

# Full Stack Development

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## CASE STUDY

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# About the project – SkillSync

Skillsync is a modern, web-based learning platform that helps educators create engaging courses and helps students learn faster with personalized content. It streamlines lesson planning, assignments, and dashboard in one place, while offering an intuitive, responsive UI for web and mobile. With real-time insights and smart recommendations, Skillsync reduces admin work and improves learning outcomes.

## Key Features:

1. Course builder
2. Assignments/quizzes
3. Progress tracking
4. Personalised dashboard.

# React concepts used

## Function components

We used function components because they make the code simpler and easier to understand. They also allow UI components to be reusable and more organized.

## States / hooks (because we used functions)

Hooks such as useState, useEffect, and useContext are used in function components to manage state, handle side effects, and improve reusability.

```
const SignIn = () => {  
  const [email, setEmail] = useState("");  
  const [password, setPassword] = useState("");  
  const { signIn } = useAuth();
```

# Routing (react-router-dom)

Routing is an important React concept that we used because the webpage contains multiple pages that need to be connected. It helps ensure smooth navigation and flow across different parts of the website.

```
<BrowserRouter>
  <Routes>
    <Route path="/" element={<Layout><Index /></Layout>} />
    <Route path="/about" element={<Layout><About /></Layout>} />
    <Route path="/contact" element={<Layout><Contact /></Layout>} />
    <Route path="/courses" element={<Layout><Courses /></Layout>} />
    <Route path="/quizzes" element={<Layout><Quizzes /></Layout>} />
    <Route path="/quiz" element={<Layout><RequireAuth><Quiz /></RequireAuth><
    <Route path="/signin" element={<Layout><SignIn /></Layout>} />
    <Route path="/get-started" element={<Layout><GetStarted /></Layout>} />
    <Route path="/dashboard" element={<Layout><RequireAuth><Dashboard /></Req
    { /* ADD ALL CUSTOM ROUTES ABOVE THE CATCH-ALL "*" ROUTE */ }
    <Route path="*" element={<Layout><NotFound /></Layout>} />
  </Routes>
</BrowserRouter>
```

