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Transparent and Genuine Charity Applications based on Blockchain

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Abstract: Zeroing in on the covering spaces of the coordination business with countless mature blockchain applications and the public government assistance industry that requires high straightforwardness and believability, this paper plans and carries out an inventive charity coordination's stage dependent on blockchain innovation through the Ethereum stage. Our foundation utilizes the open, straightforward, and unavoidable elements of the blockchain, joined with a one-of-a-kind Responsibility Relay System and Evaluation and Reporting Mechanism, and can accomplish the consistency of the information on the chain with true status, just as the credibility and straightforwardness of magnanimity coordination's information. This paper likewise sets up a model for assessing magnanimity material gifts for social government assistance dependent on the exemplary organization most extreme stream calculation. Following four months of observational investigation, we have inferred that the blockchain stage can enormously expand the client's confidence in the venture, upgrade the framework's neatness coefficient and increment the nature of generously raised materials, consequently working on the public government assistance of beneficent gifts. The paper reaches the inference that this blockchain stage is a specialized answer for augmenting social government assistance.

Keywords: Blockchain technology, Smart contract, data security, data recovery, Charity Application.

I. INTRODUCTION

Blockchain technology derived from Bitcoin is considered a subversive innovation of the computing model after mainframes, personal computers, and the Internet. A blockchain is strictly defined as a counterfeit-proof, irrevocable, decentralized cryptographic common ledger that chronologically combines data blocks into certain data structures. Therefore, pervasive blockchain technology is a new decentralized infrastructure and a distributed computing paradigm that uses encrypted chain block structures to review and store data and uses smart contracts to manipulate data on the blockchain. Technology has many areas of transparency, openness, traceability, and irrevocability for its broad application perspectives, as well as the areas of the common good and logistics traceability are discussed in this article. In the area of public welfare, the total value of donations collected in 2016, using the data reported by China Charity Fed as an example, was 18.789 million yuan, including 578 million yuan of monetary donations, which is only 3.08. equivalent to 18.211% and 4.444 billion yuan of physical value after conversion, corresponding to 96.92%

II. MOTIVATION AND PROBLEM DEFINITION

Motivation

Nowadays there are many online platforms for NGO donation peoples do online transactions to donate money to NGO. So, we need data security which is give more accuracy.

Problem definition

Now a days many NGO requests for donations to users. User should know where they are donating right NGO or not. Many NGO are taking donations as money from user. So, we are developing transaction system for user and NGO with data security using smart contract.

III. METHODOLOGY

Blockchain Technology

Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system. A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain. Each block in the chain contains a number of transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant's ledger. The

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decentralized database managed by multiple participants is known as Distributed Ledger Technology (DLT).Blockchain, is a type of DLT in which transactions are recorded with an immutable cryptographic signature called a hash.

IV. LITERATURE REVIEW

[1]Title- Public Philanthropy Logistics Platform Based on Blockchain Technology for Social Welfare Maximization.
Description-:They developed platform makes use of the open, transparent, and irrevocable features of the blockchain, combined with a unique Responsibility Relay System and Evaluation and Reporting Mechanism, and can achieve the consistency of the data on the chain with real-world status, as well as the authenticity and transparency of philanthropy logistics data. This paper also establishes a model for evaluating philanthropy material donations for social welfare based on the classic network maximum flow algorithm. After four months of empirical analysis, we have concluded that the blockchain platform can greatly increase the user's trust in the project, enhance the system's cleanliness coefficient and increase the quality of philanthropically raised materials, thereby improving the public welfare of charitable donations. The paper draws the conclusion that this blockchain platform is a technical solution for maximizing social welfare.

[2]Title- Research on Charity System Based on Blockchain
Description-:This paper proposed a charity system based on blockchain technology and expounds the design pattern, architecture and operational process of the platform. Some core functions of the charity platform have been realized and verified on Ethereum in this article. We hope to increase the transparency of charities to enhance the public's trust in charities and promote the development of philanthropy by blockchain-based charity system.

