INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 7.542

Charity Donation System Based On Blockchain Technology

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ABSTRACT: The article investigates the potential for blockchain technology to be used for charity reasons. Problems in this field need the introduction of new storage mechanisms and the flow of information between donors, foundations, contribution receivers, and other charity players to assure data privacy, fund integrity, and donation control. Using the blockchain to ensure data security and the capacity to track the movement of funds and transactions would pique the interest of potential donors in nonprofit organisations. In this essay, the writers look at the requirements and burgeoning blockchain-based charity networks in Russia and around the world. They show how distributed registry systems can be utilised to build a forum for charitable donation making and tracking. During their research, the authors worked with local funds and non-profits to validate the solution, learn more about ecosystem needs, and publish their results in the paper. Donors are wary of how their funds are handled. Blockchain technology is being employed in a wide range of sectors right now. Payments will be made via blockchain technology. The donation and fund-transfer process is transparent. It is required to construct a single database for tracking donations that will track all donation, transaction, and donor information. The goal of this article is to illustrate how a blockchain-based framework for tracking donations was implemented. The System, which is based on blockchain technology, enables contributors, charitable foundations, and recipients with open accounting of operations.

KEYWORDS: Charity Blockchain, Smart-contracts, Ethereum, Transparency

I. INTRODUCTION

According to research conducted by the Higher School of Economics at National Research University, 57 percent of people give. The share of charitable gifts made by Russians in the GDP ratio is 0.34 percent. A donor has the right to obtain a report on funds spent; nevertheless, only 30% of contributors follow through on their donations' intentions. The majority of gifts, however, are made informally. The funds are distributed to the impoverished in person (via alms, family and friends, work/study, or a civil society initiative) and Fundraising isn't structured in the traditional sense, and it's also not done on a regular basis or with transparency. Even if they donated via a bank account, the Internet, or a mobile phone, donors rarely know how their money was spent (via SMS). Best practises for social intent architecture, platform design, and REST API implementation in blockchain applications are presented in this article. As a result of the increase of social consciousness in Korea, a giving tradition has developed. On the other hand, transparency within a donation scheme has long been a challenge; for example, contributors frequently want to know how their money is spent. Transparency, on the other hand, can make donors and recipients concerned about their privacy. As a result, a donation system that assures both transparency and privacy should be developed. Donors will not want their donations to be made public, whether they are collected or given to the donation system. Users would be able to establish contracts and use the system with addresses that were not instantly recognised if they used a donation system with a blockchain that featured encryption. In a blockchain system like this, however, the log may be inspected to determine if the same sort of address performs the same activity over and over again. As a result of the ability to analyse the user's actions, a privacy issue may occur. All of the data

II.LITERATURE SURVEY

1) Paper Name-Blockchain-Based One-Off Address System to Guarantee Transparency and Privacy for a Sustainable Donation Environment
Author: Jaekyu Lee , Aria Seo 2, Yeichang Kim and JunhoJeong .
Description: The problem of transparency in donation systems has long been a topic for discussion.However, the emphasis on transparency raises privacy concerns for donors and recipients, with some people attempting to hide donations or the receipt of money. Therefore, a donation system that guarantees transparency and privacy is required to avoid negative side effects. In this study, we developed a system that protects personal information by using a one-time

account address system based on a blockchain while emphasizing transparency. The developed system could contribute to the creation of a sustainable and safe donation environment and culture.

2)Paper Name-Developing a Reliable Service System of Charity Donation during the Covid-19 Outbreak
Author-Hanyang WU1，and Xianchen Zhu2
Description: -Drawing upon the functional characteristics of blockchain technology, this paper envisages the feasibility and reliability of developing a charity donation service system loaded onto blockchain in response to the complex service demands encountered by charity operators due to the Covid-19 epidemic. With blockchain technology's support as the underlying data book, this paper focuses on the practical issues of charity donation fund and material allocation, as well as information release and sharing, charity donation organization, and organization self-management. The paper thereby discusses the key technologies in terms of overall structure design, specific service sector, and functional design of the donation service system and further summarizes the operational mechanism of the system as combined with the needs of help-seeking, receiving, and management users. It is argued that all the above proposals have the potential to alleviate the trust crisis of charity services in China in view of low transparency. The paper expects to provide a useful reference for charity business innovation propelled by block chain technology.

3)Paper Name-Platform for Tracking Donations of Charitable Foundations based on Blockchain Technology
Author:-AzamatDzhonov
Description-Donors have distrust about how donated money is spent. Currently, blockchain technology is being implemented in different sectors. Blockchain technology allows you to make the process of donations and transactions of funds transparent. Single platform for tracking donations that will track all information about donations, transactions and donors need to be developed. This paper considers description of implementation of the platform for tracking donations based on blockchain technology. The System offers transparent accounting of operations donors, charitable foundations and recipients based on blockchain technology, charitable platform should provide transparent donation route, enable public users and donors to track and monitor where, when and to whom went resources of charity funds.

