Blockchain Based Charity System Using PHP/MySQL

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Abstract - *Nowadays, people are becoming voracious to contribute to society. Many people want to donate generously for the causes they believe in but usually end up doing nothing due to no trust in the system around them. There are a lot of charitable organizations and NGOs who are in need of funds every now and then, which are really working for the betterment of the society. To decrease this fraud, we came up with a new technology called block chain. In this project, there are four typed of users such as government, NGO, retailer and users. Users can donate some amount to the NGO and retailer. Government can see donations for the proposal. This website will make the entire process more transparent. In this website, we are using block chain for charity donation to make it more transparent. This website provides a trust between the users and donors. This helps resolve the trust issues, as people already know what they are paying for and the system will help to solve the problem.*

*Key Words***: Blockchain, NGO, retailer, donations**

1. INTRODUCTION

1.1 Problem Statement

   Nowadays, people are contributing to society. People want to donate generously for the causes they believe in but usually end up doing nothing due to no trust in the system around them. Everything is done manually, so it is very difficult to maintain the records. It's also very difficult to find the activities. It is a Long-time process. It takes more time to prepare for various events within a short time. The biggest disadvantage of most NGOs there are exceptions is that they are not able to scale up their success. NGOs have many workers, and the effort they put in is considerable. But, when they succeed, it is often in a limited area. And, they cannot easily scale up.

1.2 Scope

   In this project, we are using block chain for charity donation to make it more transparent. In this project, there are four types of users such as government, NGO, retailer and users. The user can donate some amount to the NGO and retailer. The Government can see donations for the proposal. The government can approve the lowest proposal. The government can see all users. NGO users can see if work tender is allocated to which retailer. NGO users can add new work requirements. Retailer users can submit proposals of work and can see proposal status. Retailer users can see donations received for proposals.

1.3 Objectives

The main objective of the project is to provide privacy, security and transparency. The implementation of block chain is a distributed decentralized network that provides immutability, privacy, security, and transparency. The proof of work is validating the transaction in this project. All the transactions in the new block are then validated and the new block is then added to the block chain. Those who want to donate some money can then they can donate using this system. The data is securely stored in the database and no one can do any changes in the database. In this system, users can donate some funds using proof of work. All transactions are recorded on the block chain to realize traceability of funds, which increases the transparency of governments. The lack of transparency in government activities could be solved technically with this block chain charity system, which could increase the public's trust in the government organizations.

2. LITERATURE REVIEW

2.1 Existing System

        There are a lot of charitable organizations and NGOs who are in need of funds every now and then, which are really working for the betterment of the society. There are a lot of online portals to donate to these charities which usually seem to be trustless.

        There are also charitable organizations that call up individuals for donations because they don't operate on a large scale. But they face a lot of problems to convey their genuineness and hence don't get enough donations. Additionally, there are a lot of meta-charities who try to evaluate charities and thus help individuals to donate to the top charities but they sometimes seem biased to a specific set of communities.

        Hence, in spite of all the transparency that the charitable organizations are trying to incorporate, there still exists the distrust about the way in which this money is being put to practice. Also, if an individual wants to go out and do a noble deed, nobody would find him as people would only trust recognized charitable organizations. What is needed is an arrangement where individuals or organizations do noble deeds first and then get patronage for their contribution by showing the proof of work over some third party platform.

2.2 Comparison of existing system

There are a lot of problems in the existing system. There is no trust in the existing system. In NGOs there are a lot of difficulties. Everything is done manually, so it is very difficult to maintain the records. It's also very difficult to find the activities. It is a Long-time process. It takes more time to prepare for various events within a short time.

The biggest disadvantage of most NGOs there are exceptions is that they are not able to scale up their success. NGOs have many workers, and the effort they put in is considerable. But, when they succeed, it is often in a limited area. And, they cannot easily scale up. Some NGOs are doing fraudulent advertisements for donations. It is difficult to regulate lacking in transparency and accountability. It can be effective due to lack of contribution. It can be a misuse of funds.

The new system will be decentralized using Block chain Technology, Smart Contracts and Crypto currency. This system would facilitate any individual to contribute independently to the society using his time and abilities apart from just money, and ultimately this will lead to an increase in hands towards the society.

