CHARITY DAPP

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Submitted in partial fulfillment of the Degree of

Bachelor of Technology

in

Computer Science Engineering

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CERTIFICATE

This is to certify that the work titled “Charity Dapp" submitted by **Tushar Pasricha, Nishttha Saharkar, Mansi Bhardwaj** in partial fulfillment for the award of degree of B.tech of Jaypee Institute of Information Technology, Noida has been carried out under my supervision. This work has not been submitted partially or wholly to any other University or Institute for the award of this or any other degree or diploma.

Signature of Supervisor

DR. SHARDHA PORWAL

Name of Supervisor

Designation

02/12/2022

Date

ACKNOWLEDGEMENT

We would like to convey my heartfelt gratitude to **Dr. Shardha Porwal** for her tremendous support and assistance in the completion of my project. We would also like to thank our University, Jaypee Institute of Information Technology , for providing us with this wonderful opportunity to work on a Minor project.The completion of the project would not have been possible without their help and insights.

Tushar Pasricha, Nishttha Saharkar, Mansi Bhardwaj

20103001, 20103035, 20103053

2/12/2022

SUMMARY

MOTIVATION:

Due to a lack of transparency in the transactions involved in Charity and Donations, the donor cannot know whether their donations are being utilized properly, which has made people lose trust in charities.

TYPE OF PROJECT: Pure Development Project

FEATURES:

USER:

Window where user can donate using metamask

Window where user can vote

ADMIN:

Admin can add requests of the person needs donation.
Admin can make payment to the request having the highest votes.

LANGUAGE USED:

Solidity
JavaScript

TOOLS:

1. Ganache
   ->it's a local blockchain stimulator
   ->creates a blockchain environment in your computer
2.Metamask (https://metamask.io/)
   ->inject web3 and Ethereum objects in the browser by which we can connect with a smart contract
3. Remix editor (https://remix.ethereum.org)
   ->testing
   ->debugging
   ->deploy smart contracts

4. truffle
5. Reactjs
6. vscode

PROPOSED METHODOLOGY:

Blockchain-based Decentralized charity system built on Ethereum will provide full transparency, accountability, and direct reach to the intended recipients through **Smart contract.**

FRONT-END:

User Interface: The UI is developed using ReactJS.

BACK-END:

The back-end of the website is developed using solidity smart contacts and it consists of the Ethereum node connected to the blockchain network.

DESCRIPTION OF WORK:

We have made a web based decentralised charity application with the features mentioned above.

The frontend part is done using ReactJs which is integrated with Solidity Smart Contract using Truffle unbox react.

RESULTS & CONCLUSION:

Blockchain technology allows you to make the method of donations and transactions of funds transparent.

Blockchain-based Decentralized charity system built on Ethereum will provide transparency, accountability, and direct reach to the intended recipients through smart contact.

LIST OF FIGURES

LIST OF SYMBOLS AND ACRONYMS

Symbol/Acronyms	**Meaning**
eth	ether
wei	Smallest denomination of ether (1eth = 10^18 wei)
Dapp	Decentralized Application

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CHAPTER-1

INTRODUCTION

General Introduction

Due to a lack of transparency in the transactions involved in Donations the donor is not able to know whether their donations are being utilized properly, which has made people lose trust in charities. Blockchain-based Decentralized charity system built on Ethereum will provide transparency, accountability, and direct reach to the intended recipients. It will help in restoring trust in charity.

Blockchain technology allows you to make the method of donations and transactions of funds transparent.

A smart contract may help to overcome these trust issues. Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss.

The code and the agreements contained therein exist across a distributed, decentralized blockchain network. The code controls the execution, and transactions are trackable and irreversible.

Smart contracts permit trusted transactions and agreements to be carried out among disparate, anonymous parties without the need for a central authority, legal system, or external enforcement mechanism.

Problem Statement:

Due to a lack of transparency in the transactions involved in Donations the donor is not able to know whether their donations are being utilized properly, which has made people lose trust in charities. The issue of trust and transparency is as much a problem for institutional funders (e.g. governments, foundations, and impact investors) as it is for individual donors.

