

Assignment

Learner Details

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 - **Enrollment Number:** SU625MR010
 - **Batch / Class:** June 2025
 - **Assignment:** Navigation and routing techniques
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1. Program Statement

Design and implement a simple role-based login page using React where users can enter a role (Admin, Mentor, or Student) and be redirected to a corresponding page. The system should check the user input and navigate accordingly without requiring a real backend or password authentication.

2. Algorithm

1. Initialize states for username and password using React's useState.
2. Create a handleClick function to handle login logic:
3. Convert the username to lowercase and trim whitespace.
4. Check the value of the username:
5. If "admin", navigate to /admin
6. If "mentor", navigate to /mentor
7. If "student", navigate to /student
8. Otherwise, alert an invalid user message.
9. Use React Router's useNavigate for routing.
10. Create separate components for Admin, Mentor, and Student pages with basic navigation using NavLink.
11. Configure routing in App.jsx using react-router-dom's Routes and Route.

3.

3. Pseudocode

Component: Login

Initialize User and Password with useState

Define handleClick():

Convert User to lowercase and trim

If User == "admin":

 navigate to /admin

Else if User == "mentor":

 navigate to /mentor

Else if User == "student":

 navigate to /student

Else:

 Show alert: Invalid user

Return JSX form with username, password input, and login button

Component: Admin / Mentor / Student

Display basic heading and navigation links using NavLink

App Component:

Set up <Routes>

Route "/" → Login

Route "/admin" → Admin

Route "/mentor" → Mentor

Route "/student" → Student

4. Program Code

App.jsx

```
import { useState } from "react";
import reactLogo from "../assets/react.svg";
import viteLogo from "/vite.svg";
import "../App.css";
import { Routes, Route } from "react-router-dom";
import Login from "../Components/Login";
import Admin from "../Components/Admin";
import Mentor from "../Components/Mentor";
import Student from "../Components/Student";

function App() {
  return (
    <div>
      <Routes>
        <Route path="/" element={<Login />}></Route>
        <Route path="/admin" element={<Admin />} />
        <Route path="/mentor" element={<Mentor />} />
        <Route path="/student" element={<Student />} />
      </Routes>
    </div>
  );
}
```

```
    </div>
  );
}

export default App;
```

Components:Admin.jsx

```
import React from 'react'
import { NavLink } from 'react-router-dom'

const Admin = () => {
  return (
    <div>
      <h2>Hey I am Admin</h2>
      <nav>
        <NavLink
          to="/Admin"
          style={({ isActive }) => ({
            marginRight: "10px",
            color: isActive ? "blue" : "red",
          })}
        >
          Admin
        </NavLink>
        <NavLink
          to="/Mentor"
          style={({ isActive }) => ({
            marginRight: "10px",
            color: isActive ? "blue" : "red",
          })}
        >
          Mentor
        </NavLink>
        <NavLink
          to="/student"
          style={({ isActive }) => ({
            marginRight: "10px",
            color: isActive ? "blue" : "red",
          })}
        >
          Students
        </NavLink>
      </nav>
    </div>
  )
}
```

```

        {/* <Outlet/> */}
    </div>
  )
}

export default Admin

```

Mentor.jsx

```

import React from "react";
import { Outlet } from "react-router-dom";
import { NavLink } from "react-router-dom";
const Mentor = () => {
  return (
    <div>
      <h2>Heyy i am Mentor</h2>
      <nav>
        <NavLink
          to="/Mentor"
          style={({ isActive }) => ({
            marginRight: "10px",
            color: isActive ? "blue" : "red",
          })}
        >
          Mentor
        </NavLink>
        <NavLink
          to="/student"
          style={({ isActive }) => ({
            marginRight: "10px",
            color: isActive ? "blue" : "red",
          })}
        >
          Students
        </NavLink>
      </nav>
    </div>
  );
};

export default Mentor;

//      <Outlet/>

```

Student.jsx

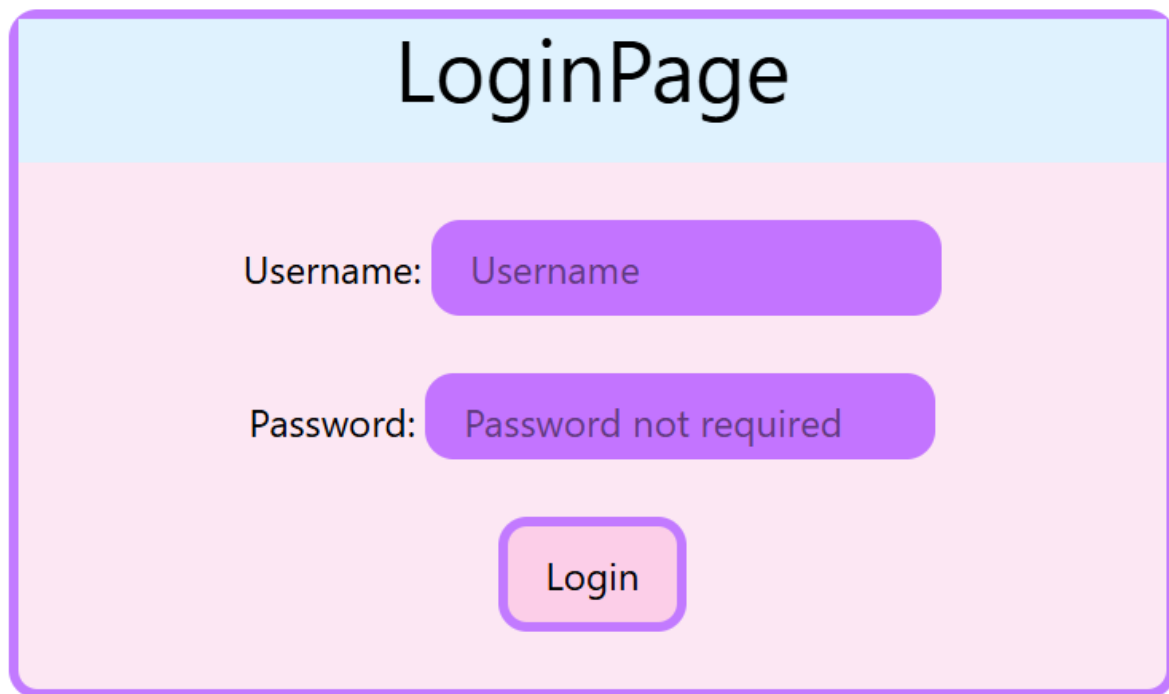
```
import React from 'react'

const Student = () => {
  return (
    <div>
      <h2>Heyy i am Student</h2>

    </div>
  )
}

export default Student
```

5.Screenshot of output:



The screenshot shows a web form titled "LoginPage". The form has a light blue header bar with the title "LoginPage" in black text. The main body of the form is light pink. It contains two input fields: "Username:" and "Password:". The "Username:" field has a purple rounded rectangle containing the text "Username". The "Password:" field has a purple rounded rectangle containing the text "Password not required". Below these fields is a purple rounded rectangle button with the text "Login".

Hey I am Admin
Admin Mentor Students

Heyy i am Mentor
Mentor Students

Heyy i am Student

6. Observation / Reflection

This project demonstrates basic routing and user navigation in React using react-router-dom. It is useful for understanding conditional rendering and navigation based on user input. While it currently works on the front-end, a real application should implement authentication and authorization with a secure backend. Styling with Tailwind CSS adds clarity and visual appeal, and the project can be further enhanced with form validation, role-based access control, or route protection.