2.3 Disadvantage of existing system

1. There is no trust in the existing system. In NGOs there are a lot of difficulties. Everything is done manually, so it is very difficult to maintain the records. It's also very difficult to find the activities

2. The biggest disadvantage of most NGOs there are exceptions is that they are not able to scale up their success.
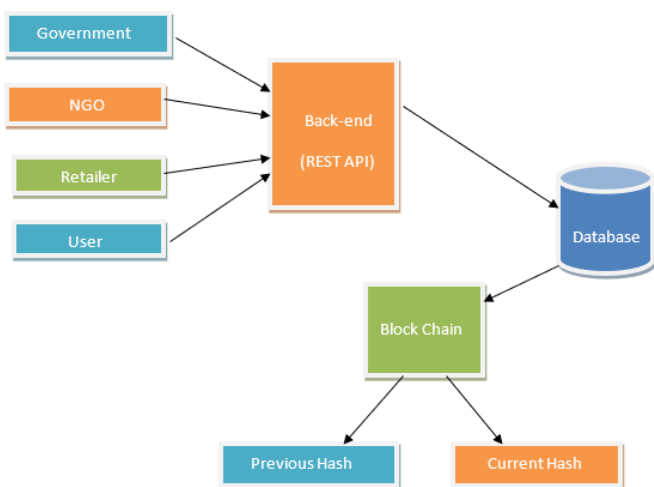
2.4 Block Diagram

Figure 2.4: Block Diagram

3. PROPOSED SYSTEM
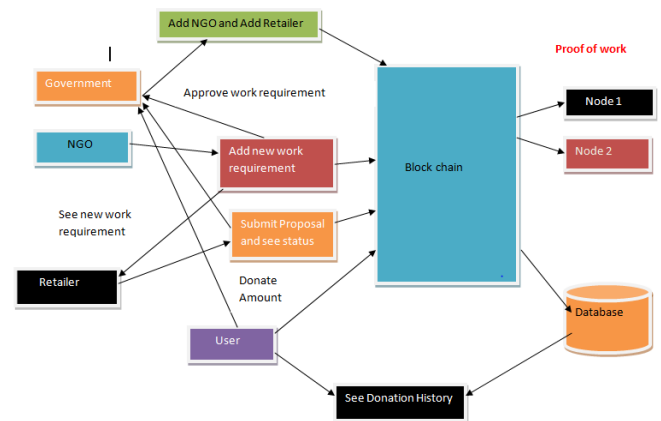
3.1 System Architecture

Figure-3.1: System Architecture
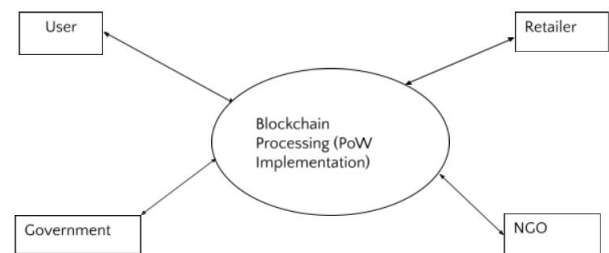
3.2 PoW Implementation

Figure- 3.2 PoW Implementation

3.3 System Methodology

In this project, the Government first login this website after that they can add NGO and retailer details. Also they can see added NGO and retailer details. The government can approve work requirements from NGO. The government can see all proposals for work requirements from the retailer. The government can approve the lowest proposal. The government can see all users. Also the government can see donations for the proposal.

NGO users first login to this website after that they can add new work requirements. NGO users can see the donation received. NGO users can see if work tender is allocated to which retailer. Retailer users first login to this website after that they can see new work. Retailer users can submit proposals for work and can see proposal status. Also retailer users can see donations received for proposals. The user first login to this website after that they can see new help required for work. The user can donate some amount to the proposal. The user can see previous donations.
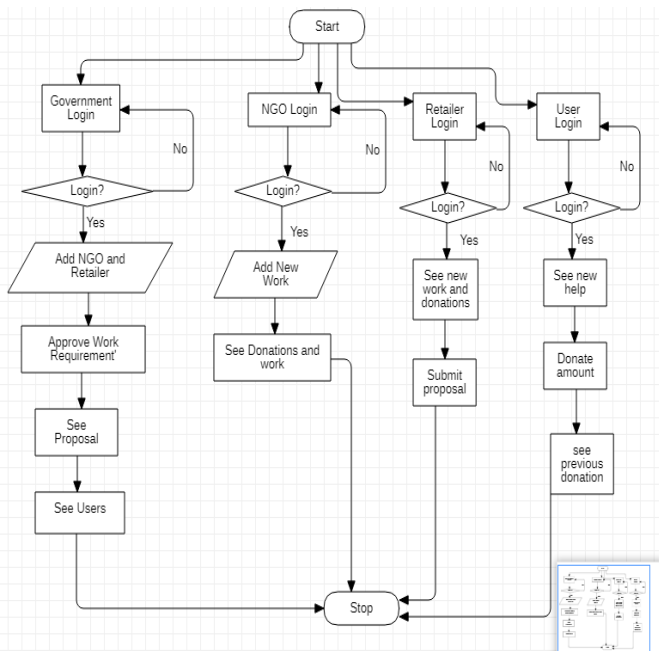
Figure- 3.3: Flow Chart Diagram