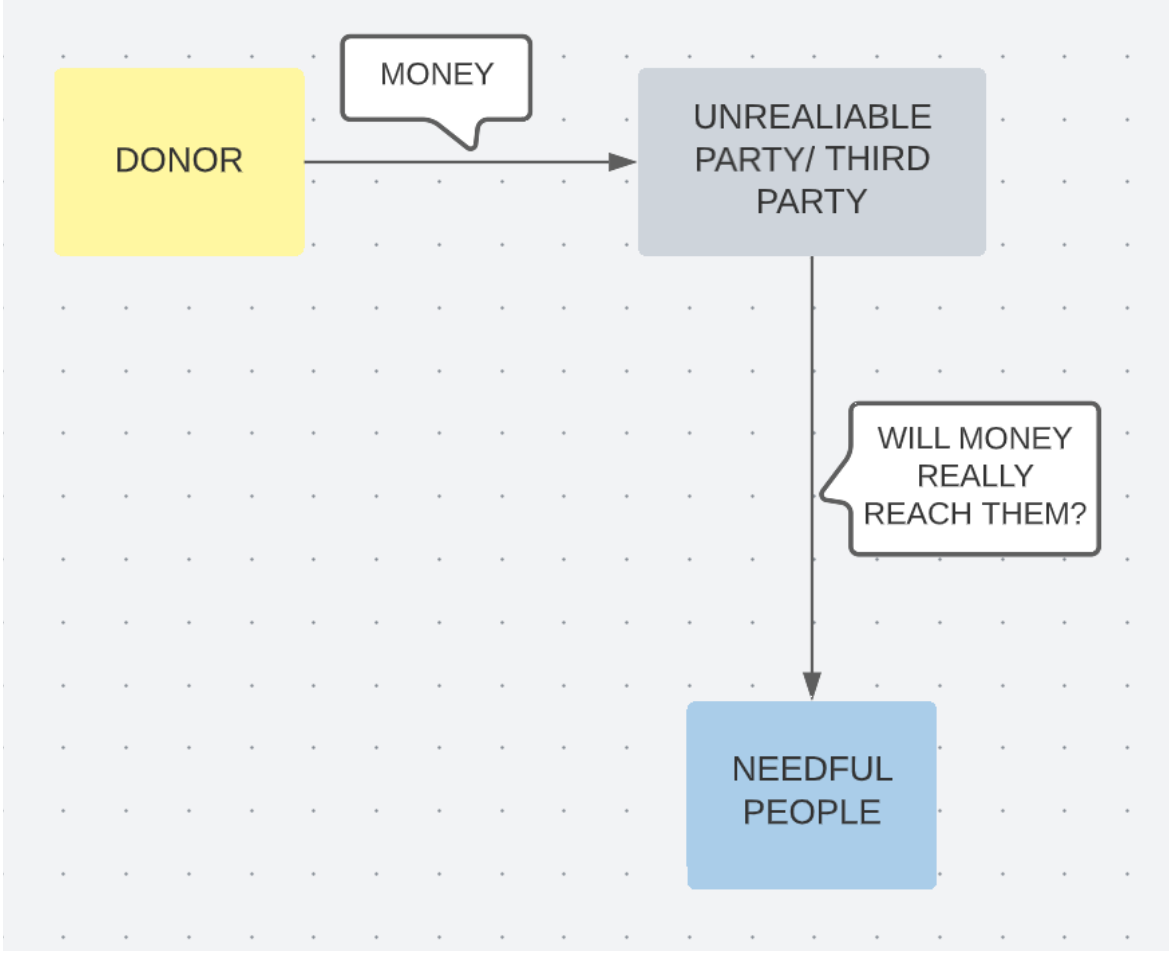


FIG 1: Problem Statement

Significance of the problem:

Online fundraising is an easy and convenient way to gather donations for your organization's cause, but it's important to meet the challenges associated with it head-on.

The first big online fundraising challenge you'll encounter is that the people who want to donate but do not because of lack of trust. People feel that their donation will not reach the needful people but to the middle man.

The blockchain system can bring transparency to online charity trusts. Contributors can confirm if their donation is reaching the deserving hands or not.

With the addition of blockchain into charities, donors would no longer be unaware of what's being done with their money.

Empirical Study

A decentralized application (dapp for short) refers to an application that is executed by multiple users over a decentralized network. In recent years, the number of dapp keeps fast-growing, mainly due to the popularity of blockchain technology. Blockchain helps in the verification and traceability of multistep transactions needing verification and traceability. It can provide secure transactions, reduce compliance costs, and speed up data transfer processing. Blockchain technology can help contract management and audit the origin of a product. It also can be used in voting platforms and managing titles and deeds. It has a huge potential to drive major changes across global businesses. Blockchain helps in saving costs, improving efficiency, and bringing transparency. It has solutions to the challenges faced by different industries. It is improving global businesses by making companies more efficient and profitable.

