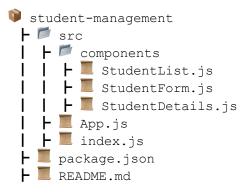
## **ReactJS Part-4 - Lab Assignment**

# **Project - 1**

### **Small Project: Student Management System**

**Concepts Covered:** JSX, Components, Props, State (useState), Event Handling, Lists, Forms, React Router (for navigation)

## **Project Structure**



### **Modules to Implement**

#### Module 1: Student List

- Display a list of students with name, age, and grade.
- Each student should have a "View Details" button.
- Implement React Router to navigate to a detailed student page.

## **Wints:**

- Use useState to store the student list.
- Use .map() to render the list dynamically.
- Implement a Link from react-router-dom for navigation.

### Module 2: Add a New Student (Form Handling)

- Create a form with inputs for name, age, and grade.
- Add a "Submit" button to update the student list.

#### Hints:

- Use controlled inputs with useState.
- On form submission, update the student list.
- Prevent empty form submissions using trim().

### **Module 3: Student Details Page**

- Show the details of a selected student on a new page.
- Display additional information such as **email**, **phone number**, **and address**.

## **Hints:**

- Pass the selected student's details using **React Router params**.
- Retrieve and display the student's information dynamically.

## **Optional Enhancements**

- **☑ Delete a Student** Add a delete button to remove students from the list.
- **☑** Edit Student Information Allow users to update details.
- ✓ Local Storage Integration Save data so it persists after page refresh.
- **Styled Components** − Use inline styles or CSS modules for better UI.

## **Project - 2**

## **Small Project: Online Bookstore**

Concepts Covered: JSX, Components, Props, State (useState), Event Handling, Lists, Forms, React Router, Conditional Rendering

## **Project Structure**



## **Modules to Implement**

#### **Module 1: Book List (Homepage)**

- Display a list of available books with title, author, and price.
- Each book should have a "View Details" button.
- Implement React Router to navigate to a detailed book page.

### Hints:

- Use useState to manage the book list.
- Use .map() to render the list dynamically.
- Implement a Link from react-router-dom for navigation.

#### **Module 2: Book Details Page**

- Show title, author, price, description, and availability of a book.
- Display an "Add to Cart" button.

#### **Hints:**

- Pass the selected book's details using **React Router params**.
- Retrieve and display the book's information dynamically.

• Use useState to manage cart status (e.g., "Added to Cart").

#### Module 3: Add a New Book (Admin Panel)

- Create a form with inputs for title, author, price, and description.
- Add a "Submit" button to update the book list.

### **Hints:**

- Use controlled inputs with useState.
- On form submission, update the book list.
- Prevent empty form submissions using trim().

## **Optional Enhancements**

- ☑ Cart Management Allow users to add/remove books from a shopping cart.
- ✓ Local Storage Integration Save book data so it persists after page refresh.
- **Styled Components** − Improve UI with CSS or Tailwind.
- Search Functionality Implement a search bar to filter books dynamically.