

Trusted and Genuine Charity Application using Blockchain Technology

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Abstract: *Currently, people are getting edacious to contribute to society. Numerous people want to contribute freehandedly to the causes they believe in but generally end up doing nothing due to no trust in the system around them. There are a lot of charitable associations and NGOs that bear finances now and which are working for the betterment of society. To drop this fraud, we came up with a new technology called a blockchain. There are four types of druggies similar as government, NGO, retailer, and druggies. Druggies can contribute some quantum to NGOs and retailers. The government can see donations for the offer. This system will make the entire process more transparent. We're using blockchain for charity donations to make it more transparent. This operation provides trust between the druggies and benefactors. This helps resolve the trust issues, as people formerly know what they're paying for, and the system will help to break the problem.*

Keywords: Blockchain technology, proof of work, hashing technology, cryptocurrency, encryption

I. INTRODUCTION

Nowadays, numerous people have become involved in donation exertion and look for trust and security in the donation process. To get donations from different corners and parts of the globe, NGOs have failed to attract donors due to trust issues resulting in the depletion of charitable funds. Blockchain technology has come out to be a hope for all who see transparency, security, and privacy in donation systems. Numerous businesses and governments are formerly using blockchain inventions in wide areas. There are a lot of online doors to contribute to these charities, which seems true. Through blockchain, donations will be largely transparent. Blockchain technology allows us to make the sale and donation of finances transparent. We have been using proof of work algorithms and hashing algorithms for charity work to make it system transparent and secure through a decentralized and immutable system for the making a secure and reliable donation mechanism, blockchain technology helps in the tracking of the donation that funds have been reached to target person or not, blockchain provides the complete path of the donation funds using hashing algorithms. Enormous information contains delicate and private data, to secure this huge volume that's put down at colorful product outfits, important to appear evidence to check customer or frame personality.

1.1 Problem Statement

In earlier days charity application systems had a problem with security, privacy, and transparency which are the key challenges that out-turn productivity of the organizations. All information regarding the organization is stored on physical resources such as pens-paper and there is little transparency as donated money is difficult to track. Data related to donors and recipients are maintained manually, which might increase the risk of data insecurity and integrity and the manpower required to maintain those data.

The following are the major reason why most NGOs have been shut down in the past time and have not been able to scale up their organizations people's trust in organizations has been depleting day by day and the time required for maintaining the data is huge which reduce the efficiency and working ability of organizations.

1.2 Objectives

The main goals behind our charity application are to provide organizations with security, privacy, and transparency. All these features are hard coded through blockchain technology, Blockchain has distributed and immutable ledgers, when a

new donor or new node wants to join the decentralized network proof of work or proof of stakes algorithms are used to verify the node, and hence node is added to the network. The consensus technique defines the rule for validating the transaction within the decentralized network. All node that is present in the network has a copy of all other node presents in the network, So data is safely stored at many different locations and no one can change the data without the permission of other nodes, If any node want to donate the money they can use proof of work to validate their transaction, every transaction is recorded in blockchain database and can be tracked easily, as it is transparent to all the nodes

1.3 Scope

Blockchain is a technology that is under development, every development gives rise to the exploration of new fields or scopes where we can use blockchain technology. The backbone of blockchain technology is security, privacy, and transparency. Currently, blockchain is used in charitable NGOs, government-proposed systems, retailers, and users. Blockchain technology helps the government to check those funds released by them have reached people similarly, NGOs have the trace of the fund, how it is being utilized, and where it is utilized using blockchain technology. Retailers and users used blockchain technology to make a transparent system for better and more efficient working of the organization.

II. RELATED WORKS

Benefactors have mistrust about how bestowed plutocrat is spent. Presently, blockchain technology Is being enforced in several sectors. The System offers transparent accounts of operations benefactors, charitable foundations, and donors supported blockchain technology; charitable platforms should give transparent donation routes and enable public druggies and benefactors to trace and cover where, when, and to whom went coffers of charity finances. While some rudiments of the System adopt from cryptocurrency and blockchain technologies, we propose indispensable impulses for distributed agreement that are better aligned with the operation and promote social good through the stakeholders. The progress of a charity association instructional System using SPL is generally made to make a charity association instructional System with a group of features that will elect according to each charity association's requirements. The System that has been developed must be supported by learning strategies for druggies to be used optimally. With the growth of internet technologies in our way of life, web donation has turned out to be a preferable path for several benefactors. The World Wide Web has made important things for uploading charity applications. The study proposes a trust conformation model in online charity information, embedded within the information process proposition. Charities are non-profitable associations established worldwide to profit societies. Generous benefactors primarily fund them with no direct profitable impact on the associations. Ultimately, small associations like pupil unions also contribute some plutocrats to charities for a specific purpose. Therefore, the charities are responsible for distributing the plutocrat to the heirs. The charities also constantly held some conditioning which vary from small to large, accidental to regular. A variety of them maintains a specific thing, like the donation for educational purposes only.