Despite the increasing importance of dapps as a typical application type that is assumed to promote the adoption of blockchain, little is known about what, how, and how well dapps are used in practice. In addition, the insightful knowledge of whether and how a traditional application can be transformed into a dapp is yet missing.

Brief Description of the Solution Approach

BLOCKCHAIN RESTORES TRUST IN CHARITY.

Blockchain-based Decentralized charity system built on Ethereum will provide transparency, accountability, and direct reach to the intended recipients through smart contact. Blockchain is a distributed ledger that provides a way for information to be recorded and shared by a community. Entries are permanent, transparent, and immutable, which allows people who don't know each other to have confidence in a shared record of events. Essentially, by making all records traceable, tamper proof and publicly available, and by removing the need for third parties, blockchain technology acts as a trusted gatekeeper and purveyor of transparency.

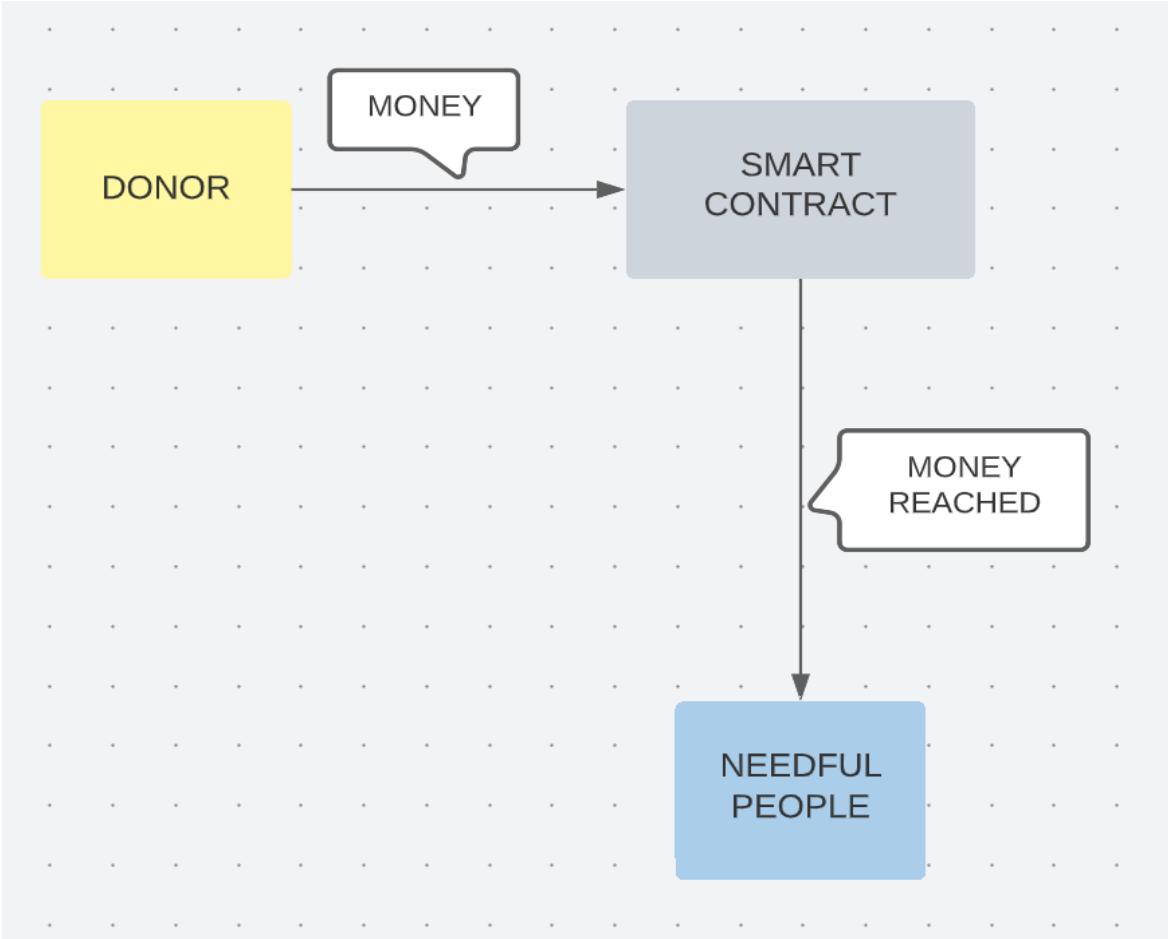


FIG2: Solution Approach

CHAPTER - 2

LITERATURE SURVEY

Summary of papers studied

- ***Singh, A., Rajak, R., Mistry, H., & Raut, P. (2020, June). Aid, charity, and donation tracking system using blockchain. In 2020 4th International Conference on Trends in Electronics and Informatics (ICOEI)(48184) (pp. 457-462). IEEE.***