3.4 Algorithm Used

Blockchain is a distributed decentralized network that provides immutability, privacy, security, and transparency. There is no central authority present to validate and verify the transactions, yet every transaction in the Block chain is considered to be completely **secured** and **verified.**

- Proof of work algorithm is used to validate the transaction. The **purpose** of this algorithm is to bring all the nodes in agreement, that is, trust one another, in an environment where the nodes don't trust each other.

- All the transactions in the new block are then validated and the new block is then added to the block chain. The process of verifying the transactions in the block to be added, organizing these transactions in a chronological order in the block and announcing the newly mined block to the entire network does not take much energy and time.

- Proof of work makes it extremely difficult to alter any aspect of the block chain, since such an alteration would require re-mining all subsequent blocks.

- It also makes it difficult for a user or pool of users to monopolize the network's computing power, since the machinery and power required to complete the hash functions are expensive.

4. IMPLEMENTATION PLATFORM

4.1 Hardware Requirement:

- Laptop or computer
- Processor:-Intel core i5
- RAM;- 8GB

4.2 Software Requirements

- Platform used:-Windows 10
- Sublime text
- XAMPP Server

4.3 PHP:

PHP is an open source and server side scripting language. It is free of cost. PHP is platform independent. It is easy to learn and use. PHP is fast. It is user-friendly. PHP is connected to the database with a secure connection.

It is easy to use to fetch the data from the database. PHP is great for dynamic web applications; it doesn't store information by itself. For storing the information we need a database, and the database of choice for PHP developers is MySQL

4.4 MySQL:

MYSQL is Open Source, Easy and fast maintenance. MYSQL used as a database at the web server. MySQL automates the most frequent tasks related to retrieving and storing unique user information based on supplied criteria. MYSQL is Superior performance, greater scalability, reliability. It is User-Friendly and programming offers multilingual support.
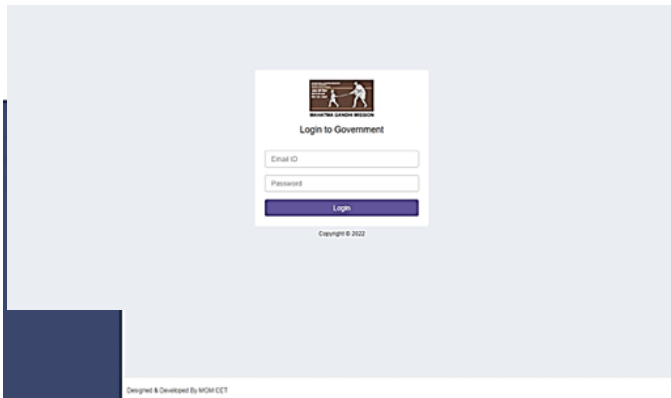
4.5 Dataset