[3]Title- Tracking Donations of Charitable Foundations Using Blockchain Technology
Description-:The paper looks at the possibilities of using blockchain technology for charitable purposes. To ensure data protection, fund integrity, and donation control, problems in this field necessitate the introduction of new storage tools and the transfer of information between donors, foundations, donation recipients, and other charitable actors. Via assured data protection and the ability to monitor the movement of funds and transactions, using the blockchain would increase the interest of potential donors in charitable organizations.

[4]Title- Blockchain based Trusted Charity Fund-Raising
Description-:This proposed system is a decentralized authentic platform that aims to leverage blockchain along with other technologies to design a trusted framework which would enable charity donations to be as accountable, trustworthy and transparent. This paper explores the potential for deploying blockchain within existing organizations to support smooth conduction of charity funds from the donor to the actual needy person using a stable Ethereum based Blockchain oriented platform.

V. SYSTEM DESIGN AND FLOW

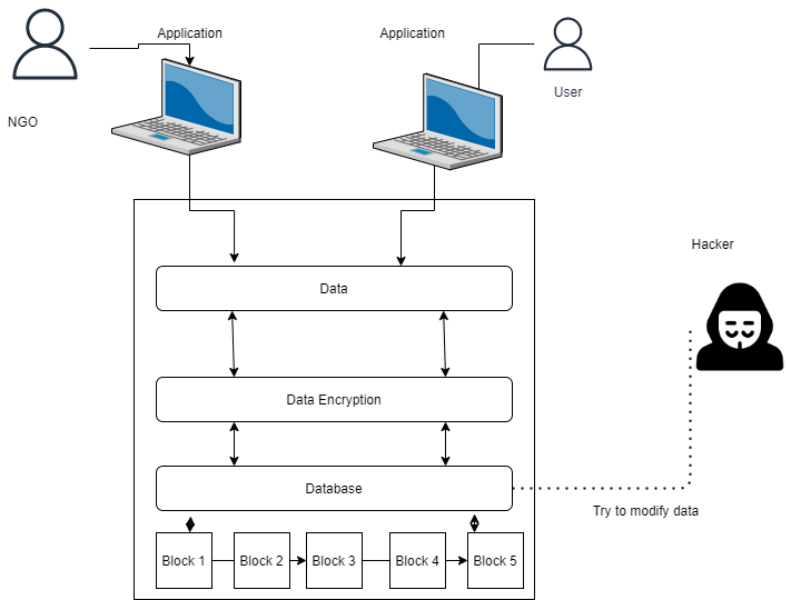

Fig.: System Architecture

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1. This system architecture represents for NGO using smart contracts.
2. Where in first phase Users and NGO can register with our system.
3. NGO can post donation requests on the system. User will check the donation and process for the money transaction.
4. We will encrypt data of transactions to provide security from hackers and all the data is been store in the database.
5. Each and every time System will check all blocks for security during transaction.

