

# Blockchain and Cryptocurrency Learning Platform

This document outlines the structure and implementation details for an online learning platform focused on blockchain and cryptocurrency. The platform aims to provide a space where instructors can upload courses, and students can enroll and complete courses while tracking their progress.

## 1. Layout and Navigation Structure

To handle navigation and layout across multiple pages in the Next.js project, a Layout component is created to wrap pages with common elements such as a navigation bar, footer, and sidebar.

The components are structured as follows:

- components/Layout.tsx: Contains the common layout including navigation and footer.
- pages/\_app.tsx: Wraps all pages with the Layout component.
- pages/index.tsx: Home page with a brief introduction.
- pages/courses/index.tsx: Course catalog page displaying all available courses.
- pages/courses/[id].tsx: Dynamic route for course details based on course ID.

## 2. Layout Component (components/Layout.tsx)

```
tsx
```

```
import React from 'react';
```

```
import Link from 'next/link';
```

```
interface LayoutProps {
```

```
  children: React.ReactNode;
```

```
}
```

```
const Layout: React.FC<LayoutProps> = ({ children }) => {
```

```

return (

  <div>

    <nav className="navbar">

      <div className="container">

        <Link href="/" passHref>

          <a className="nav-logo">Blockchain Learning</a>

        </Link>

        <ul className="nav-links">

          <li><Link href="/" passHref><a>Home</a></Link></li>

          <li><Link href="/courses" passHref><a>Courses</a></Link></li>

          <li><Link href="/about" passHref><a>About</a></Link></li>

        </ul>

      </div>

    </nav>

    <main className="main-content">{children}</main>

    <footer className="footer">

      <p>© 2024 Blockchain Learning Platform</p>

    </footer>

  </div>

);

};

export default Layout;

```

### 3. Home Page (pages/index.tsx)

```

tsx

import React from 'react';

```

```
const HomePage: React.FC = () => {

  return (

    <div>

      <h1>Welcome to Blockchain and Cryptocurrency Learning Platform</h1>

      <p>Explore a range of blockchain and cryptocurrency courses to advance your
knowledge in this exciting field.</p>

    </div>

  );

};

export default HomePage;
```

## 4. Courses Page (pages/courses/index.tsx)

```
tsx

import React from 'react';

import CourseCard from '../../components/CourseCard';

const courses = [

  { id: 1, title: 'Blockchain Basics', instructor: 'John Doe', difficulty: 'Beginner',
rating: 4.8 },

  { id: 2, title: 'Crypto Trading', instructor: 'Jane Smith', difficulty:
'Intermediate', rating: 4.6 },

  { id: 3, title: 'Smart Contracts', instructor: 'Alice Johnson', difficulty:
'Advanced', rating: 4.9 },

];
```

```
const CourseCatalog: React.FC = () => {

  return (

    <div>

      <h1>Our Courses</h1>

      <div className="course-list">

        {courses.map((course) => (

          <CourseCard key={course.id} {...course} />

        ))}

      </div>

    </div>

  );

};

export default CourseCatalog;
```

## 5. Course Details Page (pages/courses/[id].tsx)

```
tsx

import { useRouter } from 'next/router';

import React from 'react';

const CourseDetails: React.FC = () => {

  const router = useRouter();

  const { id } = router.query;

  return (

    <div>

      <h1>Course Details for ID: {id}</h1>
```

```
        </div>

    );

};

export default CourseDetails;
```

## Conclusion

**This document provides a comprehensive overview of the structure and components needed to create an online learning platform for blockchain and cryptocurrency education. By implementing a consistent layout and routing system with Next.js, developers can create a seamless user experience for both instructors and students.**