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Donate Coin Using Blockchain Technology

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ABSTRACT: Many fake charity organizations pose as genuine and loot money from innocent people in the name of charity. Most people want to donate money to a good cause of charity, but they are unsure if the money is going to reach the right hands of the destitute. The blockchain system can bring transparency to online charity trusts. DONATE COIN is a decentralized application created using the Ethereum network. Using DONATE COIN the contributors can donate the amount(ether) and can track their contributions in this application. As we know every transactions stored in the blockchain, So with the help of the transaction hash one can check their contributions in this application . Not only that the contributors can see the flow of coins in this application, the contributors can check if the amount is reaching the ones in need. The point is DONATE COIN brings back the trust in the charity with the help of Blockchain.

KEYWORDS: Blockchain, Ethereum, Smart Contracts, Decentralized Applications

I. INTRODUCTION

The blockchain is an incorruptible digital ledger that records every transaction. It is a distributed system thus all the records are stored in every node in the decentralized network. Ethereum allows running applications in the blockchain called Smart Contracts. All the Smart contracts are run on the Ethereum Virtual Machine. Crowdfunding provides an easy way to find cash for innovative project ideas. The problem with the current crowdfunding companies charging high fees and sometimes there were scams happened. Implementing a crowdfunding strategy in blockchain will help to avoid these types of problems. By incorporating Peer to Peer smart contract for crowdfunding remove the traditional transaction fees and platforms fees normally associated with other crowdfunding platforms, such as Kickstarter.

Our project is a dapp (decentralized application) which is created using the blockchain technology. This allows the data integrity and the transparency and the donors and the receivers can fully monitor the flow of the money in the dapp. Blockchain is secure and robust by nature.

Blockchain can be characterized as a distributed database of records of all transactions that have been executed and shared among interest members. The attributes of blockchain incorporates decentralization of information, persistency, anonymity and auditability. There are two primary parts in blockchain framework, which are transaction and block.

Transaction speaks to the activity set off by the member, while the block is a collection of information recording the transaction and other related subtleties, for example, the right sequence, timestamp of creation, and so on. The transaction records, or blocks, in a blockchain are connected together cryptographically, delivering them tamper proof. This implies each block that have been embedded can't be changed or erased. To achieve reliability, blockchain uses consensus algorithms. The research uses a systematic literature review method.

Literature review gives a good foundation for research in information systems and strengthens information system as a field. An audit of literature of smart contract applications reinforces the field of blockchain inside information frameworks. We direct the survey in four stages. Stage 1 is the audit of the purpose and protocol of the examination. Stage 2, includes looking through the writing and viable screening. In stage 3, the quality examination and information extraction are introduced. In stage 4, we break down the discoveries. This literature review method is chosen because it is developed specifically for information systems research.

II. EXISTING SYSTEM

AID COIN

When most people are asked about using cryptocurrencies to make donations, their response is usually: "Well, it sounds cool but it is complicated, and I can't be sure my donation will be used properly." Yet, a few projects have tried to make donating with digital assets realistic and convenient.



Some charity organizations already accept donations using Bitcoin, but that has not yet convinced institutional donors who believe Bitcoin offers room for corruption and misappropriation of funds.

The challenge of making charity organizations accountable to the funds they receive is huge and real. There is no way to prove an organization spent the cryptocurrencies donated to them in the most responsible ways. But what if there were a means of ensuring accountability? AidCoin aims to be that solution. Where accountability is a key problem in humanitarian financing, AidCoin has a solution.

The unraveling paragraphs seek to simplify what AidCoin is, how it works and how it envisions changing the world of humanitarian financing.

AidCoin is a decentralized application based on the Ethereum blockchain. Its mission is to help charity organizations receive cryptocurrency donations easily. The team behind AidCoin, Charity Stars, is based in Switzerland. They popularized the project in late 2017 with an ICO that raised more than 14,000 ether coins.

With the raised funds, AidCoin has the aim of building a platform that could utilize the blockchain technology to track how donations are utilized. The company plans to leverage smart contracts to hold charitable organizations accountable and the blockchain to keep records transparent.