Government:
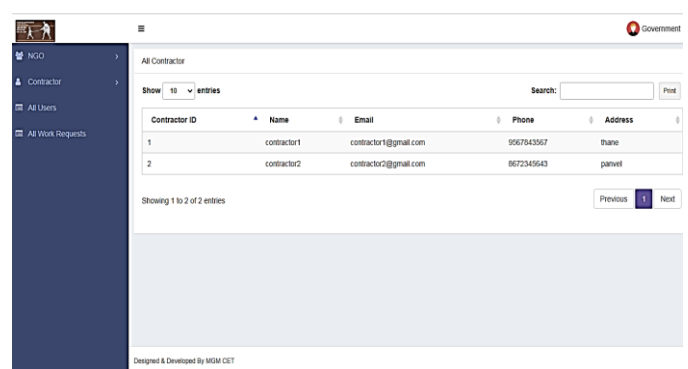
NGO

Retailer

User

5. RESULT

The implementation of block chain is a distributed decentralized network that provides immutability, privacy, security, and transparency. The proof of work is validating the transaction in this project. In this system, users can donate some funds using proof of work. All transactions are recorded on the block chain to realize traceability of funds, which increases the transparency of governments.
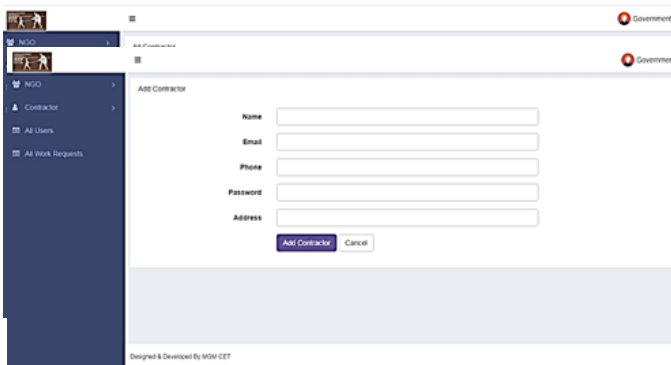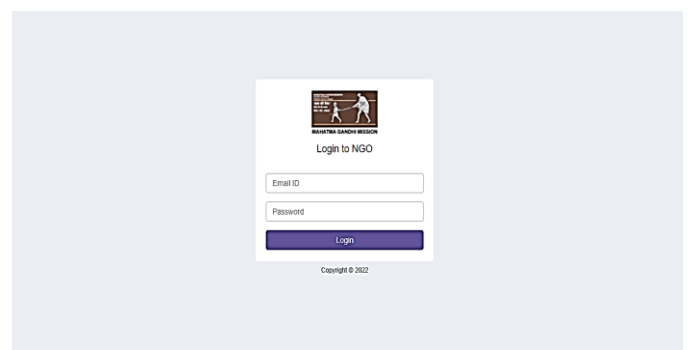
5.1 Government Login