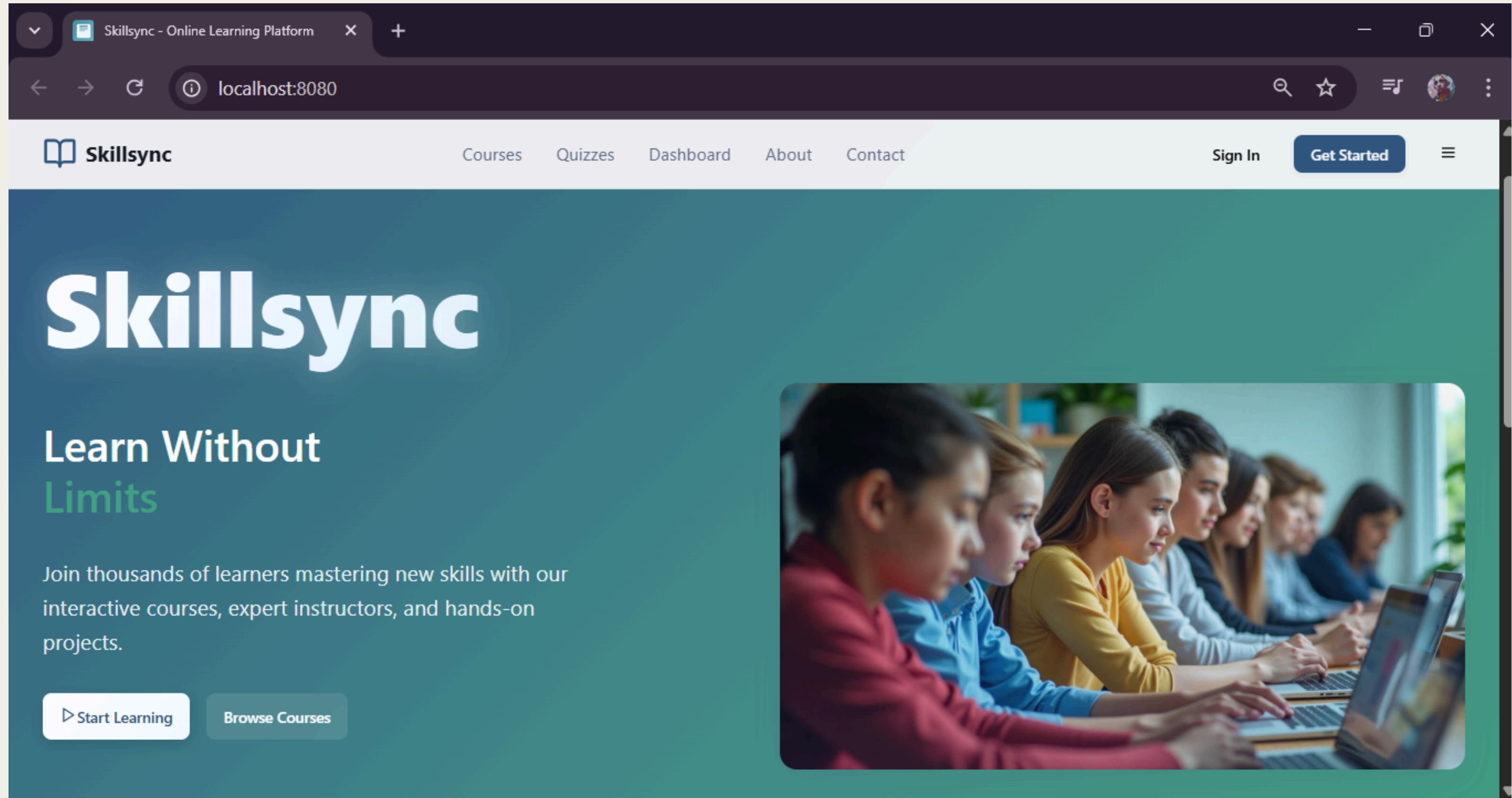
# Props

We used props to pass and display the content of each page inside the Layout component, allowing us to reuse the same header and footer while changing only the main page content

