

Experiment 08:

Create a react application for the student management system having registration, login, contact, about pages and implement routing to navigate through these pages.

Step 1: Open a Terminal/Command Prompt: Depending on your operating system:

Step 2: set npm global directory:

Create a folder for the experiment: C:\Users\hp\OneDrive\Desktop\LAB8

Run the below command in cmd:

- **cd C:\Users\hp\OneDrive\Desktop**
- **C:\Users\hp\OneDrive\Desktop>npm config set prefix C:\Users\hp\OneDrive\Desktop\LAB8**
- **C:\Users\hp\OneDrive\Desktop>cd LAB8**

Step 3: Create a New React Application

- **npx create-react-app student-management-system**
- **cd student-management-system**

Step 4: Install React Router

In the terminal, make sure you are still in the `student-management-system` directory, then execute:

- **npm install react-router-dom**

Step 5: Edit the Source Code

1. **Open Your Code Editor:** Open your project folder (`student-management-system`) in a code editor like **Visual Studio Code**, **Atom**, or any text editor you prefer.
2. **Create Component Files:** Inside the `src` folder, create a new folder named `components`, and within that folder, create the following files:
 - `About.js`
 - `Contact.js`
 - `Login.js`
 - `Register.js`
 - `Home.js`

```
sql Copy code

student-management-system/
├─ src/
│   ├─ App.js
│   ├─ index.js
│   ├─ components/  <-- This is where your components should be
│   │   ├─ About.js
│   │   ├─ Contact.js
│   │   ├─ Login.js
│   │   ├─ Register.js
│   │   └─ Home.js  <-- Make sure to add this file
```

Step 6: Edit App.js for Routing

In the `src` folder, open `App.js` and replace the default code with the routing code provided earlier. Ensure you import your components correctly.

Home.js

```
import React from 'react';

const Home = () => {
  return (
    <div>
      <h1>Welcome to Student Management System</h1>
      <p>Manage student details and more!</p>
    </div>
  );
};

export default Home;
```

About.js:

```
import React from 'react';

const About = () => {
  return (
    <div>
      <h1>About Us</h1>
      <p>This student management system is developed to help manage student data efficiently.</p>
    </div>
  );
};
```

```
export default About;
```

Contact.js:

```
import React from 'react';

const Contact = () => {
  return (
    <div>
      <h1>Contact Us</h1>
      <p>Email: support@studentmanagement.com</p>
      <p>Phone: +123-456-7890</p>
    </div>
  );
};

export default Contact;
```

Login.js:

```
import React, { useState } from 'react';

const Login = () => {
  const [credentials, setCredentials] = useState({
    email: "",
    password: ""
  });

  const handleChange = (e) => {
    setCredentials({
      ...credentials,
      [e.target.name]: e.target.value
    });
  };

  const handleSubmit = (e) => {
    e.preventDefault();
    alert('Login Successful!');
  };

  return (
    <div>
      <h1>Login</h1>
      <form onSubmit={handleSubmit}>
        <label>Email: </label>
        <input
          type="email"

```

```

        name="email"
        value={credentials.email}
        onChange={handleChange}
        required
      />
      <br />
      <label>Password: </label>
      <input
        type="password"
        name="password"
        value={credentials.password}
        onChange={handleChange}
        required
      />
      <br />
      <button type="submit">Login</button>
    </form>
  </div>
);
};

export default Login;

```

Register.js:

```

import React, { useState } from 'react';

const Register = () => {
  const [formData, setFormData] = useState({
    username: "",
    email: "",
    password: ""
  });

  const handleChange = (e) => {
    setFormData({
      ...formData,
      [e.target.name]: e.target.value
    });
  };

  const handleSubmit = (e) => {
    e.preventDefault();
    alert('Registration Successful!');
  };

  return (
    <div>
      <h1>Register</h1>
      <form onSubmit={handleSubmit}>