The AidCoin platform is a complete ecosystem. It consists of a token used for payments, an internal exchange that converts major coins into AidCoins and a tracker to help you stay updated on how your donations are used. Collectively, the AidCoin platform is known as AidChain.

With 100 million tokens set as its maximum supply, AidChain aims to revolutionize the humanitarian sector through better financial management. The tokens are yet to gain any meaningful value, but the AidChain platform has been attracting attention since early in the year.

In April 2018, the AidCoin Charity Stars team met Real Madrid football player, Cristiano Ronaldo, and received a \$36,000 donation in Bitcoin. The meet up quickly popularized AidCoin and its platform. The AidChain community has also met the Wikipedia Foundation, held conferences in the US and Europe.

While the conferences and meet-ups have not largely helped AidCoin prices increase; they have helped popularize the project. The AidCoin is increasingly receiving more hype. However, Charity Star's first mission is to popularize their company to potential donors and show them how they can help improve the manner in which donations are managed.

If the platform is able to increase adoption among large institutional donors, charity organizations willing to be held accountable will increase. Consequently, the value of AidCoin tokens will surge as well.

III. PROPOSED METHODOLOGY AND DISCUSSION

Ethereum is an open-source, public, blockchain based distributed platform and operating to featuring smart contract functionality. It is the modified version of Bitcoin via transaction-based state transitions. Ether is a cryptocurrency which is generated and used by the Ethereum platform. Ethereum provides a decentralized operating, the Ethereum Virtual Machine (EVM), which can execute an application on the public nodes. The blockchain is originally originated from the Bitcoin, invented by unknown people. The Blockchain is a list of continuously growing records called blocks. Each Block is linked to each other and they were secured using cryptography. Blockchain has the characteristics of integrity, decentralization, Immutability, Security, Anonymity.

Blockchains can be divided into three types:

1) public blockchain (Bitcoin and Ethereum); 2) consortium blockchain (Hyperledger and Ripple) 3) private blockchain.

Peer to Peer The very important part of how blockchain works are based on Peer to Peer (P2P) system. The whole blockchain is connected to all the node in the network. This means information stored on blockchain cannot be lost or destroyed, to do so have to destroy every single node on the network and that is impossible.

Consensus protocol is the most important one in the blockchain technology. The Blockchain consensus protocol is what which keeps the blocks on all the node to synchronize with each other. The term 'Consensus' means that the



nodes have to agree with the same state of the blockchain. Consensus protocol allows blockchain to be updated every minute (depends on the network) and ensures that every block in the chain is true. The aim of the consensus protocol is to guarantee a single chain is used and followed by all the nodes.

Proof of work (abbreviated to PoW) is a consensus protocol used widely by many cryptocurrencies. This process is known as mining and the node on the network is called as miners. The Proof of Work is a mathematical problem one that requires considerable work to achieve the solution. The only way to solve the problem is through the node in the network have to run the process based on trial and error basis.

A miner will continue testing different unique values until a suitable hash is produced. The miner who manages to solve will add next block, adding the block to the chain and validates all the transactions within it, and receiving the reward associated with the block.

An Ethereum based smart contract is a cryptographic box which stores information, processes inputs, writes outputs and is only accessible to the outside if certain predefined conditions are met and the contracts in Ethereum are written in special language called solidity. In practice, Ethereum allows for an easy implementation of such smart contracts and in addition Ethereum offers developers online compilers of solidity code. Smart contract is written in such a way that the entire amount funded by the contributors will safely be kept in smart contracts so that no one can modify it or steal it. The amount will not be directly given to campaign creator rather it will be held in smart contract itself. If the campaign creator wants to use this amount he/she has to create a spending request.