III. TECHNOLOGY USED

Blockchain is a fully distributed decentralized technology that comes up with security immutability and transparency. Despite the absence of central authority for transaction validation and verification, every transaction in the blockchain is considered highly secure and verified. Here we are using proof of work. It is the consensus mechanism commonly used in blockchain networks. In this mechanism, participants identify as miners, participate in solving complex mathematical problems to validate and add new blocks to the blockchain.

IV. PROOF OF WORK

The Proof of Work (POW) algorithm is used to validate the transaction. This process calls for miners using computational power to find the solution to that problem that meets specific criteria. Once a miner finds a valid solution, they distribute it to the network, and other nodes can easily verify its correctness. The minor who solves the problem first is rewarded with tokens. Basically, the main purpose of this algorithm is to bring all the nodes into an agreement, that is, trust one another.

V. HASHING ALGORITHM

Hashing algorithms play an important role in blockchain technology by providing data **integrity and** ensuring the immutability of information. It is a mathematical algorithm that takes an input (data) and generates a fixed-sized string of characters, known as a hash value or hash digest. The hash is a digital fingerprint of a certain amount of data

VII. PROPOSED SYSTEMS

In this project, the system model has been presented in this system. The users are classified based on their roles viz. Recipient, Organization, Sponsor (Donor).

- Recipient: People who require assistance should complete the information, which will be sent to the charity organization for verification, with approved projects being placed on the charity platform. The recipient may check the account to check the progress, and then use the tokens to purchase services or items in cooperative stores.
- Organization: The recipient can receive donations from the platform to aid others and use the funds to exchange tokens at cooperative stores. They used to check all information provided by the recipient and validate them.
- Sponsor (Donor): After logging in successfully, the sponsor browses the charity projects and decides one to give to. The balance of the sponsor account will be checked by the system. The organization will be notified to deposit if the balance is insufficient. Only if the balance is sufficient can the donation be finalized.

