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# Trading Platform with AI Chabot

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**Abstract**

With the exponential growth of cryptocurrency adoption worldwide, there is a rising demand for trading platforms that are not only secure and functional but also intuitive for beginners. Existing platforms often present overly complex interfaces and lack real-time, intelligent assistance. This paper presents a Trading Platform integrated with an AI Chabot, developed using modern web technologies such as ReactJS, Tailwind CSS, Spring Boot, and MySQL. The system enables users to buy and sell cryptocurrencies like Bitcoin using real-time pricing data from CoinGecko and Gemini APIs. Secure transactions are facilitated through Razorpay and Stripe integrations. The platform incorporates robust security features including email-based OTP and two-factor authentication (2FA). To assist users effectively, the platform includes an AI Chabot capable of answering crypto-related queries and guiding users through the trading process. Additionally, it offers comprehensive portfolio management with live dashboards and transaction histories. This research aims to bridge the usability and knowledge gap between novice users and the crypto market by delivering a scalable, intelligent, and user-friendly trading ecosystem.

## 1. Introduction

Cryptocurrency has emerged as a revolutionary digital asset class with a growing user base globally. Despite increasing interest, many existing platforms remain unfriendly to beginners due to complex interfaces, lack of real-time help, and minimal educational support. To address these issues, our proposed system, "Trading Platform with AI Chabot," provides a secure, intelligent, and user-centric solution that simplifies crypto trading for new users.

## 2. Methodology

- **Frontend**: Built with ReactJS and Tailwind CSS for responsiveness and interactivity.
- **Backend**: Powered by Spring Boot and MySQL, ensuring secure data storage and high scalability.
- **AI Chabot**: Uses Gemini NLP and third-party APIs to understand and answer user queries.
- **Security**: Two-factor authentication with email OTP system.
- **Payment Integration**: Razorpay and Stripe for secure financial operations.
- **Market Data**: Live crypto values fetched using CoinGecko and Gemini APIs.

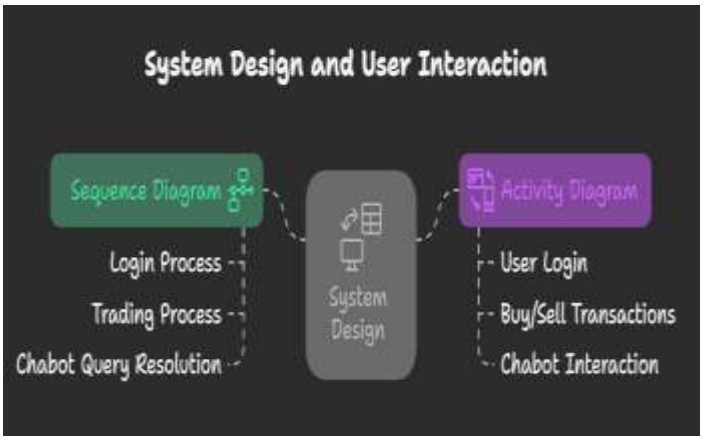
## 3. Software Overview

The software architecture includes:

- **User Module**: Signup, login, 2FA, profile management.
- **Trading Module**: Buy/sell crypto with real-time pricing.
- **Wallet Module**: Add/withdraw money via Razorpay/Stripe.
- **Portfolio Module**: View assets, trends, history.
- **AI Chabot Module**: NLP-based assistant integrated across platform.
- **Admin Module**: System management, user controls.

## 4. Sequence Diagram and Activity Diagram

The system's design is supported by sequence and activity diagrams that map user interaction with core modules. These diagrams illustrate the flow of actions such as login, trading, and Chabot query resolution.




## 5. Results and Discussion

- Successful testing of buy/sell transactions with real-time price syncing.
- Chabot successfully answers FAQs and crypto-related queries.
- OTP and 2FA authentication work seamlessly during login.
- Portfolio visualization improves user engagement.

## 6. Future Work

- Integration of biometric authentication.
- Advanced analytics using machine learning.
- Multi-language support for global reach.
- Mobile app development.

## 7. Conclusion

This project addresses the usability and security concerns of crypto trading by delivering a complete trading platform for beginners. With integrated AI guidance, secure transaction handling, and real-time insights, the system empowers users to participate confidently in the digital currency ecosystem.

## 8. Acknowledgment

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