



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

## Experiment 1

**Student Name:** Gourav Sharma

**UID:** 23BCS10857

**Branch:** BE CSE

**Section/Group:** 23BCSKRG\_3A

**Semester:** 6<sup>th</sup>

**Date of Performance:** 12/01/26

**Subject Name:** Full Stack Development-II

**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>
```



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
<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>  
  )};  
export default Logs;
```



# 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;
```



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

## 4. Output:

# EcoTrack

## Dashboard

Total Carbon Footprint: **12 kg CO<sub>2</sub>**

- Car Travel 1 kg CO<sub>2</sub>
- Electricity Usage 6 kg CO<sub>2</sub>
- Cycling 5 kg CO<sub>2</sub>

### high Carbon Activities >4

- Electricity Usage = 6 kg CO<sub>2</sub>
- Cycling = 5 kg CO<sub>2</sub>

### low carbon Activities <4

- Car Travel = 1 kg CO<sub>2</sub>



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

## 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.