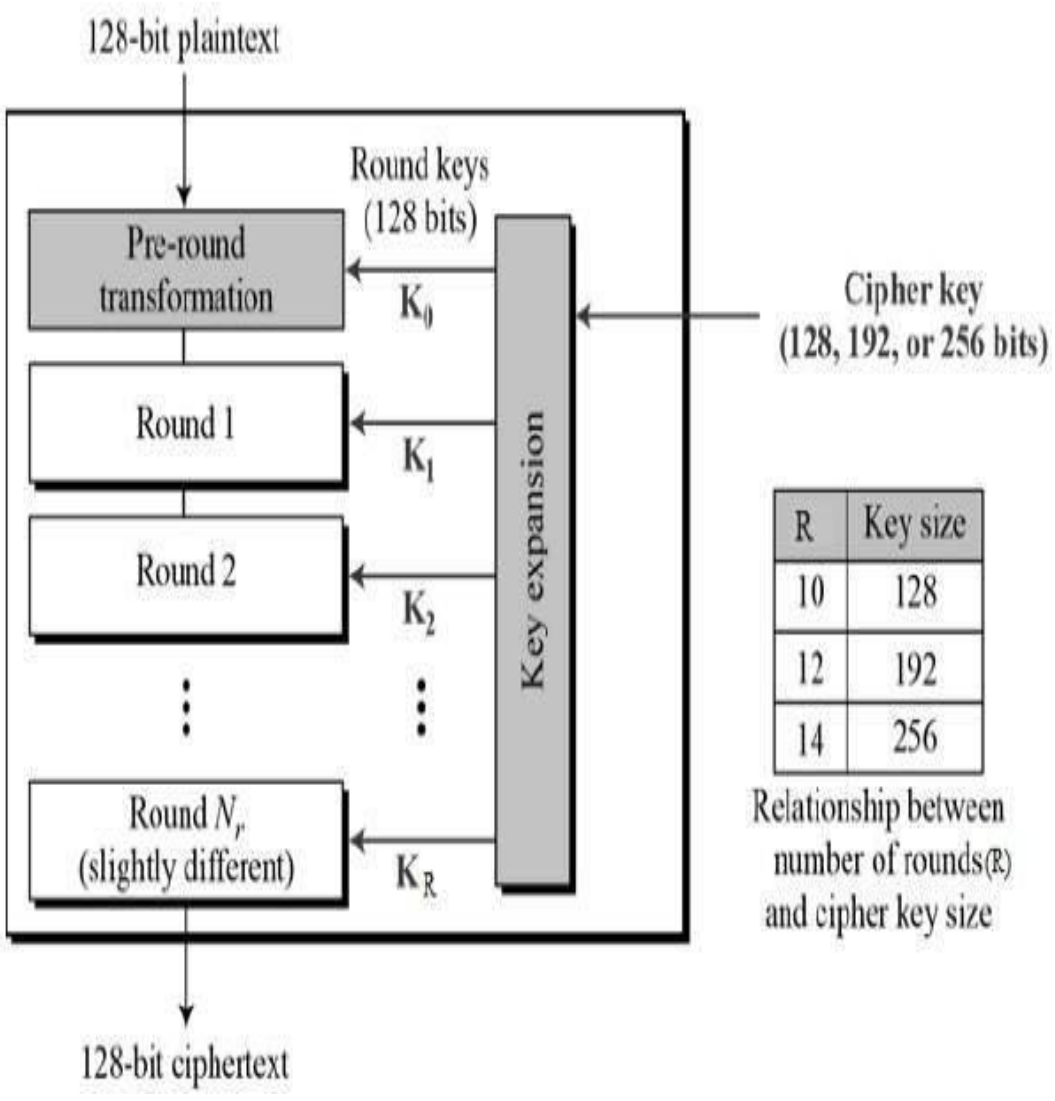
VI. PROJECT IMPLEMENTATION

Algorithm AES

AES is an iterative rather than Feistel cipher. It is based on 'substitution–permutation network'. It comprises of a series of linked operations, some of which involve replacing inputs by specific outputs (substitutions) and others involve shuffling bits around (permutations).

Interestingly, AES performs all its computations on bytes rather than bits. Hence, AES treats the 128 bits of a plaintext block as 16 bytes. These 16 bytes are arranged in four columns and four rows for processing as a matrix.

Unlike DES, the number of rounds in AES is variable and depends on the length of the key. AES uses 10 rounds for 128-bit keys, 12 rounds for 192-bit keys and 14 rounds for 256-bit keys. Each of these rounds uses a different 128-bit round key, which is calculated from the original AES key.



