



Experiment No:1

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

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

Implementation/Code:

1. Log.js:-

```
export const logs = [
    { id: 1, activity: "Car Travel", carbon: 50},
    { id: 2, activity: "Electricity Usage", carbon: 60},
    { id: 3, activity: "Cycling", carbon: 0 },
    {id :4,activity:"Coal",carbon:400},
];
```



2. EcoTrack.jsx (Dashboard) :-

```
src > ⚙ EcoTrack.jsx > ⚙ EcoTrack
  1 import Header from "./header";
  2 import { logs } from "./logs";
  3 import Logs from "./sumanyu";
  4
  5 const EcoTrack = () => [
  6   const totalCarbon = logs.reduce((sum, log) => sum + log.carbon, 0);
  7
  8   return (
  9     <div>
10       <Header title="EcoTrack Experiment-1" />
11
12       <h2>DASHBOARD</h2>
13       <p>Total Carbon Footprint: {totalCarbon} kg</p>
14
15       <ul>
16         {logs.map((log) => (
17           <li key={log.id}>
18             | {log.activity} = {log.carbon} kg
19           </li>
20         )));
21       </ul>
22
23       <Logs />
24     </div>
25   );
26 }
27
28 export default EcoTrack;
29
```



3. Sumanyu.jsx:

```
import { logs } from "./logs.js";

const Logs = () => {
  const highCarbon = logs;

  return (
    <div>
      <h2>Daily Logs</h2>
      <ul>
        {highCarbon.map((log) => (
          <li
            key={log.id}
            style={{(
              color: log.carbon < 3 ? "green" : "red"
            )}}
          >
            {log.activity} = {log.carbon} kg
          </li>
        ))}
      </ul>
    </div>
  );
};

export default Logs;
```



4. App.jsx:

```
c > App.jsx > default
1   import EcoTrack from "./EcoTrack.jsx";
2
3   const App = () => {
4       return (
5           <div>
6               <EcoTrack />
7           </div>
8       );
9   };
10
11  export default App;
```

OUTPUT:

The screenshot shows the 'EcoTrack Experiment-1' application interface. At the top, it displays 'EcoTrack Experiment-1'. Below that is a 'DASHBOARD' section showing 'Total Carbon Footprint: 510 kg' and a list of contributions: Car Travel = 50 kg, Electricity Usage = 60 kg, Cycling = 0 kg, and Coal = 400 kg. At the bottom, there is a 'Daily Logs' section which lists the same contributions with values: Car Travel = 50 kg, Electricity Usage = 60 kg, Cycling = 0 kg, and Coal = 400 kg.

EcoTrack Experiment-1

DASHBOARD

Total Carbon Footprint: 510 kg

- Car Travel = 50 kg
- Electricity Usage = 60 kg
- Cycling = 0 kg
- Coal = 400 kg

Daily Logs

- Car Travel = 50 kg
- Electricity Usage = 60 kg
- Cycling = 0 kg
- Coal = 400 kg



Learning Outcome :-

- Developed an **Eco Tracker application** using React to analyze carbon emissions.
- Implemented a **Dashboard component** to display emission data from JavaScript logs.
- Used **map(), filter(), and reduce()** to classify low and high carbon emission elements.
- Applied **component-based architecture** for better code organization.
- Achieved **dynamic data rendering** based on emission levels.
- Enhanced understanding of **data processing and state-driven UI in React**.