  Link:

  https://ieeexplore.ieee.org/abstract/document/9143001

The author briefs about the upper hand of using Blockchain technology over a conventional system in various fields and thus the challenges associated with it in respective fields. Blockchain can overcome the necessity to rely upon a third party for any Transactions. This can even be employed in cases where there is a requirement to track, verify and authenticate transactions while developing decentralized applications like supply chain management, banking applications, currency exchange, charity, etc. The author also discusses the Trust management system for authentication using blockchain and introduces new models for the same. When an online transaction takes place between two entities, they need to depend and trust on third parties for authentication and verification.

This trust is then disseminated within the network and also the third party trusts another entity in the network, forming a sequence of trust. So, to avoid such sequence, the paper suggests a decentralized approach for trust management for the secure authentication process. The merit of using Blockchain technology is that it provides extra layer of trust within a system by eliminating the third person or parties which are there for authentication. Hence, the system become more secure and Trustworthy. Blockchain allows to develop a

tamper proof system as it encodes the model and then stores them in blockchain. This makes the system more secure and trustworthy.

The proposed system is a decentralized system running on the Ethereum blockchain. Being a decentralized system, it is not governed by any third party and doesn't have any centralized entity like a database. Everything is stored in the form of a transaction in the blockchain network. These transactions are performed or works on the basis of a smart contract similar to real world contract but executed digitally. The system consists of users that play a major role which is classified as the donor/beneficiary, NGO and the Government entity.

A. Non-Government Organizations (NGO): These represent the organizations that work for the social cause. The system allows them to raise their requirements as per specific format over the system dashboard.

B. Government Body: This body approves the requirements raised by the NGOS Only after this approval the requirements will be made visible on the donor's dashboard from where they will be able to donate.

C. Donors: The donor is able to view the requirements that were raised by the NGOs and approved by the government. They can donate as per their ability and preferences to different requirements.

The system is in the form of a website where users can register themselves and allowed to perform actions as per their role which can be donor, non-government organization, and government entity. Each user will have their own username, password and the private key for their account, which will authenticate the user and authorize to access their own dashboard.

- ***Patil, Purva Deepak, Dikshita Jaiprakash Mhatre, Nidhi Hemant Gharat, and Jisha Tinsu. "Transparent Charity System using Smart Contracts on Ethereum using Blockchain."***

  Link:
  https://www.academia.edu/download/84368488/Transparent_Charity_System_using_Smart_Contracts_on_Ethereum_using_Blockchain.pdf

In 2019, S. Hadi, D. Azamat, A. Sergey, "Platform for Tracking Donations of Charitable Foundations Based on Blockchain Technology"[1] proposed that most of the donations are in the informal sphere and donators do not know how their funds were spent. The main objective of the project is to develop the platform in which charitable organization will be integrated. Due to this the data on donations will be aggregated in one place and it will allow to prepare reports automatically. Hence, increase the transparency of charitable foundations by creating a common platform based on blockchain technology.

The charity organizations get the knowledge of seeking help and do charity projects through the platform. Donors study charity projects on the platform, then donate to beneficiaries or the charity organizations. Beneficiaries upload their information to the platform for help, they're going to get and spend tokens in cooperative stores. The transactions occurring within the stores are to be uploaded to the charity platform. Many fake charity organizations pose as genuine and loot money from innocent people within the name of charity. Most people want to donate money to an honest explanation for charity, but they're unsure if the cash goes to succeed in the proper hands of the destitute.

The blockchain system will bring transparency to the online charity trusts. Contributors can see the journey of the donation in real time and ensure if it’s reaching the deserving hands or not. The following methodologies are used in this paper:

A. Blockchain technology is most easily outlined as a decentralized, distributed ledger that records the source of a digital plus. By inherent design, the info on a blockchain is unable to be modified, which makes it a legitimate disruptor for industries like payments, cybersecurity and healthcare. Blockchain may be a shared, immutable ledger that facilitates the method of recording transactions

and tracking assets during a business network. An asset is often tangible (a house, car, cash, land) or intangible (intellectual property, patents, copyrights, branding). Virtually anything useful is tracked and traded on a blockchain network, reducing risk and cutting costs for all involved. A blockchain network will track orders, payments, accounts, production and much additional. And because members share one view of the reality, you'll see all details of a transaction end-to-end, supplying you with greater confidence, also as new efficiencies and opportunities.