5.2 Government will add NGO

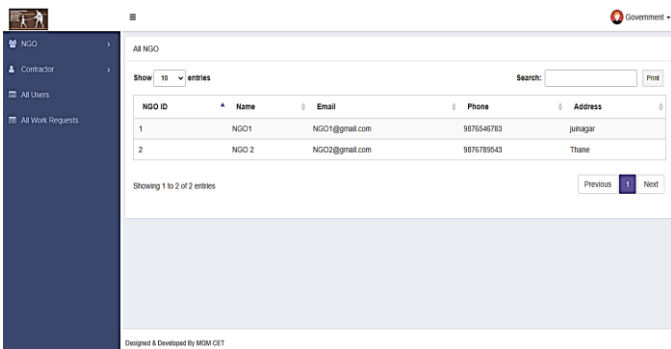## 5.3 All NGO in Government Portal

5.4 Government will add contractors

5.5 All contractors list in Government Portal

5.6 NGO Login Form

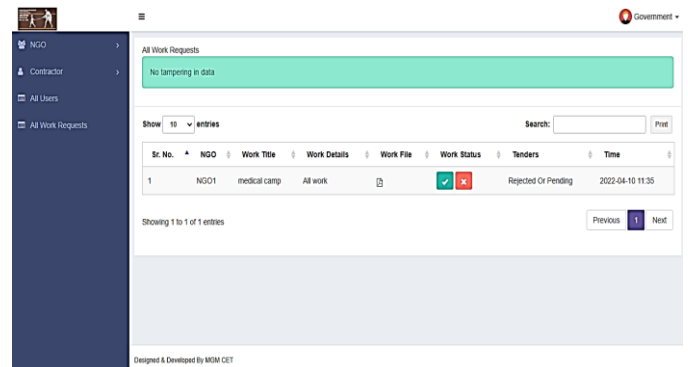## 5.7 NGO will add their work requirements
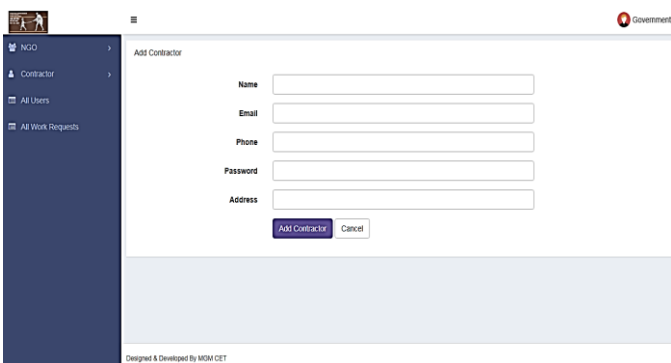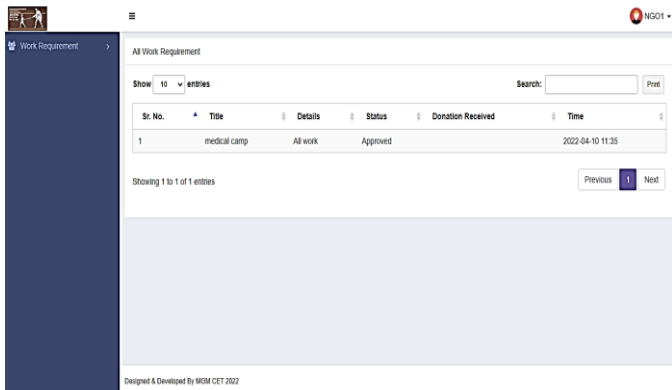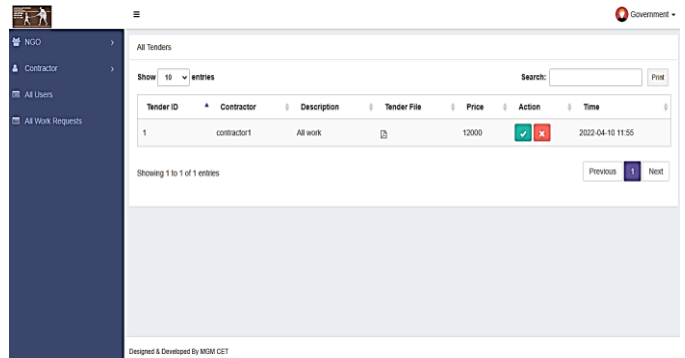

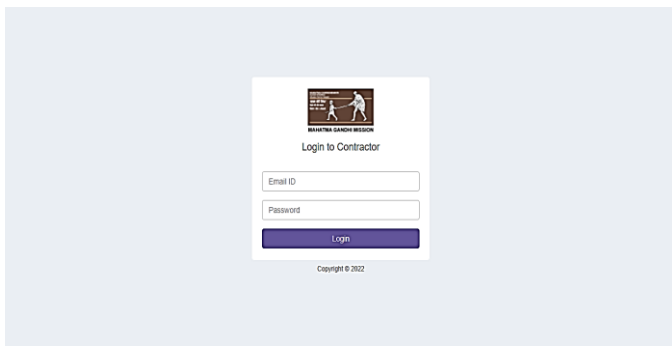## 5.8 After waiting Government will approve or decline work requirements

5.9 NGO Can see approval status

5.10 Contractor Login Form

5.11 Contractor can see work requirements

5.12 Contractor can add their bid

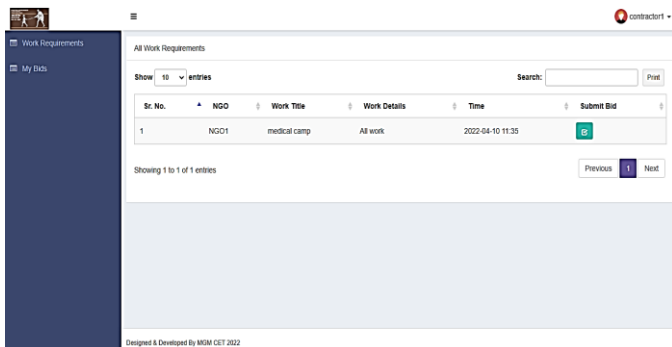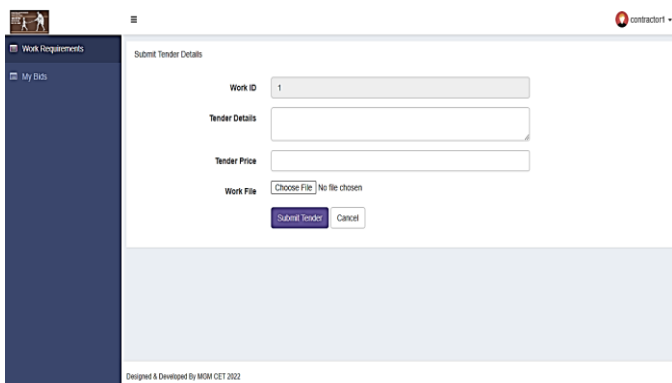### 5.13 Government approval status for contractor