R	Key size
10	128
12	192
14	256

Fig: AES algorithm structure

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VII. RESULTS

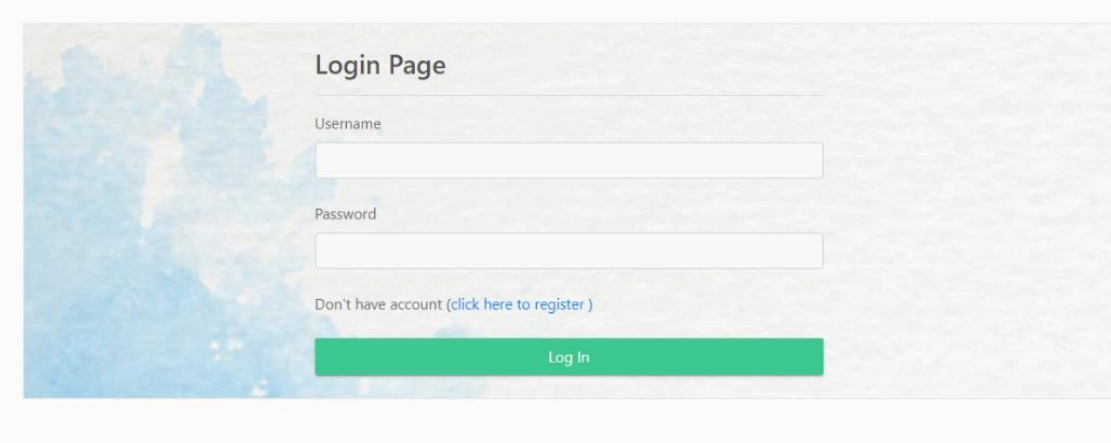

Fig a: Login Page

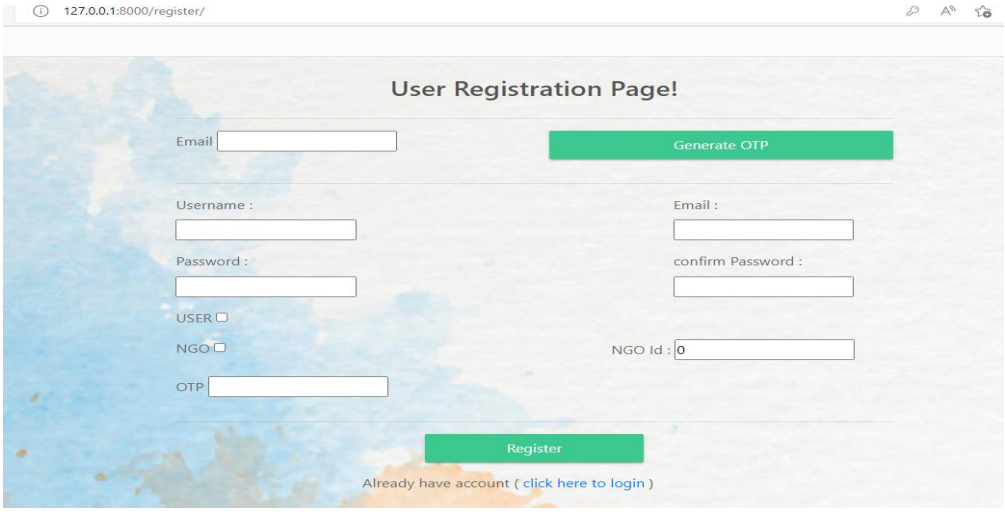

