

Learner Assignment Submission Format

Learner Details

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 - **Enrollment Number:**SU625MR015
 - **Batch / Class:**MERN Stack
 - **Assignment:**React JS
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Problem Solving Activity 1.1

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. Import React and necessary components
2. Define a functional component called Login
3. Use useState to store the username and password in state variables User and Password
4. Use useNavigate to get a navigation function from React Router
5. Define a handleClick function to handle the login button click
6. In handleClick, trim and lowercase the username
7. Check the username against predefined roles (Admin, Mentor, Student)
8. If the username matches a role, navigate to the corresponding route
9. If the username does not match any role, display an alert message
10. Render the login form with input fields for username and password, and a login button

3. Pseudocode

BEGIN

 DEFINE Login component

 IMPORT React, useState, useNavigate

 DEFINE state variables User and Password

 DEFINE navigation function navigate

 DEFINE handleClick function

 TRIM AND LOWERCASE User

 CHECK User against predefined roles

 IF User matches a role THEN

 NAVIGATE to corresponding route

 ELSE

 DISPLAY alert message

 RENDER login form

 INPUT field for username

 INPUT field for password

 LOGIN button with onClick event handler handleClick

END

4. Program Code

```
import React from "react";

import { useState } from "react";

import Admin from "../Admin";

import Mentor from "../Mentor";

import Student from "../Student";
```

```
import { useNavigate } from "react-router-dom";

const Login = () => {

  const [User, setUser] = useState();

  const [Password, setPassword] = useState();

  const navigate = useNavigate();

  const handleClick=()=>{

    const user = User.trim().toLowerCase();

    if (user == "Admin" || user == "admin") {

      navigate("/admin");

    } else if (user == "Mentor" || user == "mentor") {

      navigate("/mentor");

    } else if (user == "Student" || user == "student") {

      navigate("/student");

    } else {

      alert("Invalid user. Please type Admin, Mentor, or Student.");

    }

  };

  return (

    <div className="bg-lime-100 mt-44 mr-100 mb-8 ml-80 rounded-xxl
border-4 border-yellow-400 pb-6">

      <div>
```

```

    <h2 className="bg-sky-100 pb-5 text-4xl
md:text-center">LoginPage</h2>

    <br />

    <label htmlFor="">Username: </label>

    <input
      type="text"
      placeholder="Username"
      onChange={ (e) => setUser(e.target.value) }
      className="bg-tone-500/[71.37%] rounded-xl pt-2 pr-4 pb-2 pl-4"
    />

    <br />

    <br />

    <label htmlFor="Password">Password: </label>

    <input
      type="password"
      placeholder="Password not required"
      onChange={ (e) => setPassword(e.target.value) }
      className="bg-tone-500/[71.37%] rounded-xl pt-2 pr-4 pb-1 pl-4"
    />

    <br />

    <br />

    <button
      type="submit"
      onClick={handleClick}
      className="bg-skyblue-200 rounded-xl border-4 border-purple-400
pt-2 pr-4 pb-2 pl-4 "

```

```
>  
  
    Login{" "  
  
    </button>  
  
    </div>  
  
    </div>  
  
    );  
};  
  
export default Login;
```

6. Screenshots of Output

LoginPage

Username:

Password:

Hey I am Admin
Admin Mentor Students

7. Observation / Reflection

The given React code is a simple login form that navigates to different routes based on the username. The code is well-structured and easy to understand. Here are some reflections:

- The code uses useState to store the username and password in state variables, which makes it easy to access and update the values.
- The code uses useNavigate to get a navigation function from React Router, which makes it easy to navigate to different routes.
- The handleClick function is well-defined and handles the login button click event correctly.
- The code checks the username against predefined roles and navigates to the corresponding route if the username matches.
- The code displays an alert message if the username does not match any role.

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