

Charity and Fundraising Application Using Block Chain Technology

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Abstract—A charity and fundraising application using blockchain technology can potentially revolutionize the way we donate and support charitable causes. Blockchain technology offers several advantages, such as transparency, immutability, and security, which can address some common concerns associated with traditional fundraising platforms. This platform helps donors and charities to connect and exchange resources. This application will leverage the decentralized nature of the blockchain network to create a transparent and secure platform for charities and donors to interact directly without the need for intermediaries. Donations made on the platform will be recorded on the blockchain, providing transparency and traceability to all transactions. Overall our charity and fundraising application aims to revolutionize the way people donate. It builds trust among donors, beneficiaries, and charity organizations.

Keywords— Charity, blockchain, transparency, immutability, security, fundraising, donors, resources, decentralized, traceability, donate, beneficiaries.

I.INTRODUCTION

In the once times, philanthropy as a field has advanced in its knowledge by participating or reaching out to numerous benefactors and levies (Johnson, 2007). This has made numerous associations change their way of collecting finances or donations from colorful benefactors. Non-governmental associations that manage their operations from sources similar as class freights, government contracts, deals of services and goods, marketable gambles, and hookups use charity as the core source and form of support to support associations around the world (Higgins, 2006). Charity is an important element of the association's success.

Non-governmental associations (NGOs) are different groups of enterprises that are engaged inn on-profit conditioning similar as charity to offer backing to those who are less able. The ever- changing nature of information and communication technology has made it possible to develop numerous ICT- grounded inventions that have been suitable to enhance numerous services.

Charity can be defined as the act of kindness shown bison-governmental associations that can contribute part of their fat income to fulfill the requirements of those who are less able, especially those that are affected by afflictions. The Charities Act 2011 provides a list of charitable purposes similar as the forestallment of relief or poverty, the advancement of education, the advancement of religion, health, disability, fiscal difficulty, and numerous further to help those who need charity. In the current system script concerning charity operation, on-governmental associations similar as the Institute of Charity Management are involved in collecting donations and finances from other associations to carry out charity conditioning.

There's a lack of trust from the public especially when it comes to fundraising for charity hence the rate at which people contribute or pay for charity has lately reduced (Gilbert, 2019). Poor communication is also a challenge that exists in the current system of charity operation hence little communication between the association and colorful benefactors. A lot of coffers are being used in NGOs during charity, hence the need to develop a charity operation system to increase effectiveness.

This paper outlines stylish practices for social purpose armature, platform design, and operation perpetration in blockchain enterprise. Perfecting the openness of charitable data is a crucial strategy to boost conventional donation. A traceability system may be developed using Internet technology to boost the specialized translucency of charity. This study proposes a new model of donation grounded on blockchain technology for this end

II .LITERATURE REVIEW

[1] This article aims to describe the creation of a blockchain-based infrastructure for tracking donations. This article aims to describe the creation of a blockchain-based infrastructure for tracking donations. Based on blockchain technology, the system provides transparent accounting of operations for donors, charitable foundations, and recipients.

[2] In this paper, we propose a BBC scheme, where donors, defined as charity persons (CP), and beneficiaries, defined as charity beneficiaries (CB), register in blockchain, managed for diverse fundraisers by charity organizations (CO). The scheme mitigates fake fundraisers, as the charity scheme data and fund allocations to CP are managed as ledger entries in the blockchain. To maintain the security and privacy of massive CP and CB users.

[3] Blockchain as an underlying technology of the Bit coin system provides a new solution for the charity system in terms of technology. 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.

[4] Proposed the implementation of a blockchain-based system for monitoring donations. However, a focus on transparency can cause donors and recipients to be concerned about their privacy. As a result, a donation mechanism should be built that ensures both transparency and privacy. Using blockchain technology, the System provides transparent accounting of operations for donors, charitable foundations, and recipients.

[5] In this paper, the writers look at the requirements of blockchain-based charity networks around the world. They show how distributed registry systems can be utilized 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 block chain technology. The donation and fund-transfer process will be transparent. It is required to construct a single database for tracking donations that will track all donations, transactions and donor information.

