

Assignment: Protected Routes

1. Creating Components:

- Develop the following components:
 - **Home**: This component will serve as the landing page of the application.
 - **Login**: A component containing a form for user authentication.
 - **Dashboard**: A protected route accessible only after successful login.
 - **Header**: A reusable component to display navigation links.

2. Implementing Protected Routes:

- Define routes for the **Home**, **Login**, and **Dashboard** components using React Router.
- Ensure that the **Dashboard** route is protected and can only be accessed after successful authentication.
- Redirect users to the **Login** page if they attempt to access the **Dashboard** route without authentication.

3. Authentication Mechanism:

- Implement a basic authentication mechanism using state management or Context API.
- Allow users to enter their credentials in the **Login** component.
- Upon successful login, store the authentication state and redirect the user to the **Dashboard** component.
- Implement a logout functionality to clear the authentication state and redirect users to the **Login** page.