



Experiment 1

Student Name: Gourav Sharma

Branch: BE CSE

Semester: 6th

Subject Name: Full Stack Development-II

UID: 23BCS10857

Section/Group: 23BCSKRG_3A

Date of Performance: 12/01/26

Subject Code: 23CSH-309

1. Aim:

To design and implement the foundational frontend architecture of the EcoTrack application using modern React practices, Vite tooling, and ES6+ JavaScript features.

2. Objective:

- To set up a React project using Vite with proper project structure
- To understand component-based architecture in React
- To apply ES6 array methods (map, filter, reduce) for data-driven UI rendering
- To separate concerns using components, pages, and data modules

3. Implementation/Code:

logs.js:

```
export const logs = [  
  { id: 1, activity: "Car Travel", carbon: 1 },  
  { id: 2, activity: "Electricity Usage", carbon: 6 },  
  { id: 3, activity: "Cycling", carbon: 5 },  
];
```

Dashboard.jsx:

```
import { logs } from '../data/logs';  
  
const Dashboard = () => {  
  const totalcarbon = logs.reduce((total, log) => total + log.carbon, 0);  
  
  return (  
    <div className="dashboard">  
      <header className="dashboard-header">  
  
        <h2 className="dashboard-title">Dashboard</h2>  

```



```
    <p className="dashboard-summary">Total Carbon Footprint:
    <strong>{totalcarbon} kg CO2</strong></p>
  </header>

  <section className="logs">
    <ul className="log-list">
      {logs.map((log) => (
        <li className="log-item" key={log.id}>

          <span className="activity">{log.activity}</span>

          <span className="carbon">{log.carbon} kg CO2</span>
        </li>
      ))}
    </ul>
  </section>
</div>
);
};

export default Dashboard;
```

Logs.jsx

```
import { logs } from '../data/logs';
const Logs = () => {
  const highimpactlogs = logs.filter(log => (log.carbon > 4))
  const lowimpactlogs = logs.filter(log => (log.carbon < 4))

  return (
    <div>
      <header style={{ padding: "0.5 rem", backgroundColor: "#ff0000", color:
"white", textAlign: "center" }}>
        <h2>high Carbon Activities {>}4 </h2>
      </header>
      <ul style={{ padding: "0.5 rem", backgroundColor: "#f9fdfd", color: "Red",
textAlign: "center" }}>
        {
          highimpactlogs.map(log => (
            <li key={log.id}>
              {log.activity} = {log.carbon} kg CO2
            </li>
          ))
        }
      </ul>
    </div>
  )
}
```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
        </li>
      ))
    }
  </ul>
</div>
<div>
  <header style={{padding: "0.5 rem", color: "white", backgroundColor:
"#135f04", textAlign: "center"}}>

    <h2>low carbon Activities {'<'}4 </h2>
  </header>
  <ul style={{padding: "0.5 rem", backgroundColor: "#ffffff", color: "green",
textAlign: "center"}}>
    {
      lowimpactlogs.map(log=>(
        // <li key={log.id} >
        // {log.activity}= {log.carbon} kg CO2
        // </li>

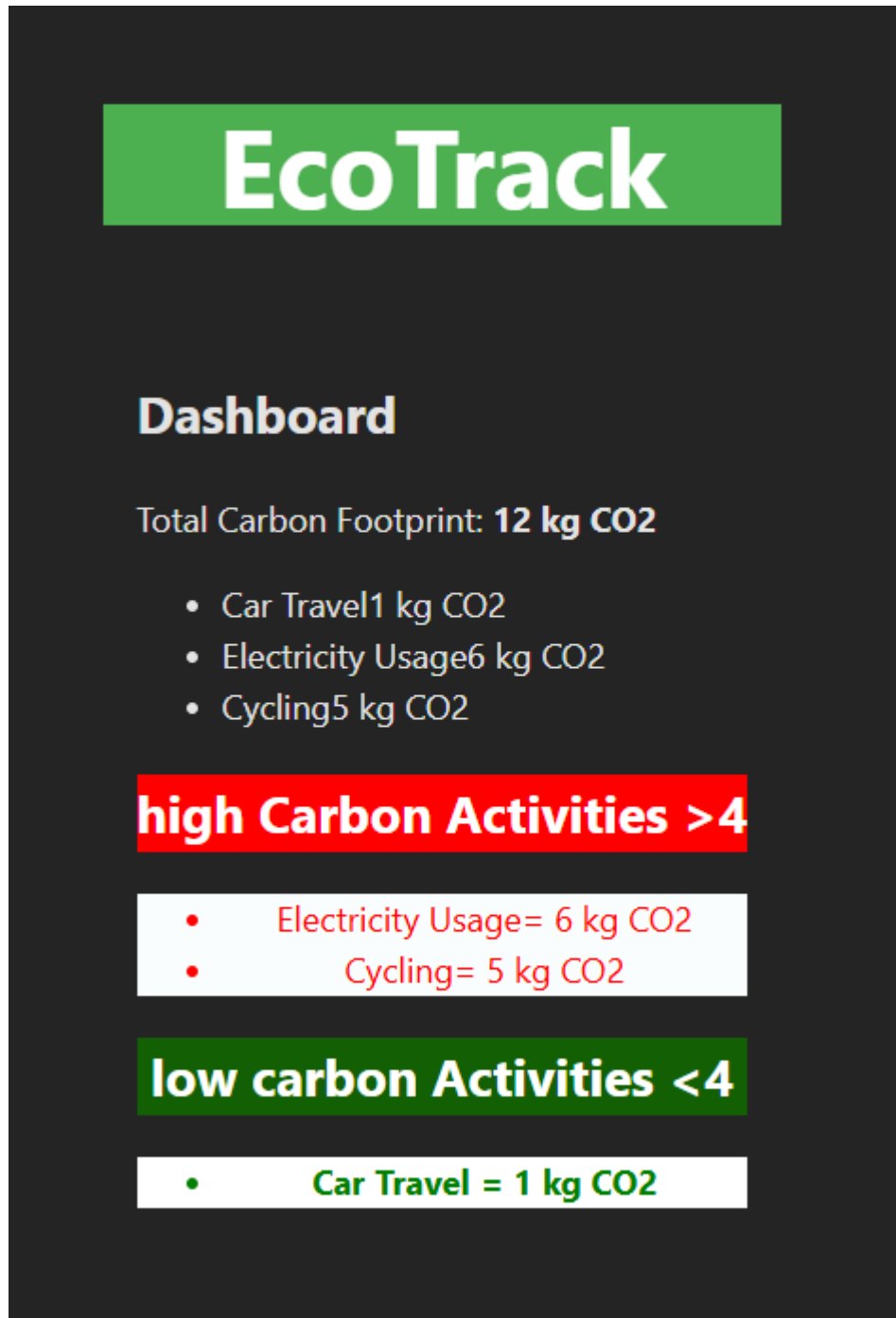
        <li key={log.id} style={{ color: "green", fontWeight: "bold" }}>

          {log.activity} = {log.carbon} kg CO2
        </li>

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



4. Output:





5. Learning Outcome:

- Learned how to create and structure a React project using Vite with proper folders like components/pages/data.
- Understood component-based UI development by building separate pages like Dashboard and Logs.
- Implemented dynamic UI rendering using ES6 map() to display activity logs from an array.
- Used ES6 filter() to categorize high-carbon and low-carbon activities efficiently.
- Applied ES6 reduce() to calculate the total carbon footprint and show summarized results on the dashboard.