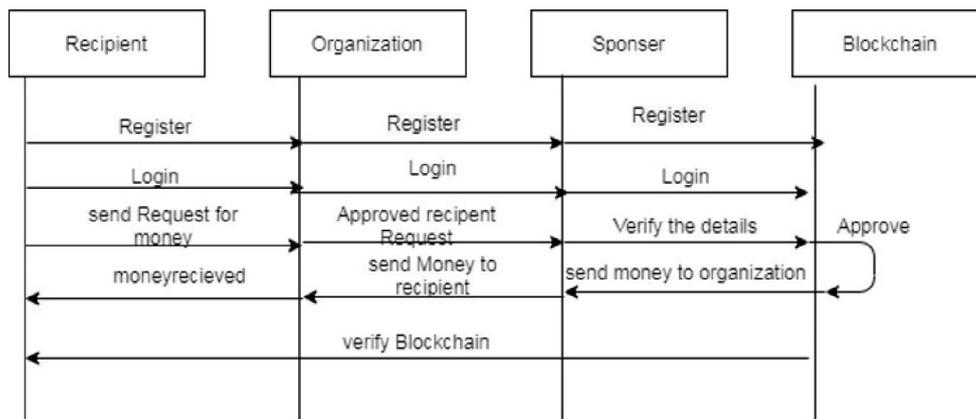


Fig: Proposed System

VIII. RESULT

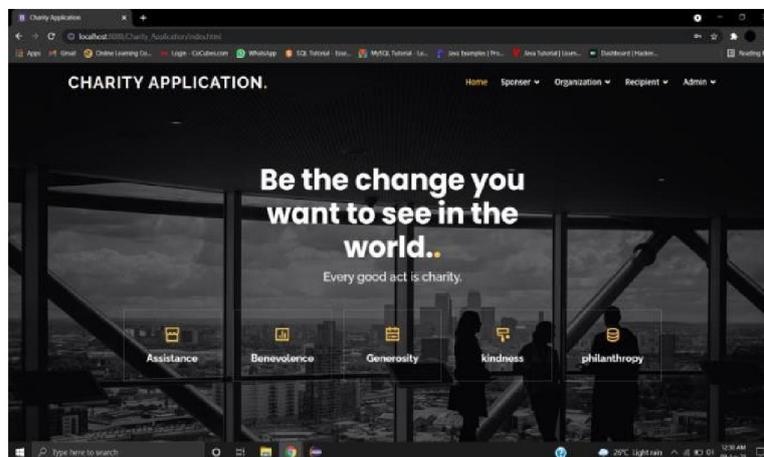


Fig: Charity Application

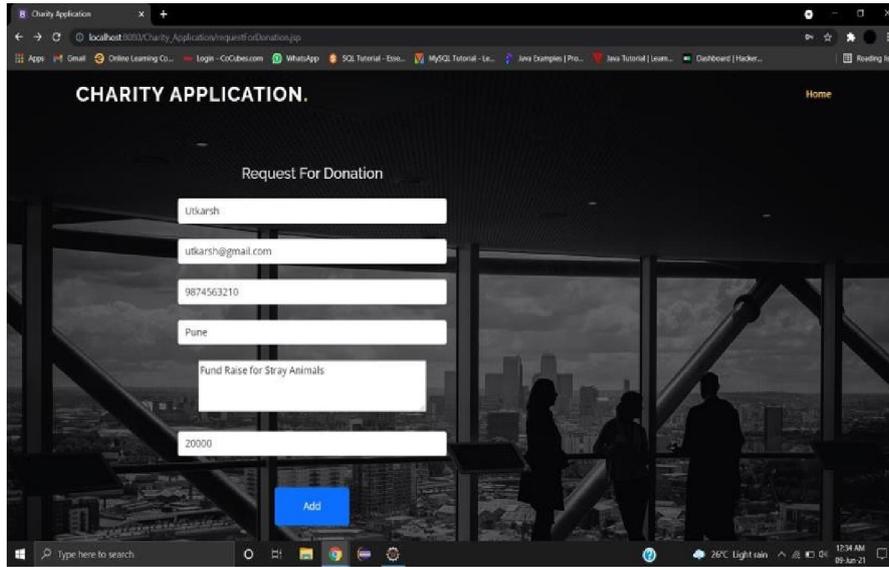


Fig: Request for Donation

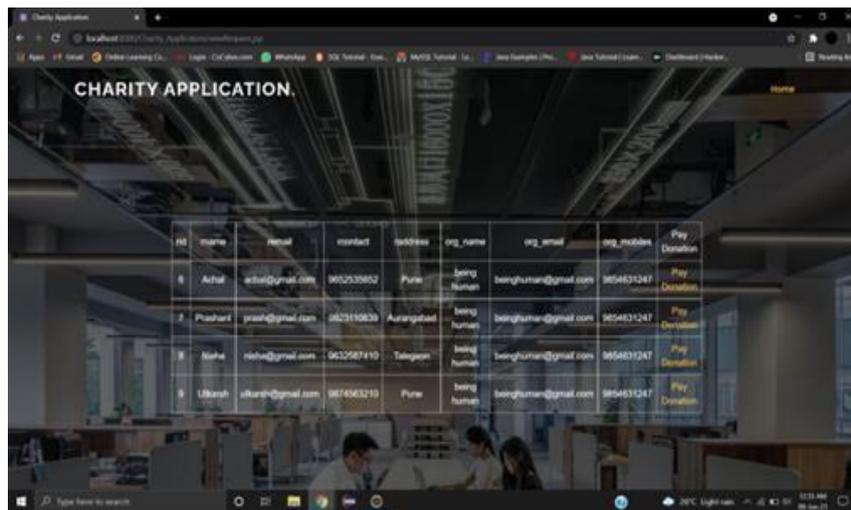


Fig: Sponsor Pay Donation

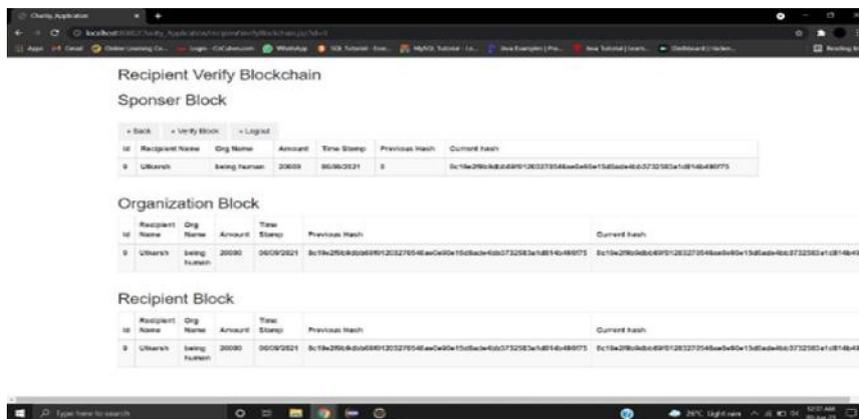


Fig: Blockchain Verification

IX. CONCLUSION

This application builds trust between users and donors. This application uses blockchain to make charities more transparent and secure. With all transactions recorded on the blockchain, we can easily trace the funds throughout the entire process. Users donate some amount to the recipient through the organization. The recipient requests the money with trusted reasons to the organization with document details. The organization sent the request with documents to the sponsor. Sponsor checks details and sends money as per requirements. Thus, there is a need for a charity management platform that is transparent enough to track and record every transaction in such a way that a donor should be able to know how his donated money has been spent, and the whole system should be audible by the government. This system helps resolve trust issues, as people already know what they are paying for. It is a completely trusted and genuine application.

X. FUTURE SCOPE

Blockchain technology has an excellent future worldwide. The extraordinary scope of blockchain technology has been observed in the financial field. Blockchain technology helps charities become more transparent.

Technology has completely revolutionized the field of information registration and distribution. Future scope can be observed in various fields like finance, cloud storage, supply chain management, cybersecurity, advertising, forecasting, etc.

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