Experiment 1

Student Name: Mohit Sharma **UID: 23BAI70733**
Branch: AIT_CSE **Section/Group: 23AIT_KRG_G2**
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Subject Name: Full Stack II **Subject Code: 23CSH-382**

1. Aim:

To design and develop a web-based Environmental Impact Tracker (Eco Track) that calculates and categorizes carbon footprint based on different daily activities using ReactJS.

2. Objective:

The main objectives of this experiment are:

- To understand the use of React components for UI development
- To calculate total carbon footprint using JavaScript logic
- To classify activities into High Carbon and Low Carbon emissions
- To design a minimalist and user-friendly dashboard UI
- To improve understanding of arrays, filter, reduce, and conditional rendering

3. Implementation/Code:

=>App.jsx

```
 import './App.css'
import Title from "./pages/Title";
import Dashboard from './pages/Dashboard';

function App() {
  return (
    <>
      <Title title = "Carbon footprint by activities"/>
```

```
        <Dashboard/>
      </>
    )
  }

  export default App
```

=>logs.js

```
import logs from "./data.js";

const highcarbon = logs.filter((log) => {
  if (log.carbon >= 4) {
    return true;
  } else {
    return false;
  }
});

const lowcarbon = logs.filter((log) => {
  if (log.carbon <= 3) {
    return true;
  } else {
    return false;
  }
});


function Logs() {
  return (
    <>
      <h3>Activities having carbon footprint greater than equal to 4 : </h3>
      <ul style={{color : "red"}}>
        {highcarbon.map((log) => (
          <li key = {log.id}>
            {log.activity} — {log.carbon}
          </li>
        ))}
      </ul>
      <br />
```

```
      <br />
      <h3>Activities having carbon footprint less than equal to 3 : </h3>
      <ul style = {{color : "green"}}>
        {lowcarbon.map((log) => (
          <li key = {log.id}>
            {log.activity} — {log.carbon}
          </li>
        ))}
      </ul>
    </>
  );
}

export default Logs;
```

=>dashboard.jsx

```
    import logs from "./data.js";
    import Title from "./Title.jsx";
    import Logs from "./Logs.jsx";

    const total = logs.reduce((sum, log)=>(
       sum + log.carbon
    ),0);

    function Dashboard(){

       return(
          <>
            <h1>Dashboard</h1>

            <h2>Sum of all carbon footprint: {total}</h2>

            <Logs/>
          </>
       )
    }

    export default Dashboard;
```

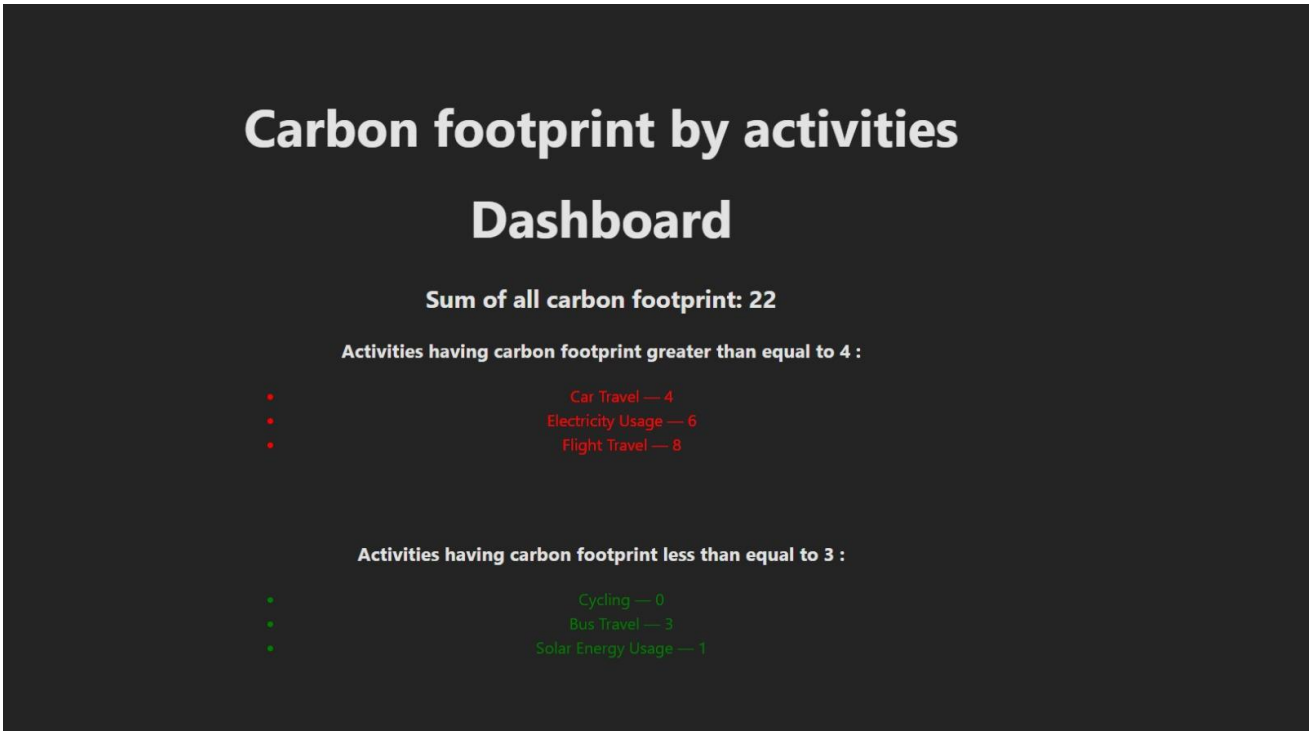
=>Title.jsx

```
function Title({title}){
  return(
    <h1>{title}</h1>
  )
}

//export
export default Title
```

=>Main.jsx

```
import { StrictMode } from 'react'
import { createRoot } from 'react-dom/client'
import './index.css'
import App from './App.jsx'

createRoot(document.getElementById('root')).render(
  <StrictMode>
    <App />
  </StrictMode>,
)
```

4. Output



5. Learning Outcome

- How to build reusable UI using **React components**
- Practical use of **map(), filter(), and reduce()**
- How to manage and display data dynamically in React
- Basics of **dashboard UI design** with CSS
- Understanding of **environmental impact awareness through technology**