

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Full Stack Assignment-1

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Semester: 5th

Subject Code: 23CSP-339

Subject Name: Full Stack

Aim:

EcoTrack Feature Ticket — “Daily Water Tracker”

You are a frontend developer at EcoTrack. The product team wants a small wellness feature added to the dashboard. Build a **Water Intake Tracker** inside a React app. The user should be able to track how many glasses of water they drink today.

Objectives:

Create a dashboard page where a logged-in user can:

- navigate to tracker
- increase/decrease water count
- save daily goal
- fetch a health tip from API
- prevent unnecessary re-renders

Requirements:

Create routes:

Route	Page
/login	Login page
/dashboard	Dashboard
/dashboard/water	Water Tracker

Software Requirements:

- Node.js v18+
- React.js v18+
- VS Code with ES7+ extensions
- JSON Server (for mock API)

Code Implementation:

Dashboard.jsx

```
import React from "react";
import Navbar from "../Components/Navbar";

function Dashboard() {
  return (
    <div style={{ minHeight: '100vh', display: 'flex', flexDirection: 'column',
justifyContent: 'center', alignItems: 'center' }}>
      <Navbar />
      <h2 style={{ marginTop: '24px' }}>Welcome to Dashboard</h2>
      <button style={{ display: 'block', margin: '24px auto', padding: '8px 24px' }} onClick={() => {
        localStorage.removeItem('token');
        window.location.href = '/login';
      }}>Logout</button>
    </div>
  );
}

export default Dashboard;
```

Login.jsx

```
import React from "react";

function Login() {

  const handleLogin = () => {
    localStorage.setItem("token", "user123");
    window.location.href = "/dashboard";
  };

  return (
    <div>
      <h2>Login Page</h2>
      <button onClick={handleLogin}>Login</button>
    </div>
  );
}

export default Login;
```

