React-14

**Project Title: Employee Management App – React Application Using Context API**

**Objectives**

* Explain the **need and benefits** of using the **React Context API**.
* Understand how to work with the createContext() method.
* Recognize how Context API replaces prop-drilling for global state access.

**Learning Outcomes**

By completing this hands-on lab, the learner will be able to:

* Create and configure a **React context**.
* Use **Provider** to supply values to child components.
* Access context values in nested components via **Consumer** or useContext().

**Prerequisites**

To complete this lab, the following are required:

* Node.js
* NPM
* Visual Studio Code

**Estimated Time**

* Approximately 30 minutes.

**Problem Scenario**

The current employee management application passes theme settings (light or dark) from the App component to deeply nested components using **props**, which is inefficient. The task is to **refactor the application using React Context API** to manage the theme without prop-drilling.

**Implementation Instructions**

1. **Download and Setup**
   * Unzip the existing application.
   * Open it in Visual Studio Code.
   * In the terminal, run:
   * npm install
   * Start the application using:
   * npm start
2. **Codebase Exploration**
   * Review the files:
     + App.js
     + EmployeesList.js
     + EmployeeCard.js
3. **Create Theme Context**
   * In a new file named ThemeContext.js:
     + Create a context using createContext().
     + Set the default value to 'light'.
     + Export the context as default.
4. **Modify App Component**
   * Import ThemeContext in App.js.
   * Wrap the JSX in the ThemeContext.Provider.
   * Set the value of the provider to come from the component's state.
   * Remove the theme prop passed to EmployeeList.
5. **Update EmployeesList Component**
   * Remove the prop that was previously passed to EmployeeCard.
   * Ensure no theme data is manually passed.
6. **Update EmployeeCard Component**
   * Import ThemeContext.
   * Use the useContext() hook to access the theme.
   * Apply the context value for className of the button elements.