[6] This paper proposed a charity system supporting blockchain technology and expounds on the planning pattern, architecture and operational process of the platform. Some core functions of the charity platform are realized and verified on Ethereum in this article. This blockchain system offers transparent accounts of operations to donors, charitable foundations and donors-supported blockchain technology. The charitable platform should give a transparent donation route, and modify public user and donors to trace and cover where, when and to whom resources of charity finances.

III.EXISTING METHODOLOGIES

Numerous Charity associations witness a lot of difficulty in getting finances or other needed requirements for charity conditioning. Getting benefactors is a grueling task also dealing with the same benefactors is grueling. For illustration, meeting the patron's condition is a delicate task for associations to fulfill. There's inefficiency in terms of tracking donations in a charity design hence making it delicate for the association to manage all donations that have been made. This leads to a lack of trust from utmost benefactors.

Managing all benefactors in anon-governmental association is thus not effective in the current system. A problem of similar magnitude can be answered by an information system that can be suitable to keep track of all donations by generating reports of all donations, can help NGOs find benefactors fluently, can be suitable to manage all benefactors and NGOs together with their history in charity

conditioning, similar as the history of all donation that has been made and donation requests that have been raised by NGOs

- The existing system for charity and fundraising applications typically involve a centralized platform that connects donors with charities.
- This system is often inefficient, with high transaction fees and long processing times.
- The existing system also lacks security and immutability and it is vulnerable to fraud and manipulation.
- There is no history of transactions and does not know about how the money was utilized by the beneficiaries.

IV. PROPOSED METHODOLOGIES

The end of this design is to develop an information system that will be suitable to break the problems linked in the Existing system.

It'll be suitable to break the problem of lack of effectiveness when managing benefactors, NGOs, donations and donations requests from NGOs. To specify the main pretensions of a charity association so as to ameliorate the rate in which donations are made. The design is set to cover all specific objects. Issues being addressed substantially being, getting numerous benefactors fluently, and keeping track of all donations and deals..

The design is set on executive and stoner relations similar as stoner enrollment and dispatch dispatches. The deliveries include benefactors being suitable to see their donation history and status of their donation, generating reports of all donations and deals that have been made by colorful benefactors. The limitation of the design is that it can only be penetrated on web- enabled bias and requires strong and dependable internet connectivity.

A. Java platform

A platform is the tackle or software terrain in which a program runs. The most popular platforms are Microsoft Windows, Linux, Solaris OS, and MacOS. Utmost platforms can be described as a combination of the operating system and underpinning tackle. The Java platform differs from utmost other platforms in that it's a software-only platform that runs on top of other tackle- grounded platforms.

The API is a large collection of ready- made software factors that give numerous useful capabilities. similar as graphical stoner interface(GUI) contraptions. It's grouped into libraries of affiliated classes and interfaces; these libraries are known as packages. The general- purpose, high- position Java programming language is a important software platform.

B. J2EE in client-server

The client sends a request to the server. The server being a more powerful machine does all the fetching and processing and returns only the desired result set back to the client for the finishing touches.

Faster execution at the server side results in less network traffic and increased response time for the program to fetch and process the data.

C. JSP

Java Server Pages (JSP) technology enables mixing regular, stationary HTML with stoutly generated content from servlets.

Numerous Web runners that are erected by CGI programs are primarily stationary, with the corridor that change limited to a many small locales.

For illustration, the original runner at most on- line stores is the same for all callers, except for a small welcome communication giving the caller's name if it's known. But utmost GCI variations, including servlets, make you induce the entire runner via your program, indeed though utmost of it's always the same.

JSP lets you produce the two corridor independently. Utmost of the runner consists of regular HTML, which is passed to the caller unchanged. Corridor that are generated stoutly are marked with special HTML like markers and mixed right into the runner.

D. MYSQL

It's used in numerous places throughout the world. Recently, still, it has begun to percolate the business world as a dependable and fast database system MySQL is frequently confused with SQL, the structured query language developed by IBM. It isn't a form of this language but a database system that uses SQL to manipulate, produce, and show data. MySQL is a program that manages databases, much like Microsoft's Excel manages spreadsheets.

E. Apache Tomcat

Apache Tomcat is a server container developed by the apache software foundation. Apache Tomcat 6.0 implements servlets 2.5 and JSP 2.1 specifications for unified expression language. Apache Tomcat includes tools for configuration and operation.

