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1. **Thesis Title**: Medi-Secure: A Blockchain-Based Pharmaceutical Supply Chain Solution

2. **Student Name:** Muhammad Saad, Hamza Siddiqui, Muhammad Shehryar, Ahmed

3. **Degree Program**: Bachelor of Computer Science

4. **University**: DHA Suffa University

5. **Advisors**: Dr. Huma Jamshed, Mr. Ayoub Kamal

Abstract

Provide a concise summary of the project, highlighting the problem, objectives, blockchain solution, and key results.

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1. Introduction

- **Background**: Outline the importance of secure pharmaceutical supply chains.

- **Purpose**: Describe the goal of using blockchain to prevent counterfeit medicines.

- **Scope**: Briefly mention Medi-Secure's core features.

2. Literature Review

- Discuss previous research on blockchain in supply chains, existing solutions for pharmaceutical transparency, and other related studies.

3. Problem Statement

- Detail the issues of counterfeit medicines and black market distribution in the pharmaceutical supply chain.

4. Methodology

- **Blockchain Architecture**: Explain why blockchain is suitable for this application.

- **Smart Contracts**: Describe how they automate and enforce contracts between stakeholders.

5. System Design

- **Architecture Overview**: Describe the high-level design of the system, including components like blockchain, web/mobile app interfaces, and smart contracts.

- **Features**:

  - Real-time stock monitoring

  - Batch traceability

  - Chatbot for affordable alternatives

6. Implementation

- Describe the tools and technologies used (e.g., Ethereum, Hyperledger).

- **Front-end & Back-end Development**: Explain the development of the web and mobile applications.

- **Smart Contracts**: Discuss key contract functionalities and how they manage transactions.

7. Results and Evaluation

- Present the outcomes of the project, including tests conducted to ensure security, transparency, and user satisfaction.

- **User Feedback**: Briefly describe how users (pharmacists, distributors) interacted with the system and their feedback.

8. Conclusion

Summarize the success of the project in addressing the problems identified.

9. Future Work

Suggest potential improvements or extensions of the Medi-Secure platform, like scalability or additional blockchain features.