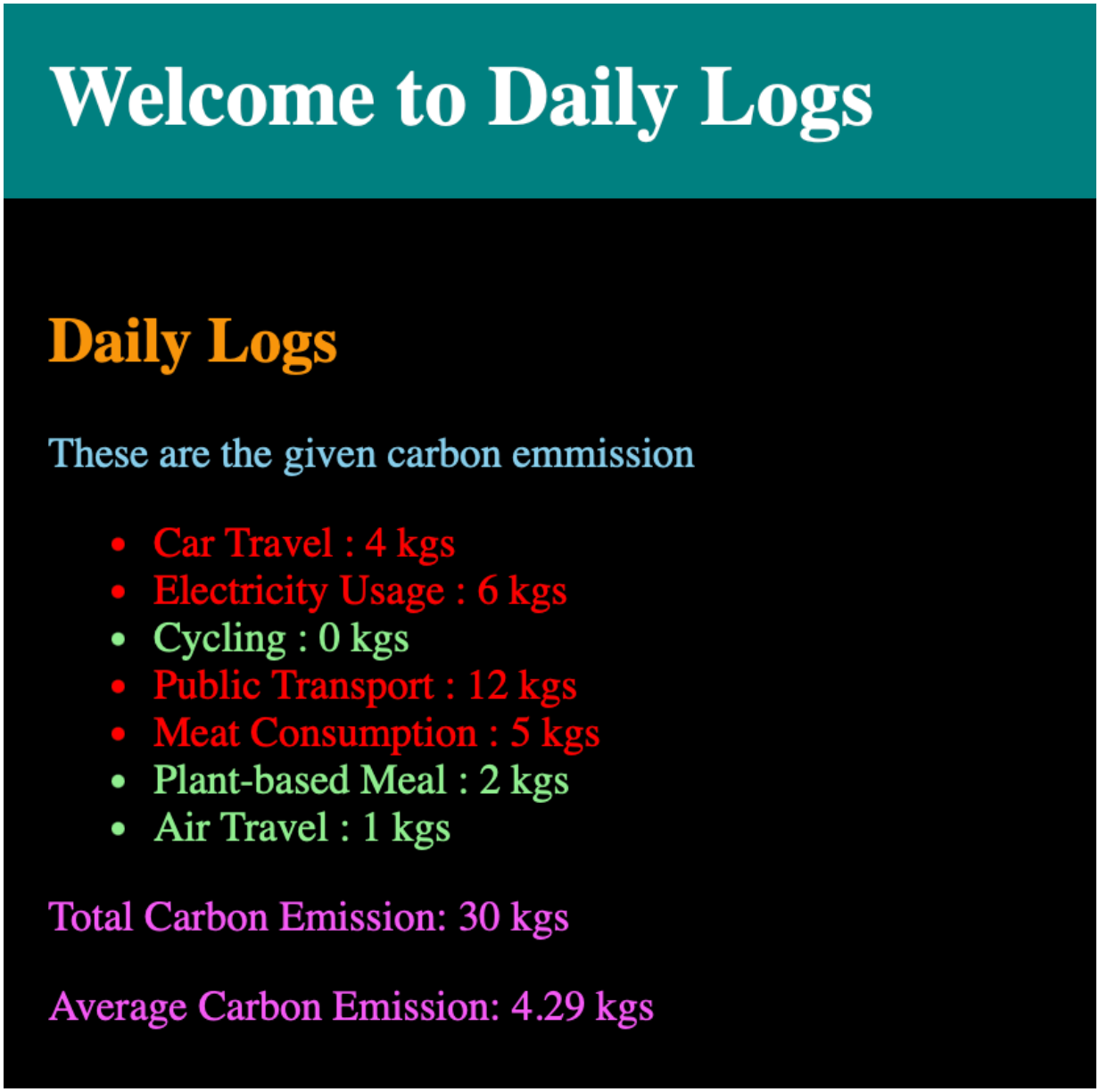
=>Logs.jsx

```jsx
export 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: "Public Transport", carbon: 12 },
  { id: 5, activity: "Meat Consumption", carbon: 5 },
  { id: 6, activity: "Plant-based Meal", carbon: 2 },
  { id: 7, activity: "Air Travel", carbon: 1 }
];
const totalCarbon = logs.reduce((total, log) => total + log.carbon, 0);
const averageCarbon = (totalCarbon / logs.length);

export const HighImpact = () => {
  const highCarbonLogs = logs;

  return (
    <div style={{ color: "red", padding: "20px", backgroundColor: "#000000" }}>
      <h2 style={{color:"#f8950bff"}}>Daily Logs</h2>
        <p style={{ color: "skyblue" }}>These are the given carbon emmission</p>
      <ul>
        {highCarbonLogs.map(log => (
          <li key={log.id} style={{
              color: log.carbon < 4 ? "lightgreen" : "red"
            }}>
            {log.activity} : {log.carbon} kgs
          </li>
        ))}
      </ul>
      <p style={{color: "#f559f5ff"}}>Total Carbon Emission: {totalCarbon} kgs</p>
      <p style={{color: "#f559f5ff"}}>Average Carbon Emission: {averageCarbon.toFixed(2)} kgs</p>
    </div>
  );
};
```

4. **Output**


Welcome to Daily Logs
Daily Logs
These are the given carbon emmission
Car Travel : 4 kgs
Electricity Usage : 6 kgs
Cycling : 0 kgs
Public Transport : 12 kgs
Meat Consumption : 5 kgs
Plant-based Meal : 2 kgs
Air Travel : 1 kgs
Total Carbon Emission: 30 kgs
Average Carbon Emission: 4.29 kgs

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**