B. Ethereum is a decentralized blockchain platform that establishes a peer-to-peer network that executes and verifies application code called smart contracts. Smart contracts allow participants to transact with one another without a trusted central authority. The transaction records in the smart contracts are immutable, verifiable, and securely distributed across the network, giving participants full ownership and visibility into transaction data. Transactions are sent from and received from the accounts created by user on Ethereum. A sender must sign transactions and spend Ether, Ethereum's native cryptocurrency, as a price of processing transactions on the network. Ethereum may be a technology that's home to digital money, global payments, and applications.

C. Solidity is an object-oriented, high-level language for implementing smart contracts. Smart contracts are programs which govern the behaviour of accounts within the Ethereum state. Solidity is a curly-bracket language. It is influenced by C++, Python and JavaScript, and is designed to target the Ethereum Virtual Machine (EVM). Solidity is statically typed, supports inheritance, libraries and complex user-defined types among other features. With Solidity, you can create contracts for uses such as voting, crowdfunding, blind auctions, and multi-signature wallets. When deploying contracts, you should use the latest released version of Solidity. This is because breaking changes as well as new features and bug fixes are introduced regularly.

- ***Sirisha, N. S., Agarwal, T., Monde, R., Yadav, R., & Hande, R. (2019, January). Proposed solution for trackable donations using blockchain. In 2019 International Conference on Nascent Technologies in Engineering (ICNTE) (pp. 1-5). IEEE.***

  Link:

  https://ieeexplore.ieee.org/abstract/document/8946019

The problem that the paper addresses is that there is a lack of transparency in the transactions pertaining to donations and funds provided by the Government or other donors. There is a need to allow donors to keep track of their donations and bring transparency to social funding.

The objective is to ensure the traceability of one's donation, and keeps funds secure. This will help to redress the decline of public trust in charities and tap into donor demand for more information about their impact. Through blockchain, donations will be largely transparent. A donor would be able to follow their gift all the way through a charity to the beneficiary, and beyond. Charity chain uses blockchain to record every transaction. Thanks to blockchains intrinsic qualities of data immutability and tamper-resistance, it further increases project transparency and accountability.

The blockchain provides a means to obtain a decentralized transaction ledger that can be used to generate, validate and send transactions to other nodes present in the same network. Various cryptographic hash functions of specific cryptocurrencies also increase the security that is needed during financial transactions. Smart contracts can be considered to be the soul of the blockchain network which controls all the transactions taking place in blockchain network. Smart contracts are defined to make decision for all the transactions.

We can say that the smart contracts are the rules designed to process any transaction that take place in blockchain network. A Smart contract can be lines code running on top of blockchain, which contains a set of rules under which multiple parties agree to that contract for interaction.If and when these predefined rules are met, the smart contract is automatically enforced.A smart contract can form a relationship between people, institutions and the assets they own. A Smart can extremely reduce the transaction costs.

We can say that is an Auto-enforceable code, means it standardizes transactions rules and it indirectly reduces transaction cost of: Reaching an agreement, Formalization, Enforcement. Using such smart contracts a Dapp is created. DAPP stands for Decentralized Application.

The system will be a website where the user will have to first provide his details for his registration. He will be given a user ID and a password that will be used for logging in. After login, he will be presented a dashboard where he will be able to view all the details like total impact of user, donations made, money donated, etc.

User will also be able to track all his transactions. The tracking of transactions will tell the user about the current processing state of the transaction. Similarly, the organization can register itself to the system and provide its details to attract donations.

Thus, the proposed system will trace the donations and let the donor know that his/her money has reached the beneficiary successfully. Charity chain uses Smart contracts to perform the process of donations and track them. Byzantine consensus algorithm is used for scalability and computational ease. Ethereum platform is used as it is a public platform. This will provide transparency in the donations will ultimately motivate the donor to contribute more to such flexible yet efficient and traceable charities.

- ***Khalil, Iqra, Omer Aziz, and Numan Asif. "Blockchain and Its Implementation for Charitable Organizations." 2021 International Conference on Innovative Computing (ICIC). IEEE, 2021.***

  Link:

  https://ieeexplore.ieee.org/abstract/document/9692944

Trust and transparency are the basics of any nonprofit or non-financial organizations. It is believed that charities that are accountable and transparent are more likely to act with integrity because they want donors to know that they're trustworthy. Keeping in mind the fact of transparency and integrity, block chain is the state-of-the-art technology which has given solution to the problem mentioned before. In this paper the use of proof of authority as a consensus protocol in Ethereum blockchain platform is proposed.