Fig b: NGO/User Registration Page

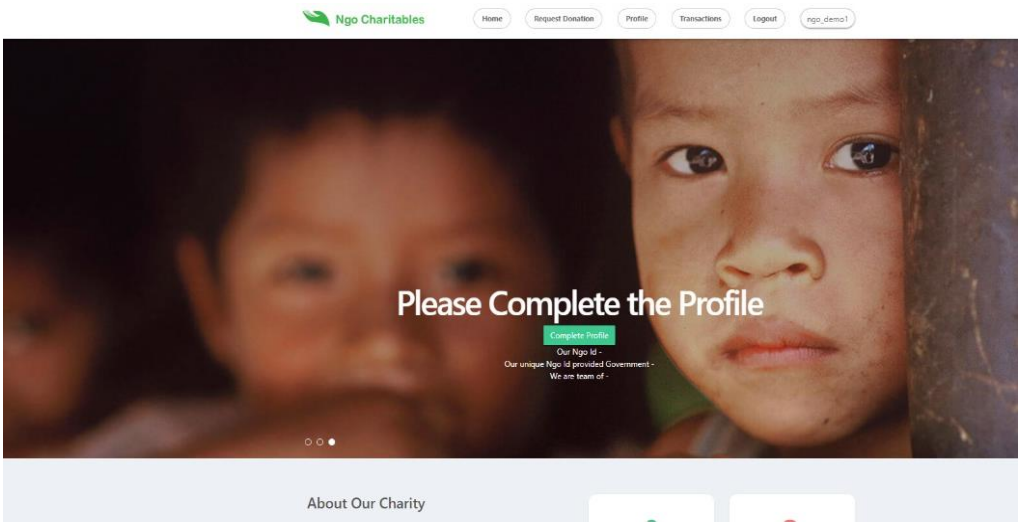

Fig c: After login Home Page

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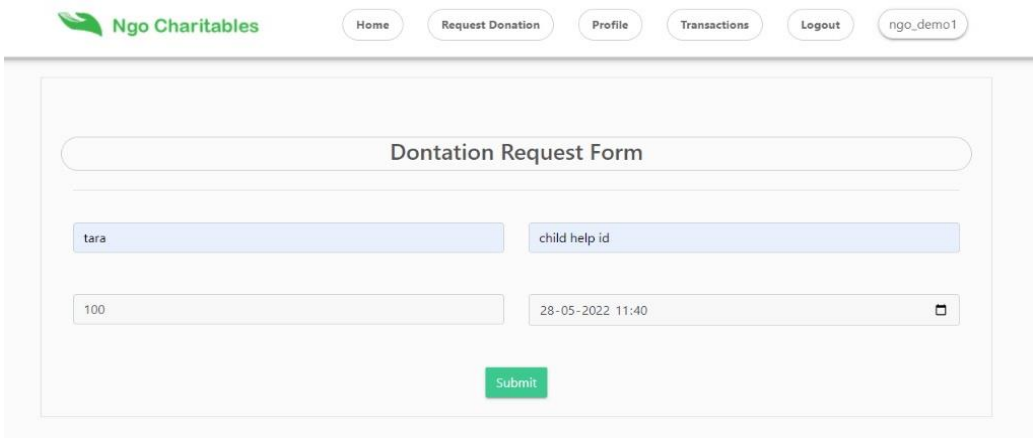

