Experiment 1

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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 setup 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.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: "Bus Travel", carbon: 3 },
  {id: 5, activity: "Solar Energy Usage", carbon: 1 },
  {id: 6, activity: "Flight Travel", carbon: 8 },
];
export default logs;
```

Lcarbons.jsx:

```
import logs from "./logs";
const hcarbon = logs.filter(log=> log.carbon <=3);
export default hcarbon;
```

hcarbons.jsx:

```
import logs from "./logs";
const hcarbon = logs.filter(log=> log.carbon >=4);
export default hcarbon;
```

Dashboard.jsx:

```
import logs from '../data/logs'
import Header from '../components/header'
import hcarbon from '../data/hcarbon'
import lcarbon from '../data/lcarbon'
const totalCarbon = logs.reduce ((sum, log) => sum+log.carbon,0)

const Dashboard = () => {
   return (

   <div >
      <h2>{Header}</h2>
      <p style={{padding
    :"1rem",backgroundColor:"#3175a2",color:"#d6eaf8",textAlign:"cente
    r"}}>Total Carbon Footprint:{totalCarbon}</p>

      <ul style={{padding
    :"1rem",backgroundColor:"white",color:"#111",textAlign:"center"}}>
         {logs.map((log)=>(
            <li key ={log.id}>
               {log.activity}:{log.carbon} kgs
            </li>
```

```
  ))}
  </ul>
  <p style={{padding
:"1rem",backgroundColor:"#3175a2",color:"#d6eaf8",textAlign:"cente
r"}}>High carbon emission</p>
  <ul style={{padding
    :"1rem",backgroundColor:"#eab6a6",color:"#ff3c00",textAlign:"center
    "}}>
        {hcarbon.map((log)=>(
          <likey ={log.id}>
            {log.activity}:{log.carbon} kgs
          </li>
        ))}
      </ul>

      <pstyle={{padding
    :"1rem",backgroundColor:"#3175a2",color:"#d6eaf8",textAlign:"cente
    r"}}>Lowcarbon emission</p>
      <ulstyle={{padding
    :"1r em",backg ro undCo lo r: "#c4f0 d7",color:"# 0bec6c",t extAlign :"c ente
    r"}}>
        {lcarbon.map((log)=>(
          <likey ={log.id}>
            {log.activity}:{log.carbon} kgs
          </li>
        ))}
      </ul>
   </div>

)
}
exportdefaultDashboard;
```

App.jsx:

```
import Header from "./components/header";
import Dashboard from "./pages/Dashboard";
function App (){
  return (
  <>
    <Header title="Eco Tracker : Experiment 1 "/>
      <Dashboard/>

  </>
)
}
export default App;
```

4. Output

5. Learning Outcome
   1. Learnt about vite+react files.
   2. Learnt about component based architecture in react.
   3. Learnt To apply ES6 array methods (map, filter, reduce) for data-driven UI rendering.