Department of Electrical and Computer Engineering
North South University

Senior Design Project

Decentralised Banking System Using Blockchain Technology and Solidity Contracts

Al Sadat Rafi **1813118642**
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Md. Mahir Asif Chowdhury **1712447642**

Faculty Advisor:

Md. Shahriar Hussain

Senior Lecturer

ECE Department

Spring, 2023

LETTER OF TRANSMITTAL

17 June, 2023

To,

Dr. Rajesh Palit
Chairman,
Department of Electrical and Computer Engineering
North South University, Dhaka

Subject: **Submission of Capstone Project Report on "Decentralised Banking System Using Blockchain Technology and Solidity Contracts"**

Dear Sir,
With due respect, we would like to submit our **Capstone Project Report** on **"Decentralised Banking System Using Blockchain Technology and Solidity Contracts"** as a part of our BSc program. The report deals with Decentralised Banking System. This project was very much valuable to us as it helped us gain experience from practical field and apply in real life. We tried to the maximum competence to meet all the dimensions required from this report.

We will be highly obliged if you kindly receive this report and provide your valuable judgment. It would be our immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.

Sincerely Yours,

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Al Sadat Rafi
ECE Department
North South University, Bangladesh

.....
Md Riaz Uddin Mojumdar
ECE Department
North South University, Bangladesh

.....
Md. Mahir Asif Chowdhury
ECE Department
North South University, Bangladesh

APPROVAL

Al Sadat Rafi (ID:1813118642), Md Riaz Uddin Mojumdar (ID:1912430042) and Md. Mahir Asif Chowdhury (ID:1712447642) from Electrical and Computer Engineering Department of North South University, have worked on the Senior Design Project titled "**Decentralised Banking System Using Blockchain Technology and Solidity Contracts**" under the supervision of **Md. Shahriar Hussain** partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering and has been accepted as satisfactory.

Supervisor's Signature

…….

Md. Shahriar Hussain
Senior Lecturer
Department of Electrical and Computer Engineering
North South University
Dhaka, Bangladesh.

Chairman's Signature

…….

Dr. Rajesh Palit
Professor & Chair
Department of Electrical and Computer Engineering
North South University
Dhaka, Bangladesh.

DECLARATION

This is to declare that this project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. All project related information will remain confidential and shall not be disclosed without the formal consent of the project supervisor. Relevant previous works presented in this report have been properly acknowledged and cited. The plagiarism policy, as stated by the supervisor, has been maintained.

Students' names & Signatures

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1. Al Sadat Rafi

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2. Md Riaz Uddin Mojumdar

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3. Md. Mahir Asif Chowdhury

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ABSTRACT

Decentralised Banking System Using Blockchain Technology and Solidity Contracts

This thesis aims to design and implement a decentralized banking system using blockchain technology and smart contracts. The objective of this study is to address the issues of security and transparency in traditional banking systems by utilizing the immutability and decentralization properties of blockchain technology. The proposed system will be built on the Ethereum blockchain platform and will use smart contracts written in Solidity to facilitate transactions and maintain a secure and transparent ledger of all banking activities. The system will also be evaluated for its scalability and potential real-world applications. The blockchain technology offers a secure, decentralized, and transparent way of recording transactions, which is well-suited for the banking industry. This decentralized banking system will enable users to have full control over their assets and transactions, without the need for intermediaries. The study will also explore the potential of this system in the context of financial inclusion and the challenges that need to be addressed for its successful implementation. The results of this study will provide valuable insights for the future development of decentralized banking systems and the integration of blockchain technology in the financial industry. The proposed system has the potential to revolutionize the traditional banking system by making it more secure, transparent, and efficient.