5.14 User Registration Form

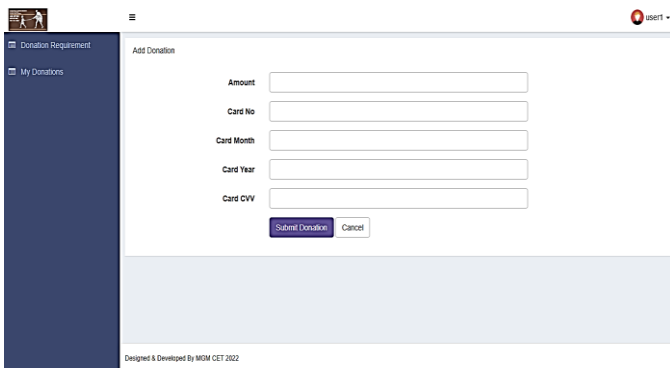### 5.15 User Login Form

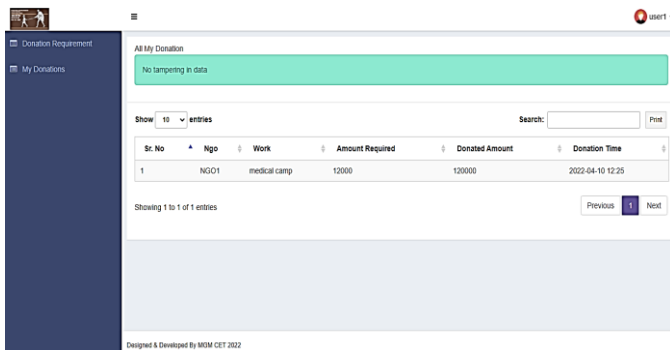### 5.16 User can see donation requirements
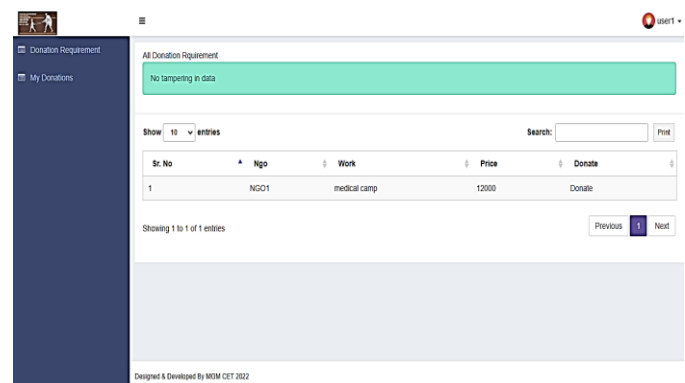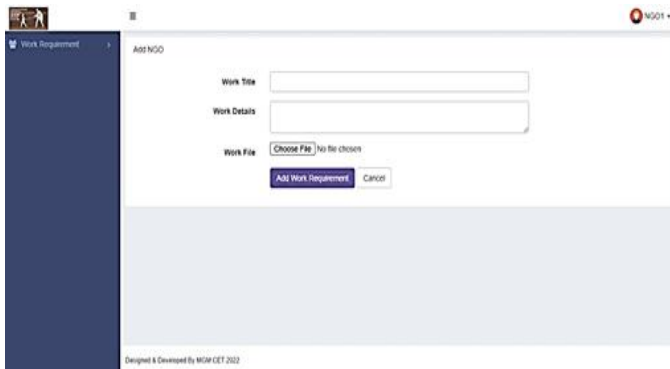
5.17 User can donate

5.18 User can see their donations

6. FUTURE SCOPE

We studied the combination of blockchain technology and philanthropy, and a new charity platform model based on blockchain will be proposed. In this system, users can complete the donation and use funds with smart contracts. All transactions will be recorded on the blockchain to realize traceability of funds, which increases the transparency of charities. The lack of transparency in charity activities could be solved technically with this blockchain charity system, which could increase the public's trust in charity organizations.

In the future one can implement a system as android software, iOS software or windows software and can add some intriguing features.

8. CONCLUSIONS

In this project we provide all the requirements to whoever is needed. This website provides a trust between the user and donors. This website will make the entire process more transparent. In this project, we are using the block chain for charity work to make it more transparent. Users can donate some amount to the NGO and retailer. Government can see donations for the proposal. NGO users and retailer users can see donations received. This system helps resolve the trust issues, as people already know what they are paying for and the system will help to solve the problem.