Fig d: Contribution request form

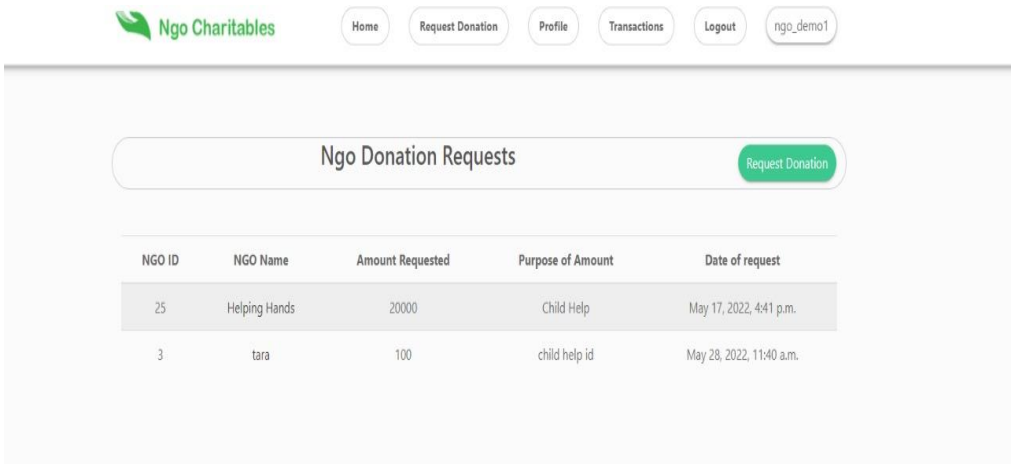

Fig e: Successfully added request in table

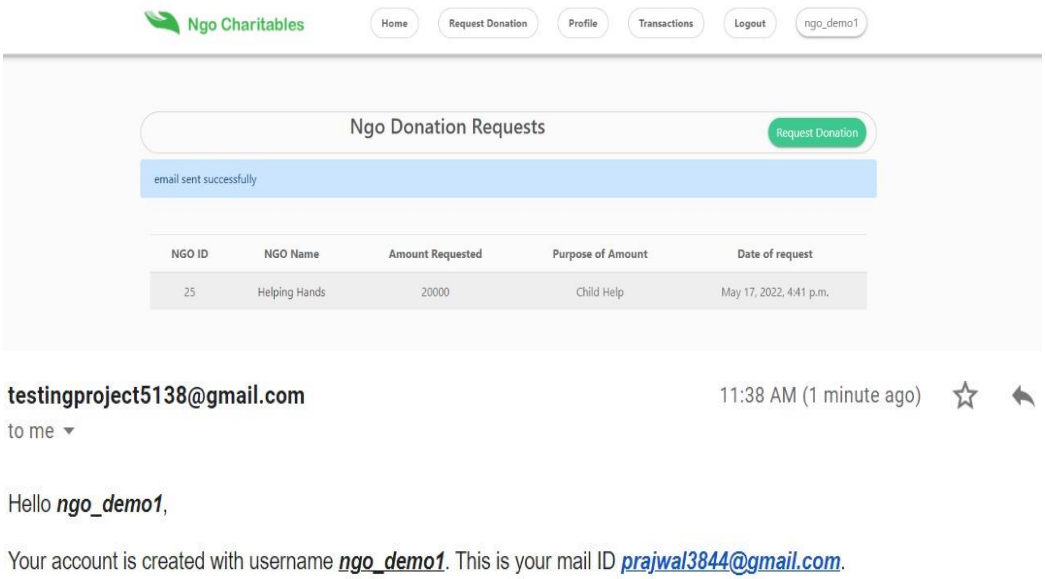

Fig f: NGO donation request

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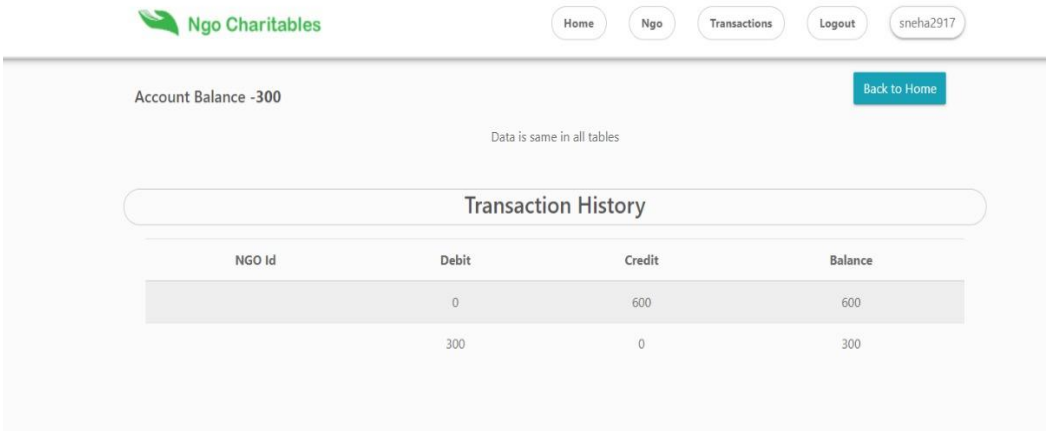