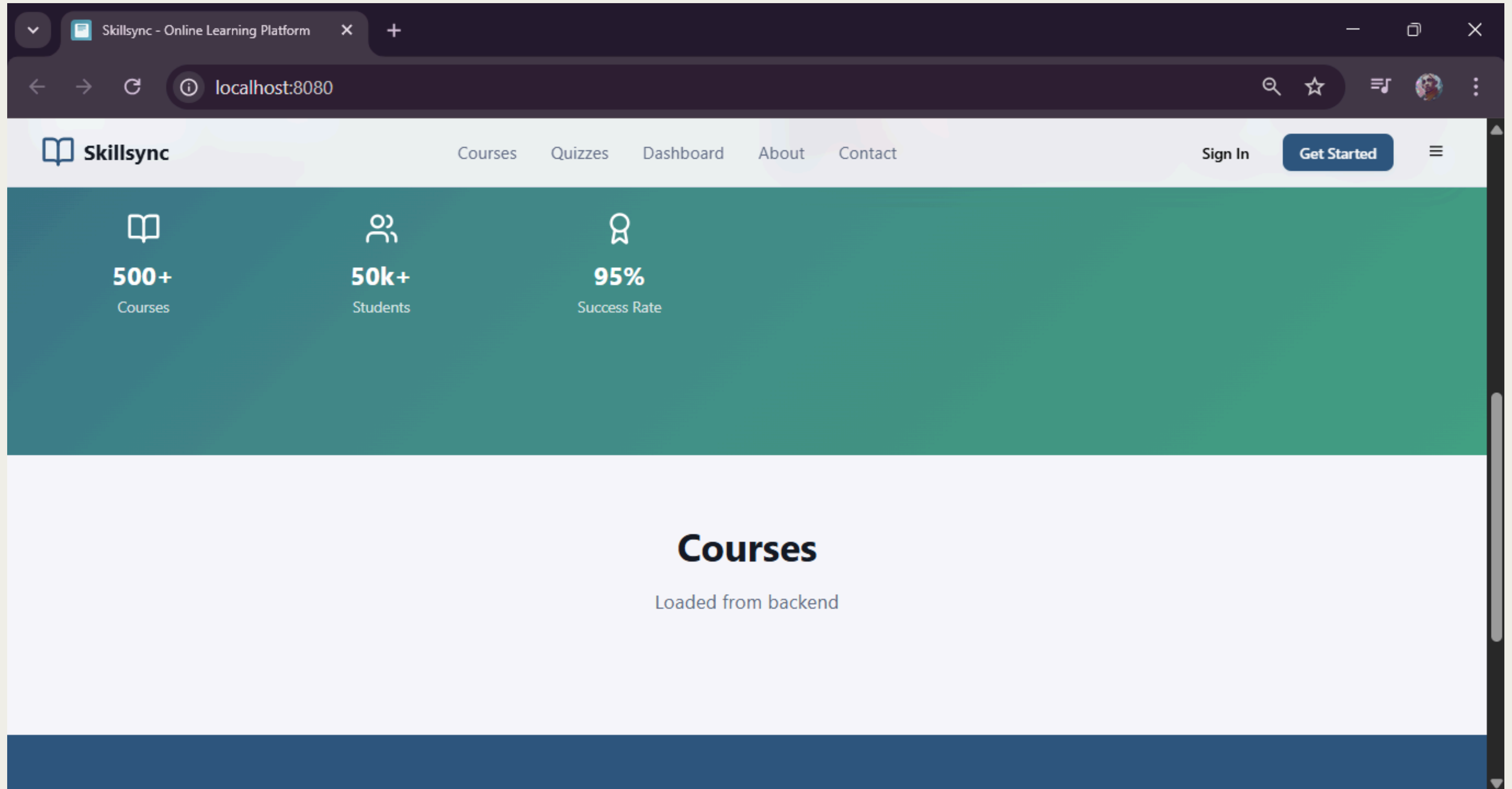
```
const Layout = ({ children }) => {  
  return (  
    <div className="page-container">  
      <Header />  
      <main>  
        {children}  
      </main>  
      <Footer />  
    </div>  
  );  
};
```

