



DEPARTMENT OF

COMPUTER SCIENCE & ENGINEERING

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Experiment 1

Name : Astik Joshi

UID : 23BCS10627

Branch: BE-CSE

Section/Group: KRG-3B

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Subject Name: Full Stack-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 understand about basic of React and Vite.
- To create a project using Vite with proper flow.
- 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 :-

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```
export const logs = [
  { id: 1, activity: "Car Travel", carbon: 8 },
  { id: 2, activity: "Electricity Usage", carbon: 6 },
  { id: 3, activity: "Cycling", carbon: 0 },
  {id: 4, activity: "Bus",carbon : 3},
  {id: 5, activity: "Walking",carbon:0}
];
```



- Dashboard.jsx :-

```
import { logs } from "../data/log";

const Dashboard = () => {
    const totalCarbon = logs.reduce((sum, Log) => {
        return sum + Log.carbon;
    }, 0);

    return (
        <div>
            <h2>Dashboard</h2>
            <p>Total Carbon Footprint: {totalCarbon} kgs</p>

            <ul>
                {logs.map((Log) => (
                    <li key={Log.id}>
                        {Log.activity} = {Log.carbon} Kg
                    </li>
                ))}
            </ul>
        </div>
    );
};

export default Dashboard;
```

- Logs.jsx :-

```
import React from 'react'
import { logs } from '../data/log'

export const Logs = () => {
    const highCarbon = logs.filter(
        Log => Log.carbon >= 4
    )

    return (
        <div>
            <h2>High Carbon Activities more than 4</h2>

            {highCarbon.map((Log, index) => (
                <p key={index}>
                    {Log.activity} - {Log.carbon} kg
                </p>
            ))}
        </div>
    )
}

export const LowCarbon = () => {
    const LowCarbon = logs.filter(
        Log => Log.carbon <= 3
    )
    return [
        <div>
            <h2>Low Carbon Activities less than 3</h2>

            {logs.map((Log, index)=>{
                return (
                    <p>
                        {Log.activity} - {Log.carbon} kg
                    </p>
                )
            })}
        </div>
    ]
}
```



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- App.jsx:-

```
import Header from "./components/header";
import Dashboard from "./pages/dashboard";
import Logs from "./pages/logs";
const App = () => {
  return (
    <>
      <Header title="EcoTrack Experiment 1" />
      <Dashboard />
      <Logs/>
    </>
  );
};

export default App;
```

4. Output

The screenshot shows a mobile application interface. At the top, there is a green header bar with the text "EcoTrack Experiment 1" in white. Below the header, the word "Dashboard" is displayed in bold black text. Underneath "Dashboard", the text "Total Carbon Footprint: 17 kgs" is shown, followed by a bulleted list of carbon footprint sources: "Car Travel = 8 Kg", "Electricity Usage = 6 Kg", "Cycling = 0 Kg", "Bus = 3 Kg", and "Walking = 0 Kg". Further down, the section "Daily Logs" is visible, preceded by a bulleted list with the same five items as the "Dashboard" section, all in red text.

EcoTrack Experiment 1

Dashboard

Total Carbon Footprint: 17 kgs

- Car Travel = 8 Kg
- Electricity Usage = 6 Kg
- Cycling = 0 Kg
- Bus = 3 Kg
- Walking = 0 Kg

Daily Logs

- Car Travel = 8 kg
- Electricity Usage = 6 kg
- Cycling = 0 kg
- Bus = 3 kg
- Walking = 0 kg



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5. Learning Outcome :-

- Created an Eco Tracker application using React to track carbon emissions.
- Displayed emission data through a dashboard built with reusable components.
- Applied JavaScript array functions to separate low and high emission activities.
- Organized the project using a component-based structure.
- Implemented dynamic rendering based on carbon emission values.
- Gained hands-on experience with data processing in React.