F. Blockchain Technology

As the basic technology of Bitcoin blockchain is decentralized, non-tamperable, anonymous, and traceable, which has great potential in transforming traditional industries. A blockchain is a distributed database system involving multiple independent bumps. Nodes maintain the entire database throughout the network. The blockchain can record all transaction information, whose process is efficient and transparent and the data is highly secure.

V. MODULE DESCRIPTION

This describes the structure of the system and the roles of all modules that are in the system. There are various descriptions of the modules in this project such as administrative, orphanage, donor and blockchain modules.

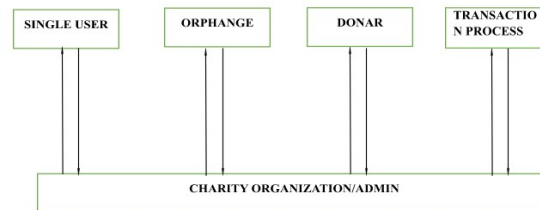


Fig 1. Module Description

A. Administrative module

This module offers duties such as managing data concerning Non-governmental organizations and NGOs, managing all transactions that take place, managing all data containing donations that have been made and communicating among charity organizations and donors. It also features approval of the organization's documents in order for the organization to be granted access to the system.

B. Orphanage module

This module features non-governmental organizations and charity-based organizations. It enables the organization's registration and uploading of legal documents to the system to request for approval to access the system. Allows requests to be sent to various donors through emails there after the donor is able to accept the request and a notification is sent concerning whether the request has been accepted or rejected. Once accepted, a donation is made.

C. Donor module

This module only features a single repository of all information regarding donors. It includes a history of all donations that have been made to various NGOs for charity activities, communications and activities relating to charity. The module also features capturing of various transactions through credit cards, online banking, cheques and cash. Distribution of donations to organizations or charity-based events is also captured in the system.

D. Blockchain

A blockchain is a digitized, decentralized, distributed public tally that acts as a participated and accompanied database that records cryptocurrency deals.

While blockchains are basically decentralized databases, there's no primary power of the data. Through collaboration, druggies decide which data are added to the blockchain while icing that identical clones of the data are entered

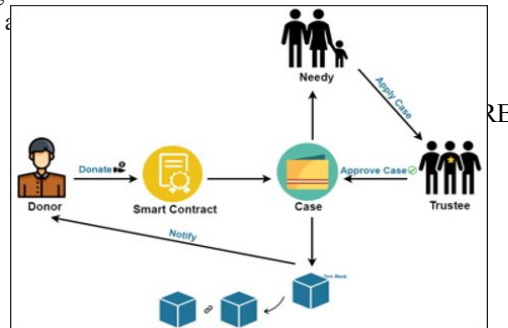


Fig 2. System Architecture

VII. SYSTEM IMPLEMENTATION

Implementation is the stage in the project where the theoretical design is turned into a working system. The most crucial stage is achieving a successful new system and giving a user confidence that the new system will work efficiently and effectively in the implementation stage. The stage consist of

- Testing a developed program with sample data
- Detection and correction of error
- Creating whether the system meets a user requirements
- Making necessary changes as desired by users.
- Training user personnel

The implementation phase is less creative than the system design. A system design may be dropped at any time prior to implementation, although it becomes more difficult when it goes to the design phase. The final report of the implementation phase includes procedural flowcharts, record layouts, and a workable plan for implementing the candidate system design into an operational design.

VIII. CONCLUSION

We studied the combination of block chain technology and philanthropy, and a new charity platform model grounded on block chain was proposed. In this system, users complete the donation and use funds with smart contracts. All transactions are recorded on the block chain to realize the traceability of funds, which increases the transparency of charities. The lack of transparency in charity activities could be solved technically with this block chain charity system, which could increase the public's trust in charity organizations. Some core components have been realized and verified by the application we have developed.

IX. FUTURE WORKS

The approaches, as well as the nodes, were thoroughly detailed. Despite the fact that our endeavor is not entirely in line with the general charitable cause. It's ideal for small-scale charitable efforts in businesses and communities. Our ideal is to broaden the use of block chain technology beyond crypto currencies. It has the capability to beget annihilation on a variety of current systems.

It has the ability to destabilize a variety of current systems and technologies. We are aiming to

ameliorate and apply our product so that it can reach a larger followership.

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