

Task: Build a Cryptocurrency Portfolio Tracker

Objective

Create a frontend-focused application using Next.js/React.js with TypeScript. The application will allow users to view a list of cryptocurrencies, and add them to their portfolio. The primary focus should be on building a well-structured, visually appealing, and highly interactive Frontend experience.

Part 1: Frontend (Next.js/React.js with TypeScript - Primary Focus)

Develop a React.js-based Next.js application with the following features:

1. Cryptocurrency List Page (SSR)

- Display a list of cryptocurrencies with their current prices.
- Implement server-side rendering (SSR) for optimized performance.
- Add a search bar to filter cryptocurrencies by name or symbol.
- Provide sort and filter options (e.g., by market cap, price, or performance).
- Implement loading states and error handling for API interactions.

2. Cryptocurrency Detail Page (CSR)

- Show detailed information about a selected cryptocurrency.
- Implement client-side rendering (CSR) for better interactivity.
- Include an "Add to Portfolio" button with smooth UX/UI transitions.

4. UI/UX Enhancements

- Use Tailwind CSS or Material-UI for styling (mandatory).
- Ensure a modern and visually appealing design.
- Implement dark mode for better user experience.
- Ensure mobile responsiveness and accessibility compliance.

5. State Management & Performance Optimizations

- Use React Query or SWR for efficient API data fetching.
- Optimize with lazy loading and code splitting.
- Use context or Redux for global state management.

Part 2: Backend (Minimal Scope - Only for API Consumption)

- Use a mock API or public cryptocurrency API (e.g., CoinGecko, CoinMarketCap).
- No need to build a custom backend unless necessary for API handling.

Good to have (optional)

- Deploy the project to GitHub with proper documentation.
- Use ESLint and Prettier for code consistency.
- Implement unit tests for key components (e.g., Jest + React Testing Library).