Assignment

BSCE21010/BSCE21014/BSCE20036

Requirement Specification Document [Crypto Bot]

Crypto Market Analyst

Introduction

The Cryptocurrency Trading Bot System is a sophisticated platform designed to automate cryptocurrency trading based on predefined strategies. The system incorporates essential functional and non-functional requirements to ensure seamless trading experience.

Functional Requirements

1. **Trading**: The system should be able to execute trades automatically based on predefined strategies,Trends and Market Revisions.
2. **Market Data Analysis**: The system should be able to analyze market data such as price, volume, and other relevant information.
3. **Strategy Implementation**: The system should allow users to implement and test their own trading strategies and at the same time visulize the imperfections pesent.Futher on suggestions with known algorithms and sensible decisions will also be implemented.
4. **Notifications**: The system should notify users of significant events or changes in the market.
5. **Portfolio Management**: The system should use take premptive measures on its own to manage the portfolio e.g Auto Trades,Buying/Selling orders
6. **Copy Trading**: The system should be able to follow the known traders and enhance their techniques and algorithms. e.g Each trader follows a certain set of rules

Non-Functional Requirements

▼ **Re-usability (Object-Oriented Approach)**: The system code should be modular and object-oriented, allowing for easy reuse of components.

- Code should be organized into reusable components or libraries, promoting efficiency and reducing redundancy in development efforts.
- Encapsulation, inheritance, and polymorphism should be leveraged to enhance reusability, enabling developers to extend and modify existing functionality without impacting other parts of the system.

▼ **Maintainability**: The system should be designed in a way that allows for easy updates and maintenance. This includes clear, well-commented code and comprehensive documentation.

- Code should follow consistent coding conventions and best practices, making it easier for developers to navigate and make changes.e.g proof reading,indentation etc.

- Comments and documentation should be comprehensive, providing insights into the purpose and functionality of each component, method, or class.

▼ **Reliability**: The system should have a clearly defined operational availability. It should be designed to run continuously without crashing and handle errors gracefully.

- The system should demonstrate high reliability, with a clearly defined operational availability of at least 99%.
- It should be capable of running continuously without unexpected crashes or failures, ensuring uninterrupted trading operations.

▼ **Security**: The system should have clearly defined user access controls. Sensitive data, such as API keys and personal information, should be encrypted.

- User access controls should be clearly defined, ensuring that only authorized users can access sensitive functions or data.