



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Experiment 1

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Subject Name: Full Stack

Subject Code: 23CSH-382

1. Title:

Modern React Foundations – EcoTrack

2. Aim:

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

3. 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

4. Implementation/Code:

- Header.jsx:

```
const Header = ({title}) => {  
  return (  
    <header style = {{  
      padding: '10px',  
      backgroundColor: '#5499f8',  
      color : 'white',  
      textAlign: 'center',  
    }}>  
      <h1>{title}</h1>  
    </header>  
  )  
}  
export default Header;
```

- Dashboard.jsx:

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

const Dashboard = () => {
  const totalcarbon = logs.reduce((acc, curr) => {
    return acc + curr.carbon;
  }, 0);

  return (
    <div>
      <h1>Dashboard</h1>
      <h2>Total Carbon Footprint: {totalcarbon} kg CO2</h2>
      <ol>
        {logs.map((log) => (
          <li key={log.id}>
            {log.activity}: {log.carbon} kg CO2
          </li>
        ))}
      </ol>
    </div>
  )
}

export default Dashboard;
```

- Logs.jsx:

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

const Logs = () => {
  const highCarbon = logs.filter((log) => {
    return log.carbon > 3;
  })

  return (
    <div>
      <h1>Logs with Carbon geater than 3</h1>
      <ol>
        {highCarbon.map((log) => (
          <li key = {log.id}>
            {log.activity} = {log.carbon} kg CO2
          </li>
        ))}
      </ol>
    </div>
  )
}

export default Logs;
```

- Apps.jsx:

```
import Dashboard from "../pages/dashboard";
import Logs from "../pages/logs";
function App(){
  return (
    <div>
      <Dashboard />
      <Logs />
    </div>
  )
}
export default App;
```

5. Output

Dashboard

Total Carbon Footprint: 10 kg CO2

1. Car Travel: 4 kg CO2
2. Electricity Usage: 6 kg CO2
3. Cycling: 0 kg CO2

Logs with Carbon geater than 3

1. Car Travel = 4 kg CO2
2. Electricity Usage = 6 kg CO2

6. Learning Outcome

- We learnt about React Apps and how to create them.
- We learnt about map function.
- We learnt about filter function.
- We learnt about reduce function and how it replaces map and filter.
- We learnt about the flow of a React project.