# Outputs

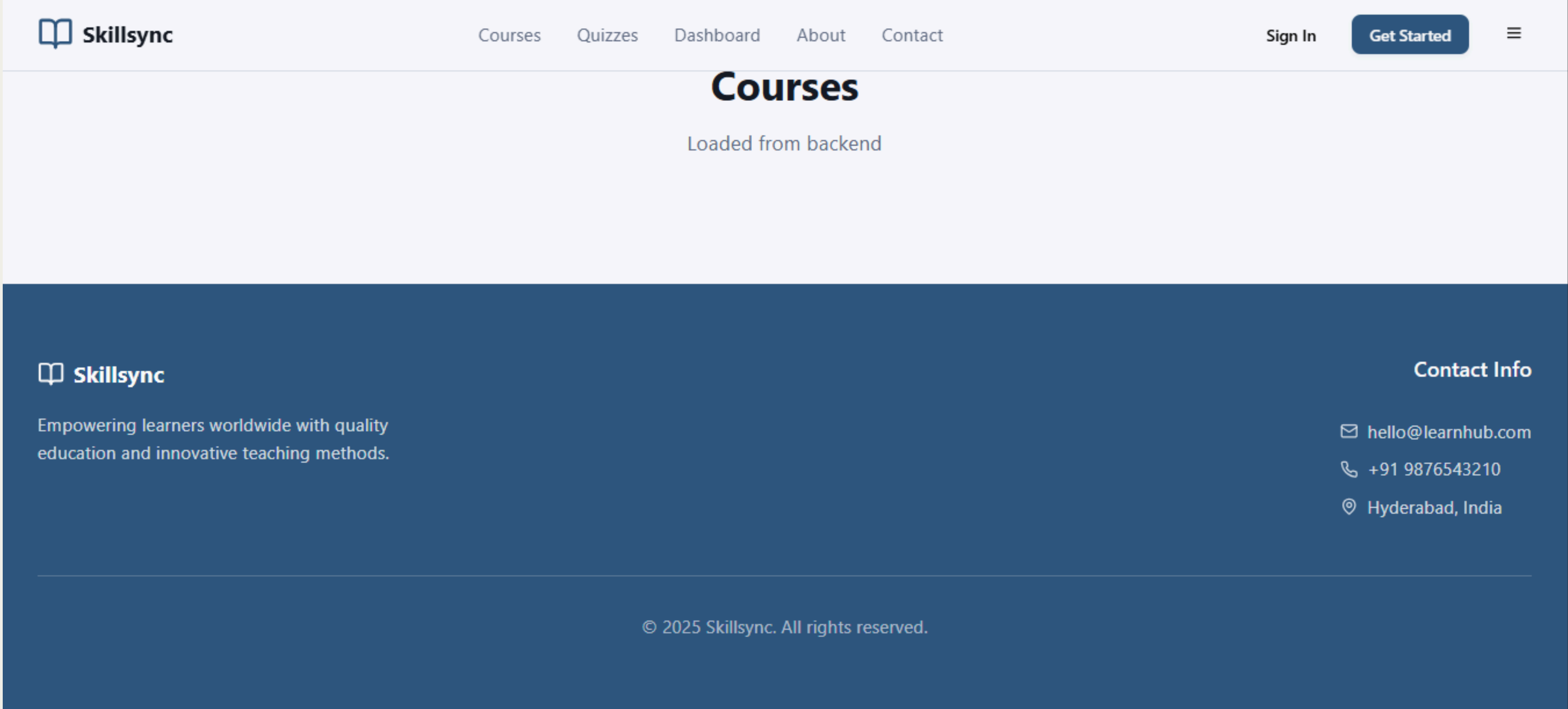
## home page / landing page



# home page / landing page

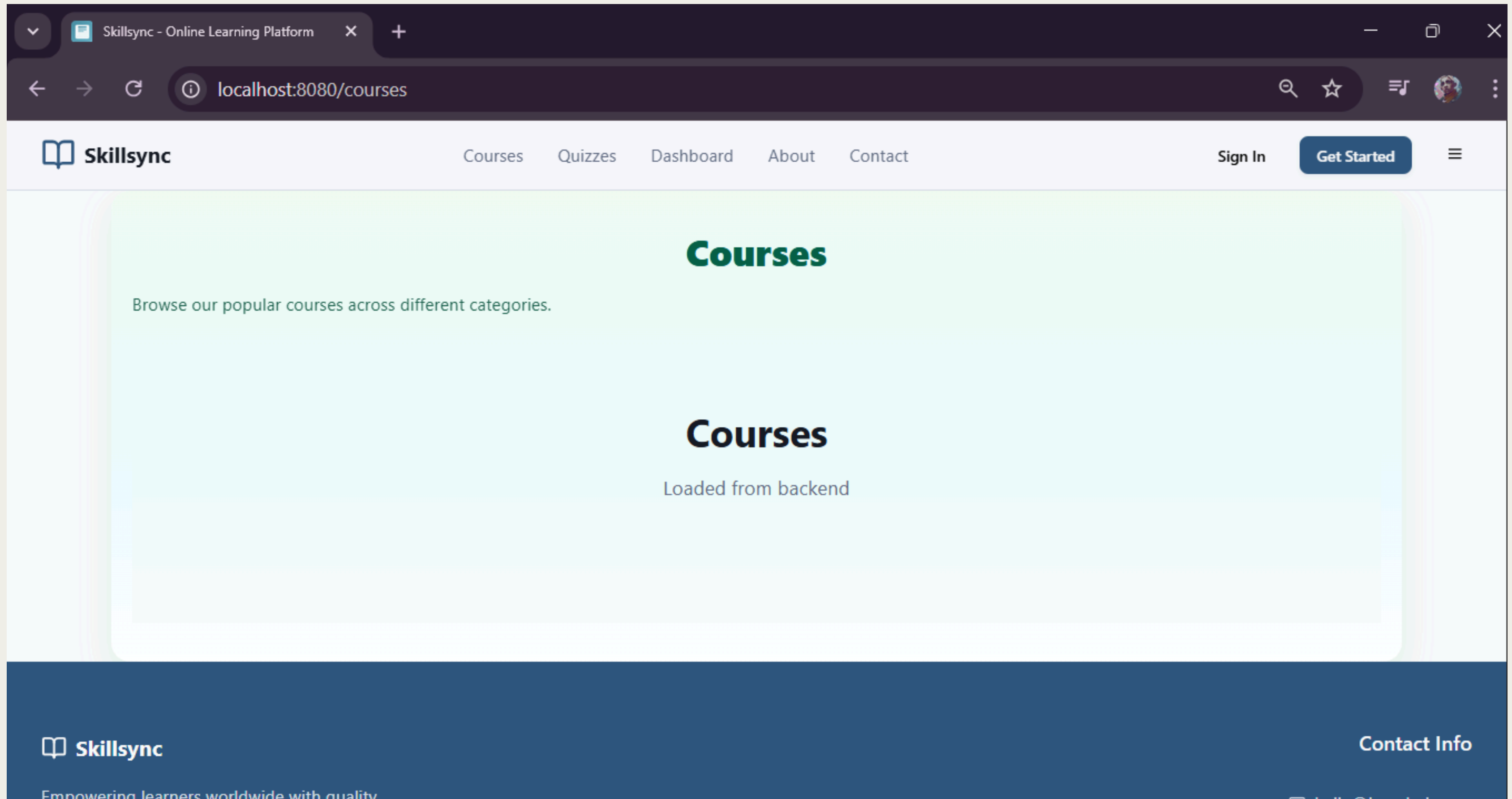


# home page / landing page