```

```

    <label>Username: </label>
    <input
      type="text"
      name="username"
      value={formData.username}
      onChange={handleChange}
      required
    />
    <br />
    <label>Email: </label>
    <input
      type="email"
      name="email"
      value={formData.email}
      onChange={handleChange}
      required
    />
    <br />
    <label>Password: </label>
    <input
      type="password"
      name="password"
      value={formData.password}
      onChange={handleChange}
      required
    />
    <br />
    <button type="submit">Register</button>
  </form>
</div>
);
};

export default Register;

```

these .js files should be saved in the new “components” folder → refer the above diagram for creating .js files

update the app.js file by below code:

app.js:

```

import React from 'react';
import { BrowserRouter as Router, Route, Routes, Link } from 'react-router-dom';
import Home from './components/Home';
import Register from './components/Register';
import Login from './components/Login';
import Contact from './components/Contact';

```

```

import About from './components/About';

function App() {
  return (
    <Router>
      <div>
        <nav>
          <ul>
            <li><Link to="/">Home</Link></li>
            <li><Link to="/register">Register</Link></li>
            <li><Link to="/login">Login</Link></li>
            <li><Link to="/contact">Contact</Link></li>
            <li><Link to="/about">About</Link></li>
          </ul>
        </nav>
        <Routes>
          <Route path="/" element={ <Home /> } />
          <Route path="/register" element={ <Register /> } />
          <Route path="/login" element={ <Login /> } />
          <Route path="/contact" element={ <Contact /> } />
          <Route path="/about" element={ <About /> } />
        </Routes>
      </div>
    </Router>
  );
}

export default App;

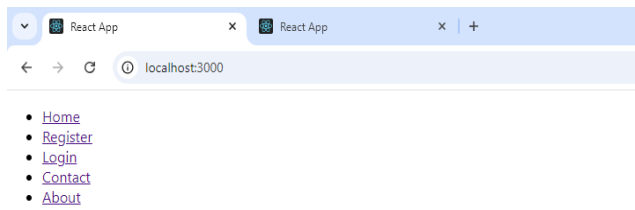
```

Step 7: Run Your Application

1. **Start the Development Server:** In your terminal, make sure you are still in the `student-management-system` directory, then execute:

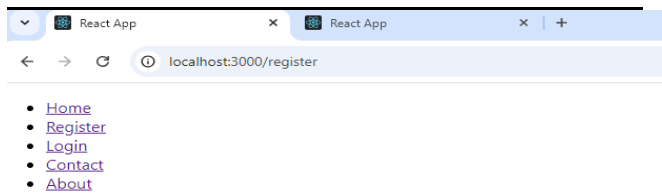
- **npm start**

OUTPUT:



Welcome to Student Management System

Manage student details and more!

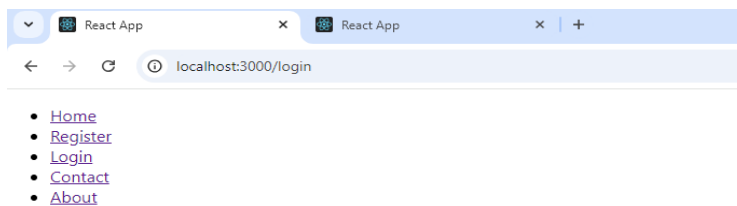


Register

Jsername:

Email:

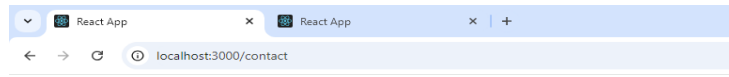
Password:



Login

Email:

Password:

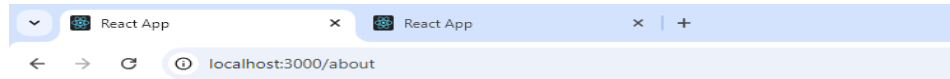


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Contact Us

Email: support@studentmanagement.com

Phone: +123-456-7890



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About Us

This student management system is developed to help manage student data efficiently.