A detailed tutorial of blockchain mechanism along with the detailed comparison of three main platforms bitcoin, Ethereum and Hyperledger in which blockchain has been explored a lot. Furthermore, there is a detail overview of how blockchain has flourished itself in various fields of non-profit and non-financial organizations. Finally, we have proposed an economical model along with the framework which uses less computational power. Charitable organizations are playing a vital role in the healthcare sector by providing social services with Donors' donations.

As one of the best charities out of hundreds of charitable organizations knows that donors' donation carries the greatest impact, so they make everything clear and transparent for the donors by allowing them to examine their financial statements, growth, history, governance policies, annual reports and the progress of their grant recipients. Such organizations are committed to their supporters by ensuring them that their donations are being spent wisely. A donor has the right to demand a report on the utilization of his funds.

They want their supporters to know exactly where their time and money are being utilized and they should know that they are valued and making a positive difference. Fear of misuse, wastefulness,

and lack of impact plays an important role in discouraging people from donating to organizations and hence reducing the economic growth

This paper will be further opening up a new domain for blockchain implementation in various fields along with the features of the blockchain.

This paper has focused on three different platforms with their detailed comparison including the implementation of smart contracts, consensus protocols and a proposed framework for charitable organizations along with the economic model and layered structure of the proposed framework.

Blockchain has three building blocks which outstands this technology:

• Decentralization

• Transparency

• Immutability

The paper discusses what is a Blockchain and how it is being implemented and integrated with other platforms using different consensus protocols. All types of industries are taking advantage of this technology. This paper can be considered as a solid basis for future research studies on the detailed working of smart contract and Hyperledger. The blockchain with the use of proof of authority consensus protocol can further be explored.