IV. RESULTS

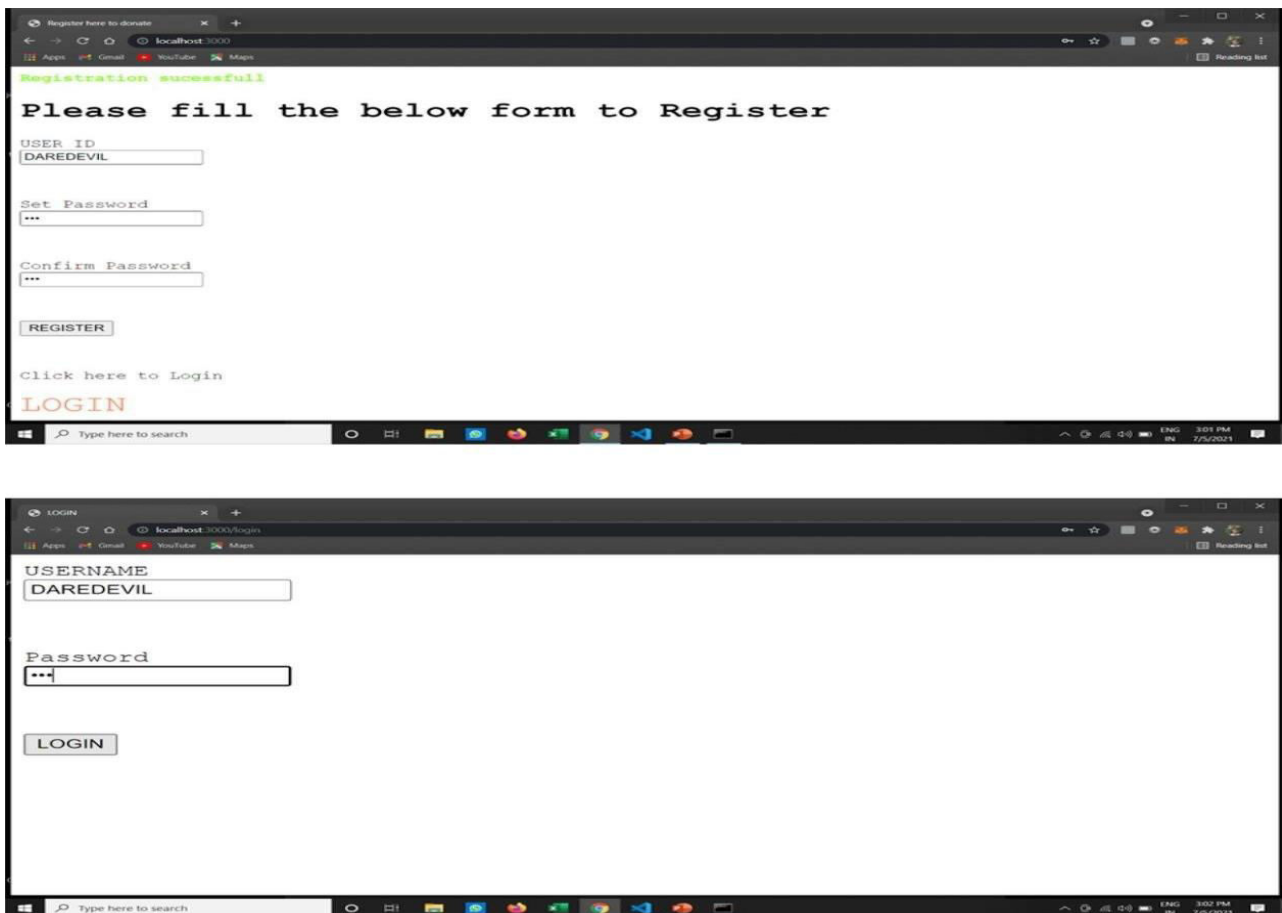


Fig 4.1 . Registration and login pages

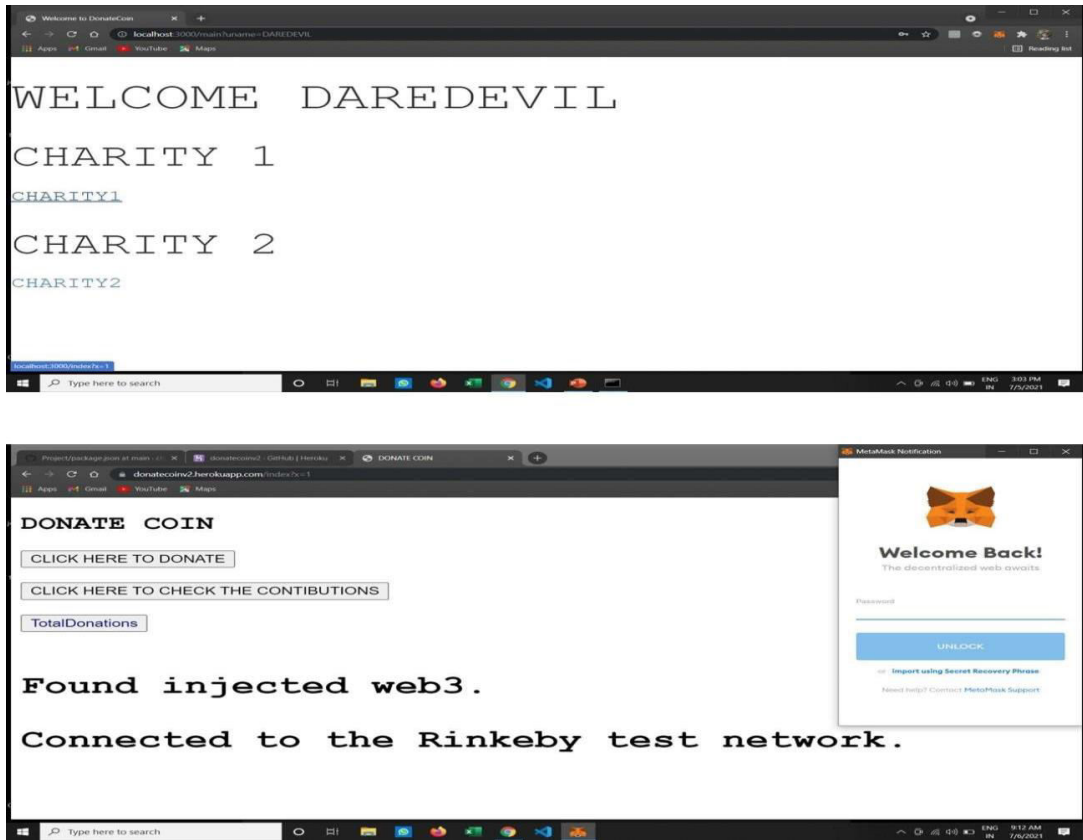


Fig 4.2. Index and Home pages

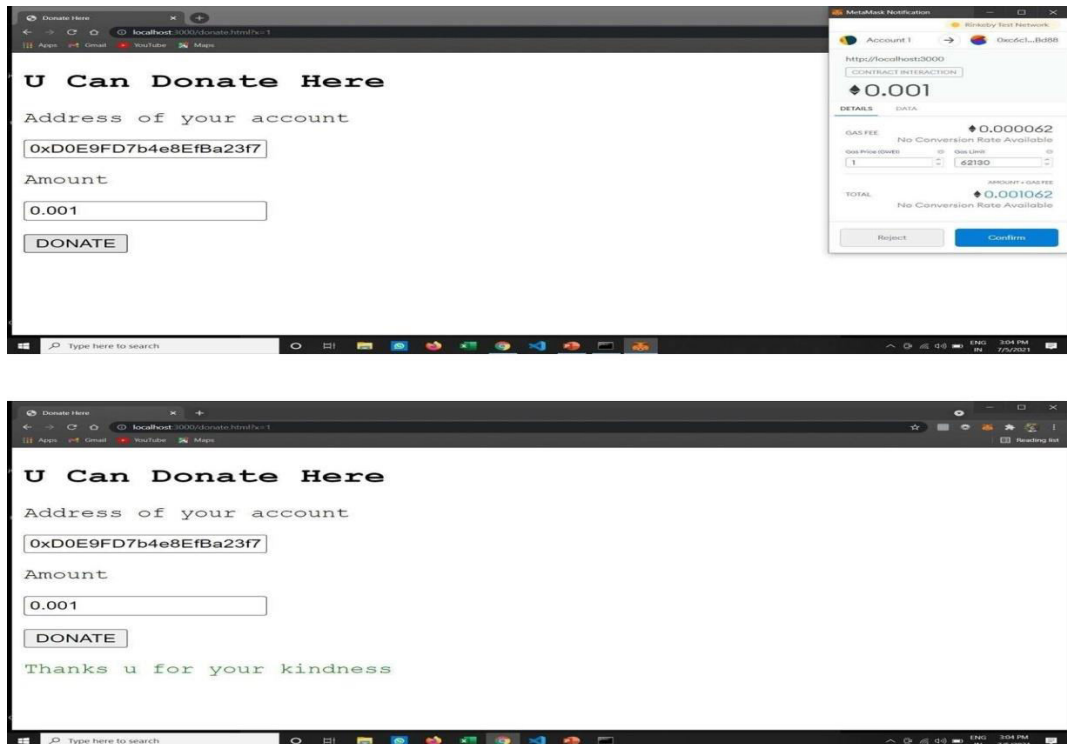


Fig 4.3. Donate page

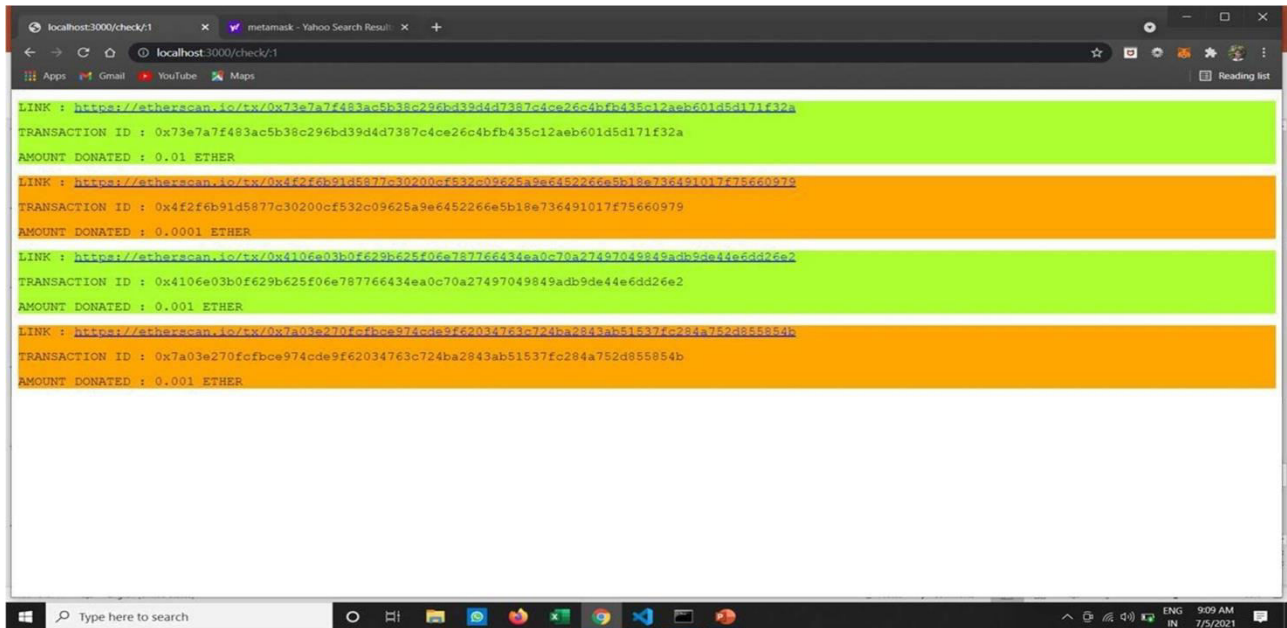


Fig 4.4. Check the contributions page

V. CONCLUSIONS

Blockchain in donating is a relatively new concept to the community. We have taken that into consideration and designed this app so that even a common man can use it with ease. But this is not the end. With the evolution of Blockchain and introducing of ICOs, our application has a bright future and a large scope for improvement and evolution. The world is still adjusting to Blockchain and Cryptocurrencies and it'll take a couple of years more for Ethereum based Dapps to become popular and to be recognized by the community. In such a situation Blockchain based donating application is a tough concept to be understood by everyone. We have taken that into consideration and designed this app so that even a common man can use it with ease. But this is not the end. With the evolution of Blockchain and introducing of ICOs, our application has a bright future and a large scope for improvement and evolution. In the future, we wish to provide an even easier and safer way for all ideas to get life through our donate coin application.

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