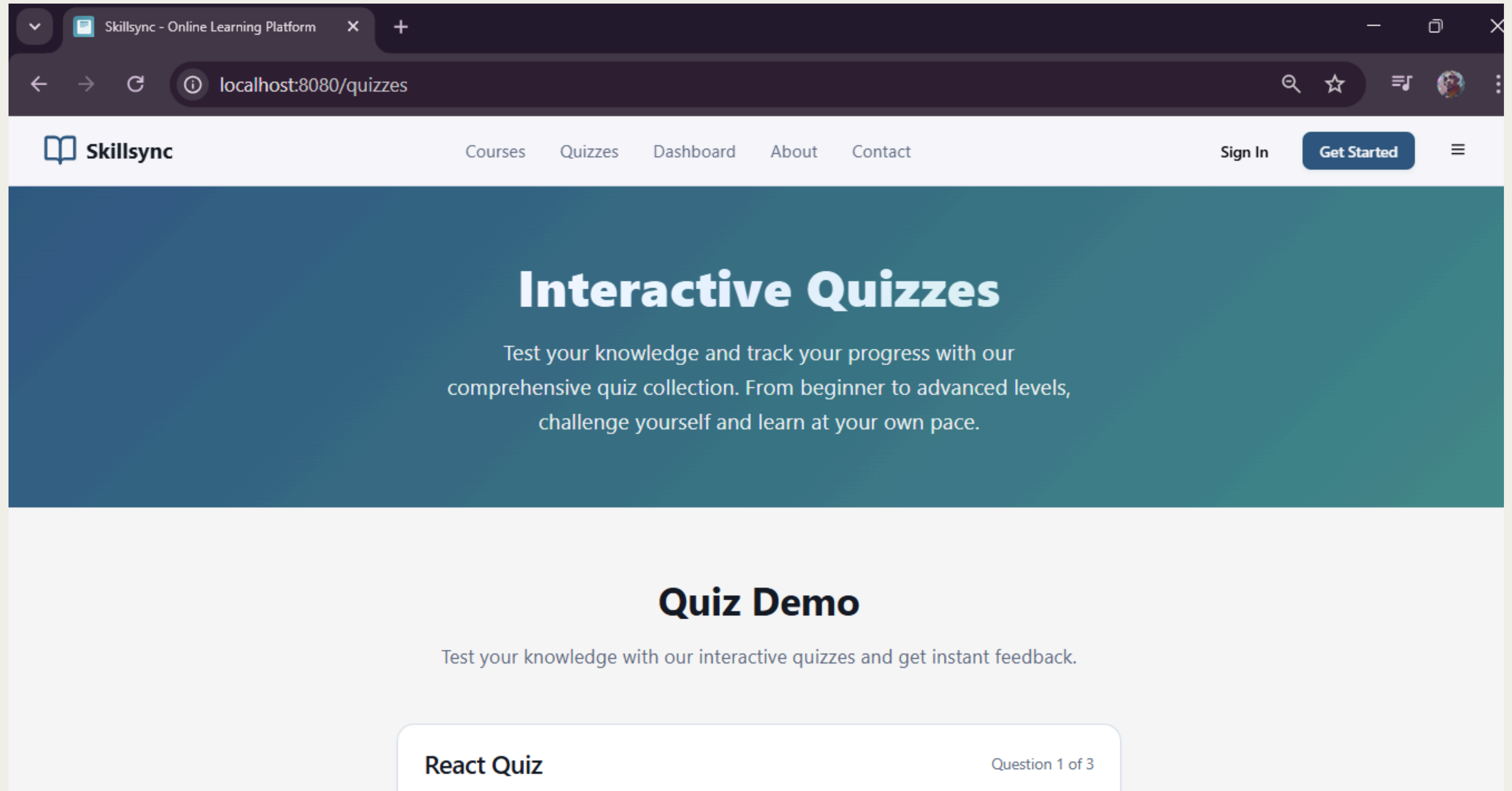




# courses tab



# quizzes tab



# sign in tab

Skillsync - Online Learning Platform

localhost:8080/signin

Skillsync

CoursesQuizzesDashboardAboutContact

Sign InGet Started

Sign In

Email/Username

Password

Sign In

Skillsync

Empowering learners worldwide with quality education and innovative teaching methods.

