Cryptoverse Cryptocurrency Dashboard Documentation

# Introduction

Project Title: Cryptoverse - Cryptocurrency Dashboard.  
  
Team Members: : Mubarak.k – team lead, Manisha kumari.S – UI/UX designer , Vedhavalli.k – Frontend Developer ( React.js Specialist ) , Kishore.v - Frontend Developer ( API Ingegrator ) , Dinesh kumar.k – Testing and Debugging Specialist.

# Project Overview

Purpose :  
Cryptoverse is a feature-rich cryptocurrency dashboard that provides comprehensive insights into market dynamics.  
It visualizes historical price data over the past five years, enabling users to analyze trends, compare assets,  
and make informed investment decisions. With intuitive charts and user-friendly navigation, Cryptoverse serves  
as both a powerful investment tool and an educational resource.

# Key Features

- Interactive charts powered by `react-chartjs-2` and Chart.js  
- Customizable timeframes for detailed analysis  
- Search functionality for exploring cryptocurrencies  
- Visual representation of price fluctuations with easy comparison tools

# Architecture

Component Structure:  
- Homepage: Displays global cryptocurrency statistics and top 10 cryptocurrencies  
- Cryptocurrencies Page: Displays a full list of available cryptocurrencies with search functionality  
- Crypto Details Page: Displays detailed price trends, performance stats, and links for each cryptocurrency  
- LineChart Component: Provides interactive data visualization for price trends  
  
State Management:  
- Managed using `@reduxjs/toolkit`  
- Uses `cryptoApi` service for data fetching, integrated with Redux middleware  
  
Routing:  
- Utilizes `react-router-dom` for seamless navigation

# Setup Instructions

Prerequisites:  
- Node.js & npm  
- React.js  
- Basic knowledge of HTML, CSS, and JavaScript  
- Git for version control  
- IDE such as Visual Studio Code  
  
Installation:  
1. Clone the repository: git clone https://github.com/SSC369/cryptoverse  
2. Navigate to the project folder: cd crypto  
3. Install dependencies: npm install  
4. Start the development server: npm run dev (vite) or npm start

# Access the App

Open http://localhost:3000 to access Cryptoverse.

# Folder Structure

/client - Contains the React app  
 /components - Reusable UI components  
 /pages - Pages like Home, Cryptocurrencies, Crypto Details  
 /services - API configurations and Redux slices  
 /assets - Images, icons, and stylesheets

# Future Enhancements

- Enhanced filtering and sorting options  
- Improved visual analytics and charting features  
- Expanded educational resources for crypto market insights