WaterTracker.jsx

```
import React, { useState, useEffect, useCallback } from "react";
import Navbar from "../Components/Navbar";
import CounterDisplay from "../Components/CounterDisplay";

function WaterTracker() {

  const [count, setCount] = useState(0);
  const [goal, setGoal] = useState(8);
```

```
const [tip, setTip] = useState("");
const [loading, setLoading] = useState(false);
const [error, setError] = useState("");

// Load from LocalStorage
useEffect(() => {
  const savedCount = localStorage.getItem("count");
  if (savedCount) {
    setCount(Number(savedCount));
  }
}, []);

// Save count
useEffect(() => {
  localStorage.setItem("count", count);
}, [count]);

// API Call
useEffect(() => {
  setLoading(true);
  fetch("https://api.adviceslip.com/advice")
    .then(res => res.json())
    .then(data => {
      setTip(data.slip.advice);
      setLoading(false);
    })
    .catch(() => {
      setError("Failed to fetch tip");
      setLoading(false);
    });
}, []);

// useCallback for optimization
const addWater = useCallback(() => {
  setCount(prev => prev + 1);
}, []);

const removeWater = useCallback(() => {
  setCount(prev => (prev > 0 ? prev - 1 : 0));
}, []);

const reset = () => {
  setCount(0);
};

const handleGoalChange = (e) => {
  setGoal(e.target.value);
};

return (
  <div>
    <Navbar />
```

```
<h2>Water Tracker</h2>

<div style={{ border: "1px solid black", padding: "20px", width: "300px" }}>

  <CounterDisplay count={count} goal={goal} />

  <button onClick={addWater}>+</button>
  <button onClick={removeWater}>-</button>
  <button onClick={reset}>Reset</button>

  <br /><br />

  <input
    type="number"
    value={goal}
    onChange={handleGoalChange}
  />

  {count >= goal && <p>Goal Reached 🎉</p>}

  <hr />

  <h4>Health Tip</h4>

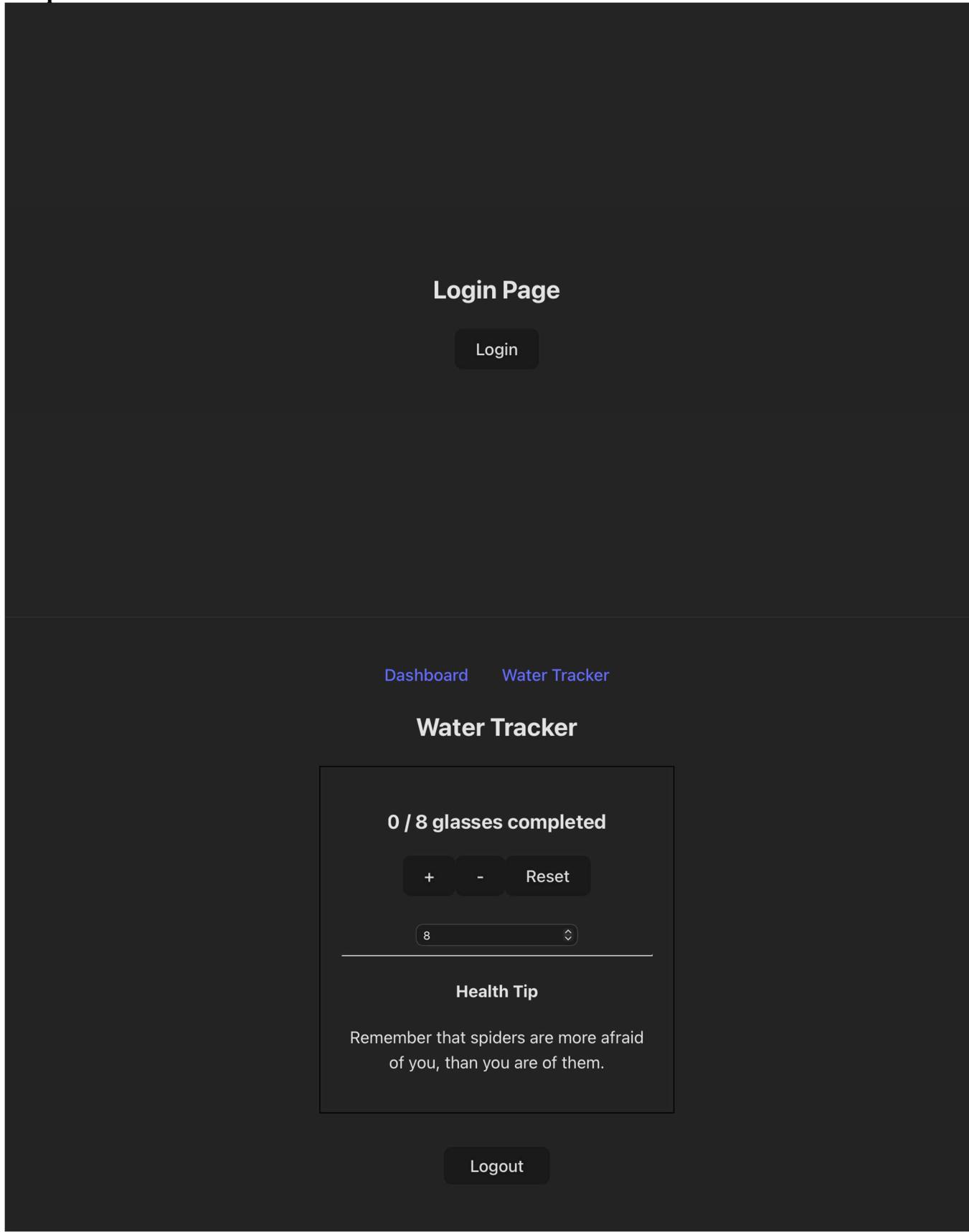
  {loading && (
    <div style={{ background: '#eee', height: '24px', width: '80%', borderRadius: '4px', margin: '8px auto', animation: 'pulse 1s infinite' }} />
  )
  {error && <p>{error}</p>}
  {!loading && tip && <p>{tip}</p>}

  </div>
  <button style={{ display: 'block', margin: '32px auto 0 auto', padding: '8px 24px' }} onClick={() => {
    localStorage.removeItem('token');
    window.location.href = '/login';
  }}>Logout</button>
</div>
);

}

export default WaterTracker;
```

Output:



Water Tracker

8 / 8 glasses completed

+ - Reset

8 ↕

Goal Reached

Health Tip

Remember that spiders are more afraid
of you, than you are of them.

[Logout](#)