Contact Info

hello@learnhub.com

+91 9876543210

Hyderabad, India

# get started tab

Skillsync - Online Learning Platform

localhost:8080/get-started

Skillsync

Courses Quizzes Dashboard About Contact

Sign In Get Started

## Create your account

Full name

Username

Email

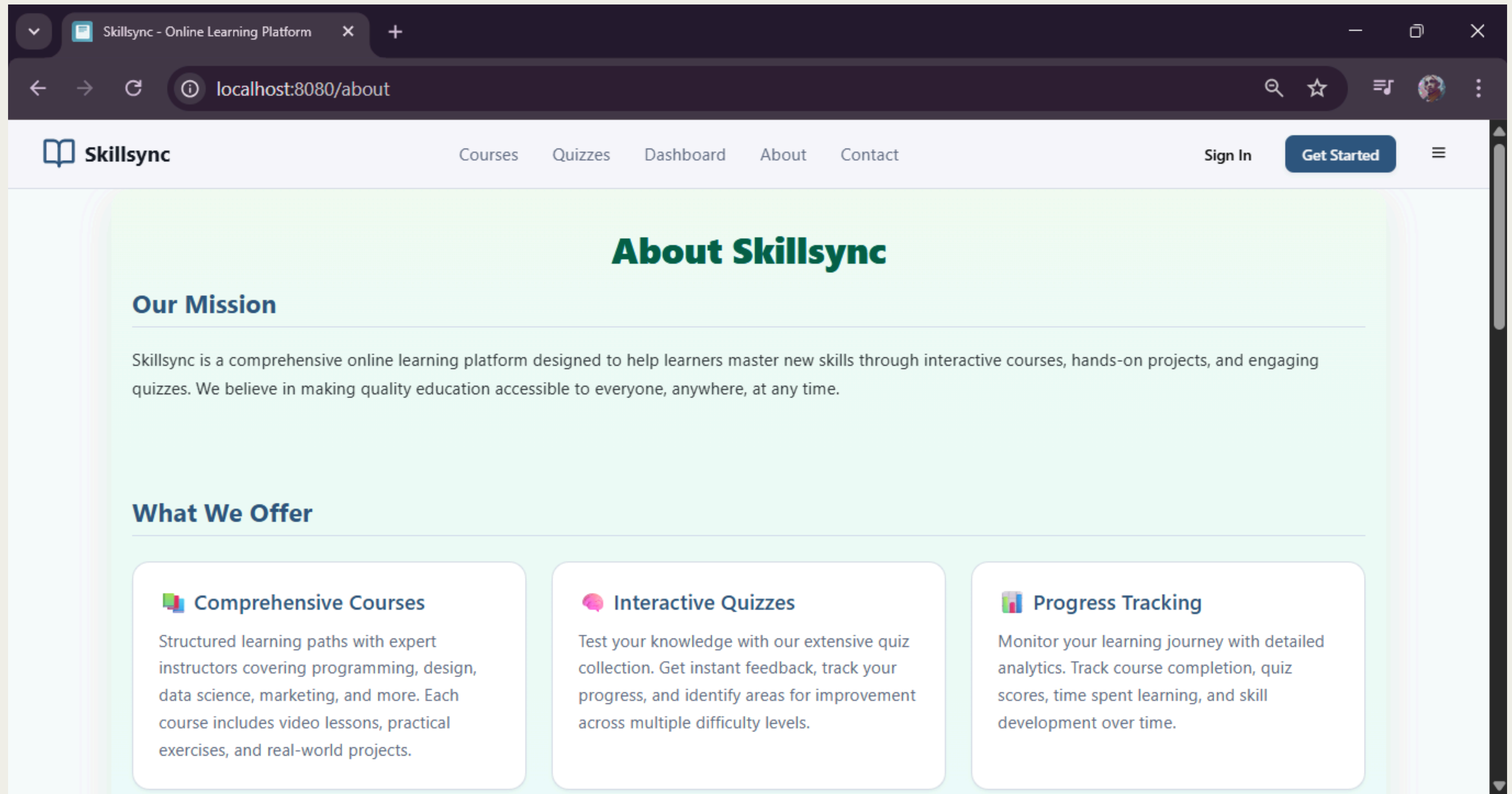
Password

Confirm password

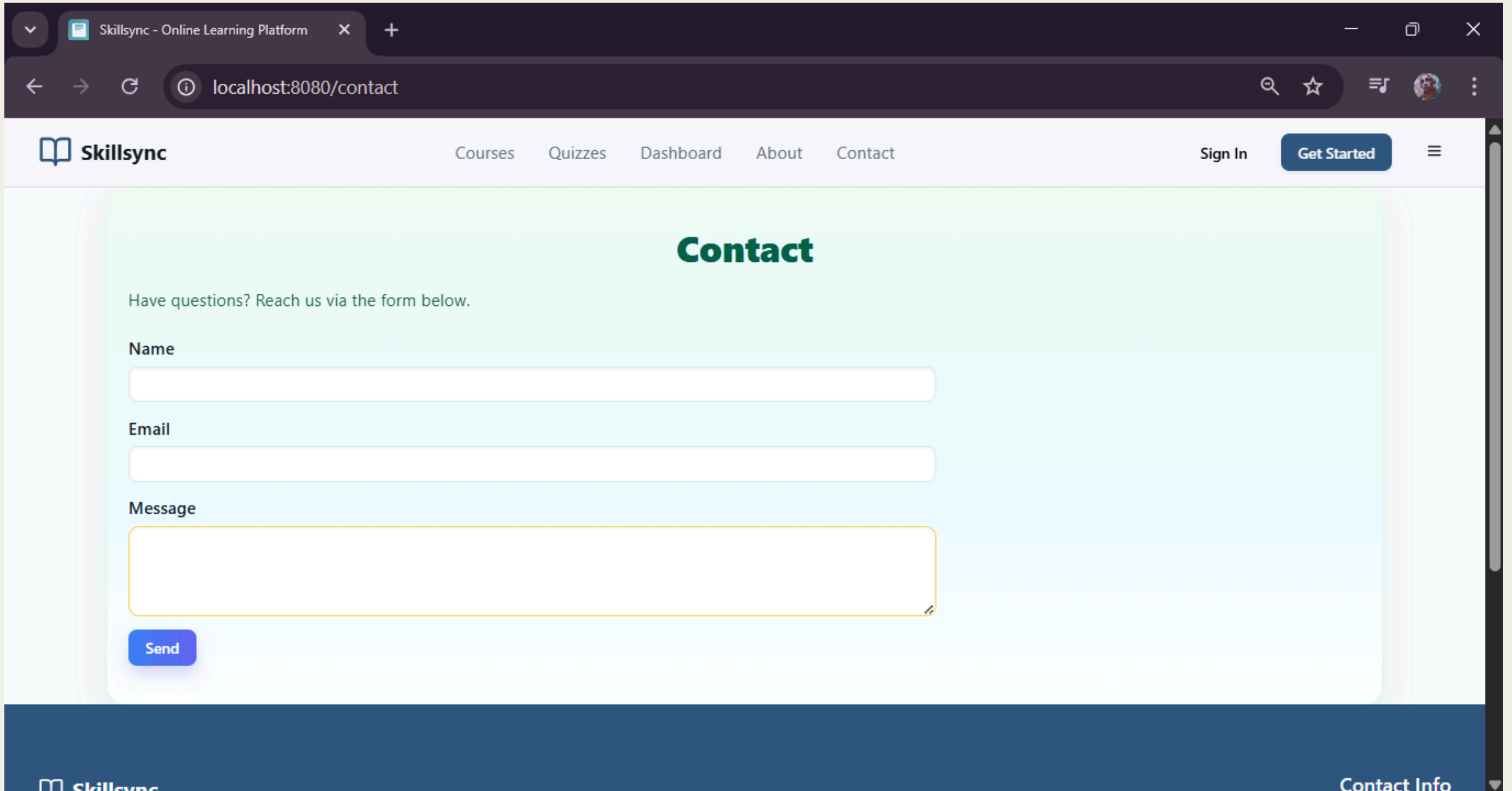
☐ I agree to the Terms and Privacy Policy

Create account

# about tab



# contact tab



The screenshot shows a web browser window with the Skillsync - Online Learning Platform tab. The address bar shows the URL localhost:8080/contact. The Skillsync logo is in the top left, and navigation links for Courses, Quizzes, Dashboard, About, and Contact are in the top center. Sign In and Get Started buttons are in the top right. The main content area has a light green background with the title Contact and a message: Have questions? Reach us via the form below. The form includes input fields for Name, Email, and a text area for Message, followed by a Send button. The footer shows the Skillsync logo and Contact Info.

Skillsync - Online Learning Platform

localhost:8080/contact

Skillsync

Courses Quizzes Dashboard About Contact

Sign In Get Started

## Contact

Have questions? Reach us via the form below.

Name

Email

Message

Send

Skillsync

Contact Info

# Learning Outcomes

- Learned how to build a React app using function components.
- Used props to send data between components.
- Managed state and side effects with React Hooks (useState, useEffect).
- Implemented React Router for navigating between pages.
- Created layout components like Header, Footer, and Main.
- Understood component-based structure for organized code.
- Gained experience in building a multi-page frontend (SPA).
- Improved debugging and problem-solving skills in React.

Thank you!