4)Paper Name:-Proposed Solution for Trackable Donations using Blockchain
Author-N.SaiSirisha, TarashaAgarwal
Description-The lack of transparency has made people lose trust in charities, making social funding stagnant. The donor is unaware of the legitimate utilization of his funds. Corruptionadds to the distrust of the donor. This paper proposes a system called Charity-Chain that is a decentralised network built on theEthereum blockchain. It helps social organisations to run projects transparently, using smart contract-based incentives toensure their impact is independently verified and accessible to everyone. This makes it much easier for funders (philanthropic organisations, impact investors, small donors) to monitor their transactions and hence restore their trust in giving to such social organizations.

**5)PaperName:**Developing a Reliable Service System of Charity Donation During the Covid-19 Outbreak
Author:HANYANG WU AND XIANCHEN ZHU
Description: Major disaster resistance has become a regular global concern, and disaster governance is an important sector of charity. There have been 3751 catastrophic natural catastrophes worldwide in the last decade. With a population of 2 billion people and a total loss of 1658 billion USD, it is the world's most populous country. All countries value close cooperation between the public and commercial sectors, as well as between diverse non-governmental groups and scientific research institutions, and have established a multi-party disaster relief and catastrophe reduction mechanism.

III. EXISTING SYSTEM

- A database-based donation system already exists.
- With a central server, the system is centralised.
- Transparency is provided, however there is a lack of trust in transparency.
- Others can read transaction history if it is open, or it can be locked so that no one can see it.
- There is a possibility that data will be tampered with by third parties.
- Security in the system is variable, depending on the security system.

IV. PROPOSED WORK
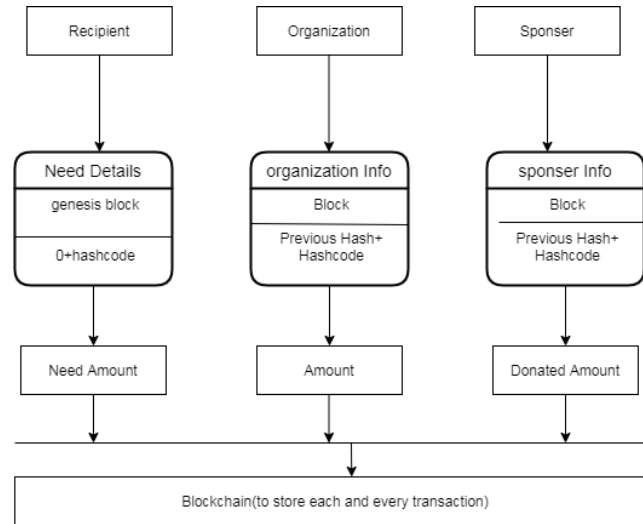
A decentralised blockchain-based application's architecture.Bitcoin is an example of such an application. The data on the network is distributed in this case, and the blockchain is used to implement all business logic. However, the contribution field generates a considerable quantity of data, including information about gifts, transactions, and donors. Data writing to the blockchain is currently not possible. All network nodes require disc space, and recording takes a long time. This presents problems in our project, which has a lot of data flowing through it. The bulk of blockchain-based projects are not completely decentralised. In most cases, they are strongly connected with a client/server architecture (hybrid). All minor application data is saved in a centralised storage system outside of the blockchain. A database stores the master data. The term "blockchain" refers to a distributed ledger system. All entries in the decentralised store are created using smart contracts. To send and receive data from the blockchain and centralised storage, REST requests are employed.

V. PROBLEM STATEMENT

◉　　　Establishing an external database whose records are preserved on the blockchain can solve the problem of donor distrust and fund overload.

◉　　　All reports are now generated by hand by foundation employees who are mandated to maintain public records (in particular, to publish reports on their websites).

◉　　　Because of a lack of transparency, people have lost faith in charities, resulting in a stagnation in social funding.

◉　　　The donor is absolutely uninformed of how his funds will be used. Donors' scepticism grows as a result of corruption

VI. CONCLUSION

Users' transparency and privacy are difficulties with present centralised contribution methods.We designed a donation system based on a smart contract on the blockchain for the sake of transparency. As a result of this procedure, donations become more transparent.We used a smart contract to develop a one-time address system to protect privacy.The anonymity of donation system users is preserved by not documenting the donation from a specific donor to a specific recipient.

VII. FUTURE SCOPE

▸　　　Smart contracts are used by a charity chain to manage and track donations
▸　　　For scalability and computational ease, the Byzantine consensus technique is used.
▸　　　Because it is a public platform, the Ethereal platform is used.

▸   This will increase transparency in donations, which will encourage donors to give more to such adaptable, efficient, and traceable nonprofits

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INNO SPACE
SJIF Scientific Journal Impact Factor
Impact Factor: 7.542

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INTERNATIONAL STANDARD SERIAL NUMBER
INDIA

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INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

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