This system would facilitate any individual to contribute independently to the society using his time and abilities apart from just money, and ultimately this will lead to an increase in hands towards the society.

REFERENCES

Research Articles

[1]   Hu, B., & Li, H. (2020). Research on Charity System Based on Blockchain. *Research on Charity System Based on Blockchain*, *768*(072020), 11. https://iopscience.iop.org/article/10.1088/1757-899X/768/7/072020.

[2]   Nixon, R. (2009). *Learning PHP, MySQL, JavaScript, CSS & HTML5: A Step-by-Step Guide to Creating Dynamic Websites*. Shroff Publishers & Distributors Private Limited- Mumbai. 4

[3]   Rangone, A., & Busoli, L. (2021, March). Managing charity 4.0 with Blockchain: a case study at the time of Covid-19. *Managing charity 4.0 with Blockchain: a case study at the time of Covid-19*, *18*(01), 31. https://doi.org/10.1007/s12208-021-00281-8

[4]   [4] Shinde, R., Panamnd, K., & Bansole, K. (2019, April). Block Chain for Public Distribution System in India. *Block Chain for Public Distribution System in India*, *05*(01), 5. https://www.google.com/url?sa=t&source=web&rct=j&url=http://ijream.org/papers/IJREAMV05I0149223.pdf&ved=2ahUKEwjF3aitmLb3AhWHm1YBHeX1CmQQFnoECAUQAQ&usg=AOvVaw2KBViUi1o_dG7tKrOQELqg

[5]   https://www.researchgate.net/publication/329648817_Decentralized_and_financial_approach_to_effective_charity

[6]   https://ieeexplore.ieee.org/document/8573644

[7]   Freya Sheer Hardwick, Apostolos Gioulis, Raja Naeem Akram, and Konstantinos Markantonakisdf ," EVoting with Blockchain: An E-Voting Protocol with

Decentralisation and Voter Privacy," arXiv:1805.10258v2 [cs.CR] 3 Jul 2018

[8]   Anjali Raj, Ayana Asokan , Gayathri ,Pooja , Niveditha , Asha Arvind, ," Fingerprint Based Automatic Ration Distribution System," International Research Journal of Engineering and Technology (IRJET), Volume: 05 Issue: 04 ,pp-255-257,Apr-2018

[9]   Friðrik Þ. Hjálmarsson, Gunnlaugur K. Hreiðarsson, "Blockchain-Based E Voting System", 11th IEEE international Conference on Cloud Computing (CLOUD) 7th July 2018.

[10]   Salanfe, "Setup your own private Proof-of-Authority Ethereum network with Geth", Hacker Noon, 2018. Available at: https://tinyurl.com/y7g362kd. [5] Wanjun Yu,Shiyuan Huang, "Tracability of Food Safety based on block chain and RFID Technology" , 2018 , 11th international symposium on computational intelligence and design(ISCID), Vol:01

[11]   Gaoying Cui ; Kun Shi ; Yuchen Qin ; Lin Liu ; Bing Qi, "Application of block chain in multi-level demand response reliable mechanism," 2017 3rd International Conference on Information Management (ICIM), 10.1109/INFOMAN.2017.7950404

[12]   Agarwal, P., Jalan, S., & Mustafi, A. (2018, February). *Decentralized and financial approach to effective charity*.   Researchgate. https://www.researchgate.net/publication/3296488 17_Decentralized_and_financial_approach_to_effective _charity

[13]   javatpoint.   (n.d.).   *Blockchain*.   javatpoint. https://www.javatpoint.com/blockchain-tutorial

Books

[14]   Forbes, A. (2012). The Joy of PHP: A Beginner's Guide to Programming Interactive Web Applications with PHP and MySQL. BeakCheck LLC.

[15]   Beighley, L., & Morrison, M. (2009). Head First PHP & MySQL. O'Reilly.

[16]   Drescher, D. (2017). Blockchain Basics: A Non-Technical Introduction in 25 Steps. Apress.

[17]   Laurence, T. (2017). Blockchain for dummies. Wiley.

[18]   DuBois, P. (2013). MySQL. Addison Wesley.

[19]   Watney, M. (2017). Blockchain for Beginners: The Complete Step by Step Guide to Understanding Blockchain Technology. Createspace Independent Pub.