Fig g : Transaction History

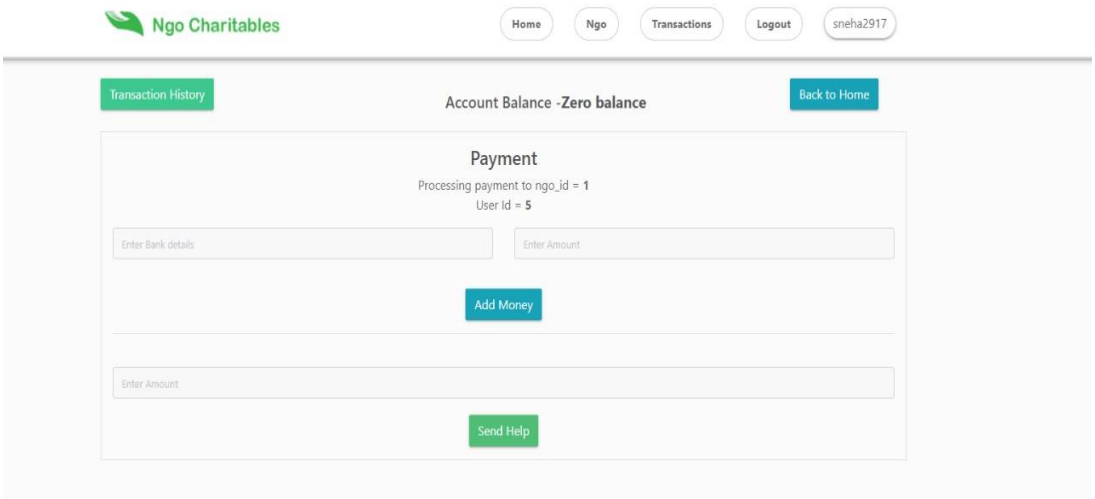

Fig h: After withdrawing account balance

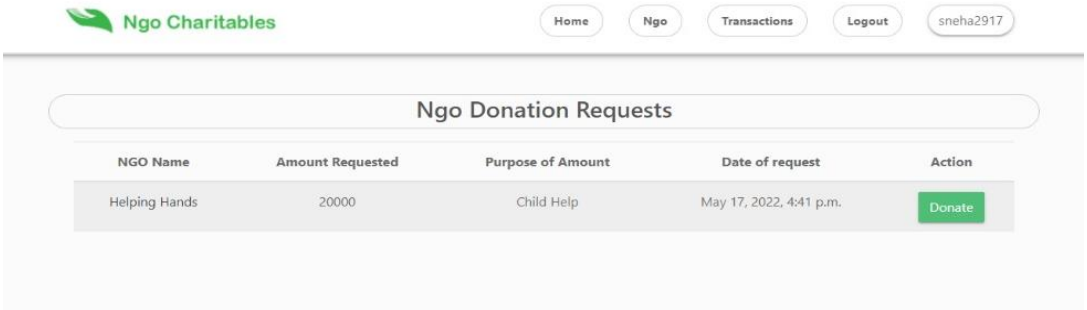

Fig i: Final donate request

VIII. ADVANTAGES AND APPLICATIONS

- Bank sector
- Money transaction application
- Money investing application
- Education sector
- Data security
- Data recovery
- Transparency between NGO and user
- Online platform helps to connect multiple user

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IX. CONCLUSION AND FUTURE SCOPE

We have proposed a framework utilizing Blockchain alongside digital currency for a noble cause work to make it more straightforward through a decentralized framework. Urbanization has made a ton of individuals more worried about others and this has made a ton of individuals charitable. And yet there are additionally individuals who need to at last bring in unlawful cash all the while. This framework will give both the necessities which are better credibility and security. Likewise, it will furnish with a believed framework and will make the whole cycle more straightforward. This will help dispose of center men between contributors and noble cause practitioners.

ACKNOWLEDGMENT

The completion of our project brings with it a sense of satisfaction, but it is never complete without those people who made it possible and whose constant support has crowned our efforts with success. One cannot even imagine our completion of the project without guidance and neither can we succeed without acknowledging it. It is a great pleasure that we acknowledge the enormous assistance and excellent co-operation to us by the respected personalities.

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