CHAPTER - 3

REQUIREMENT ANALYSIS AND SOLUTION APPROACH

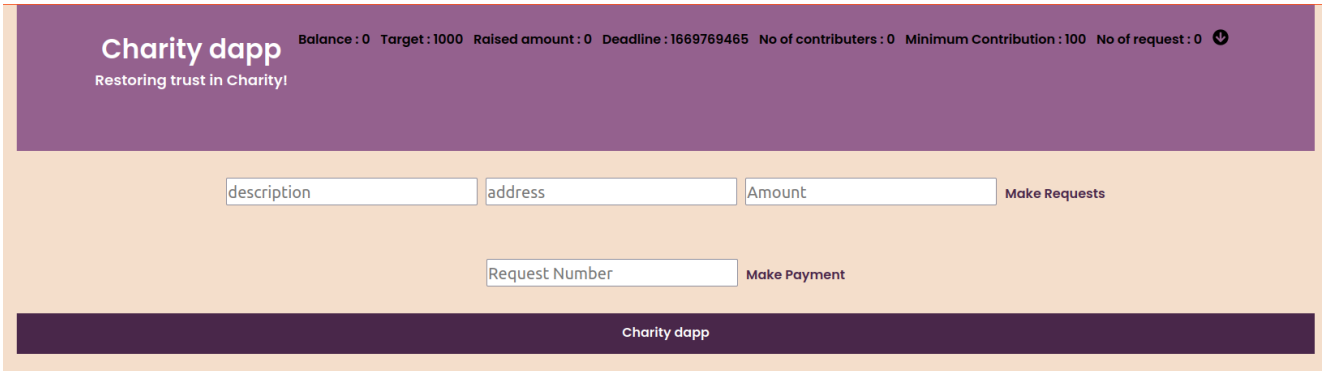
Overall description of the project

Charity Decentralised application using blockchain

Our application has 2 sections - User and Admin

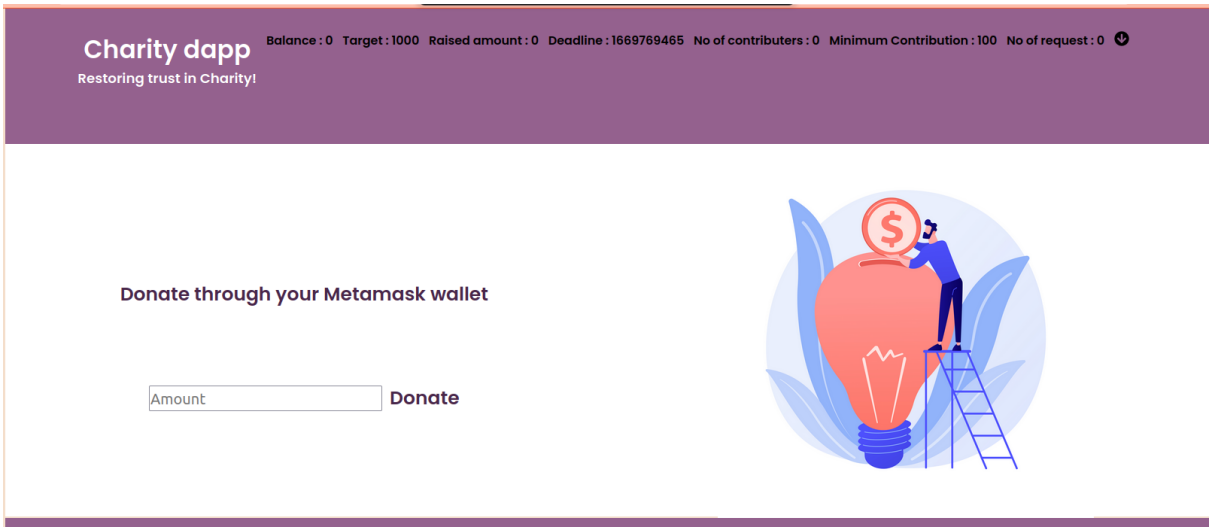
ADMIN:

- The admin account is the account by which the blockchain is deployed.
- Only this account can add requests and make payments.
- Admin can add requests of the person who needs donation by mentioning the details and description, account address, and amount required, which leads to an increase in the number of requests.
- He can only make payments to the request having the highest vote only when all users have made their vote.



USER:

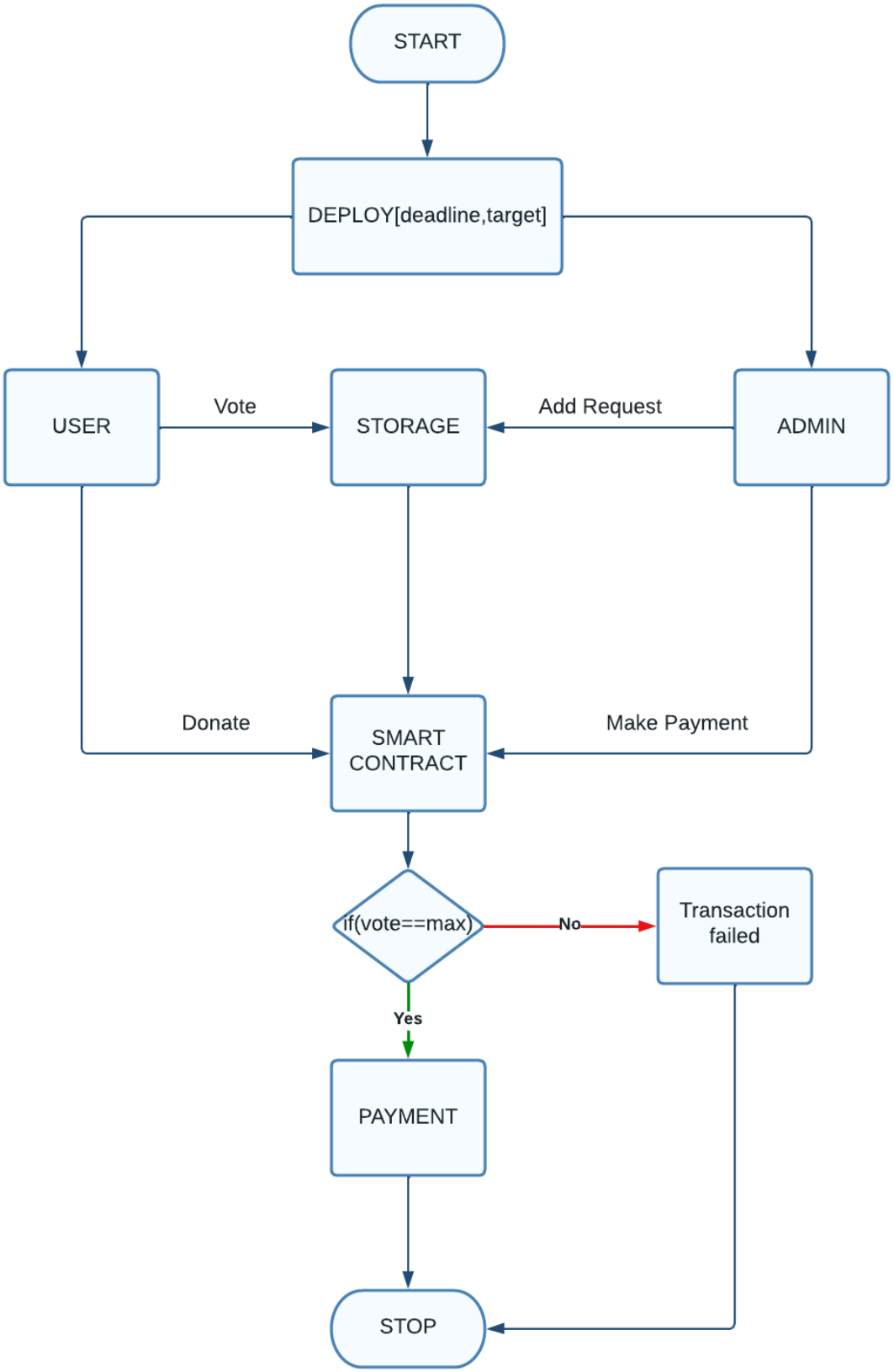
- In the user window, the initial balance is zero wei (unit of ether ,refer to the table given below), and we have a target of 1000 wei (mentioned in the smart contract).
- The user enters the donation amount in wei which he/she wishes to donate to a request in the form of wei using his/her Metamask account.
- The minimum amount he/she can donate is 100 wei.
- Donations can be done only within a specified deadline (mentioned in the smart contract).
- The raised amount and the balance increase after the donation.
- There can be number of users/donors, the number of contributors will increase after each donation from different metamask accounts.



