



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

Experiment 1

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Subject Name: Full Stack - II

Subject Code: 23CSH-382

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 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

3. Implementation/Code:

“DashBoard.jsx”

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

const Dashboard = () => {
  const log = logs;

  const total = log.reduce( (acc, curr) => {
    acc += curr.carbon;
    return acc;
  }, 0)

  const tiles = [];

  logs.forEach(element => {
    tiles.push(<Tile key={element.id} act={element}/>);
  });

  return (
    <div>
      <h1>Total Carbon Footprint is {total} kg CO2</h1>

      <div>
        {tiles}
      </div>
    </div>
  );
}

export default Dashboard;
```

“Logs.jsx”

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

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

  const highCarbon = log.filter((curr) => {return curr.carbon >= 4});

  const tiles = [];

  console.log("hehhe");

  highCarbon.forEach(element => {
    tiles.push(<Tile key={element.id} act={element}/>);
  });

  return (
    <>
      <h1>High Carbon Activity</h1>
      <>{tiles}</>
    </>);
}

export default Logs;
```

“Tile.jsx”

```
const Tile = (props) => {
  const name = props.act.activity;
  const carbon = props.act.carbon;

  return (
    <div>
      <h3>{name}: footprint is {carbon} KG</h3>
    </div>
  );
}

export default Tile;
```

4. Output

Total Carbon Footprint is 10 kg CO2

Car Travel: footprint is 4 KG

Electricity Usage: footprint is 6 KG

Cycling: footprint is 0 KG

High Carbon Activity

Car Travel: footprint is 4 KG

Electricity Usage: footprint is 6 KG

5. Learning Outcome

- a** The use of reduce, map and filter functions.
- b** The use of render list.
- c** The method of installing react.