The window where users can donate wei using Metamask.

- Then he votes for the request he wants to donate using the request number.

Window where user can vote



Flow Diagram

DENOMINATIONS OF ETHER		
UNIT NAME	**WEI VALUE**	**NUMBER OF WEI**
Wei (wei)	1 wei	1
Kwei (Babbage)	1e3 wei	1000
Mwei (lovelace)	1e6 wei	1000,000
Gwei (shannon)	1e9 wei	1000,000,000
Twei (szabo)	1e12 wei	1000,000,000,000
Pwei (finney)	1e15 wei	1000,000,000,000,000
Ether (buterin)	1e18 wei	1000,000,000,000,000,000

TABLE 1 : DENOMINATIONS OF ETHER

Requirement Analysis

1. **Ganache**:

- It is a private Ethereum blockchain environment that allows to you emulate the Ethereum blockchain so that you can interact with smart contracts in your own private blockchain.
- It's a local blockchain stimulator
- Creates a blockchain environment in your computer
- Ganache UI is a desktop application supporting both Ethereum and Corda technology.

2. **Metamask** (https://metamask.io/):

- MetaMask is a software cryptocurrency wallet used to interact with the Ethereum blockchain. It allows users to access their Ethereum wallet through a browser extension or mobile app, which can then be used to interact with decentralized applications.
- MetaMask wallet is a versatile product in the marketplace, supporting multiple protocols across blockchains.
- Inject web3 and Ethereum objects in the browser by which we can connect with a smart contract.
- Transactions are done using metamask.

3. **Remix editor** (https://remix.ethereum.org):

- The Remix editor recompiles the code each time the current file is changed or another file is selected.
- Remix is a powerful, open source tool that helps you write Solidity contracts straight from the browser.
- It also provides syntax highlighting mapped to solidity keywords.
- Also used for:
  - testing
  - debugging
  - deploy smart contracts

4. **Truffle:**

   Truffle is a world-class development environment, testing framework and asset pipeline for blockchains using the Ethereum Virtual Machine (EVM), aiming to make life as a developer easier.

   Ethereum is a blockchain that allows applications to run on it. The code is written in Solidity language in the form of smart contracts. To compile these contracts, we need an Ethereum compiler, which converts smart contracts to machine-readable code. The Truffle Suite is a collection of tools made specifically for blockchain development on Ethereum.

   - Deployments and transactions through MetaMask to protect your mnemonic.
   - Built-in smart contract compilation, linking, deployment and binary management.

5. **Node.js:**

   Node.js is an open-source server environment. Node.js is cross-platform and runs on Windows, Linux, Unix, and macOS. Node.js is a back-end JavaScript runtime environment.

6. **Vscode:**

   Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft with the Electron Framework, for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

Solution Approaches

Blockchain-based Decentralized charity system built on Ethereum will provide transparency, accountability, and direct reach to the intended recipients through **Smart contract.**

- **No middleman/third-party**

Money is not transferred to any middleman/third-party but transferred to the smart contract and then to the people in need.

- **Voting**

Every contributor has to vote and Money is donated to the request which has the maximum number of votes.

No payment can be done until all donors make their vote,

CHAPTER-4

MODELING AND IMPLEMENTATION DETAILS

Design Diagrams

i)Use case diagrams

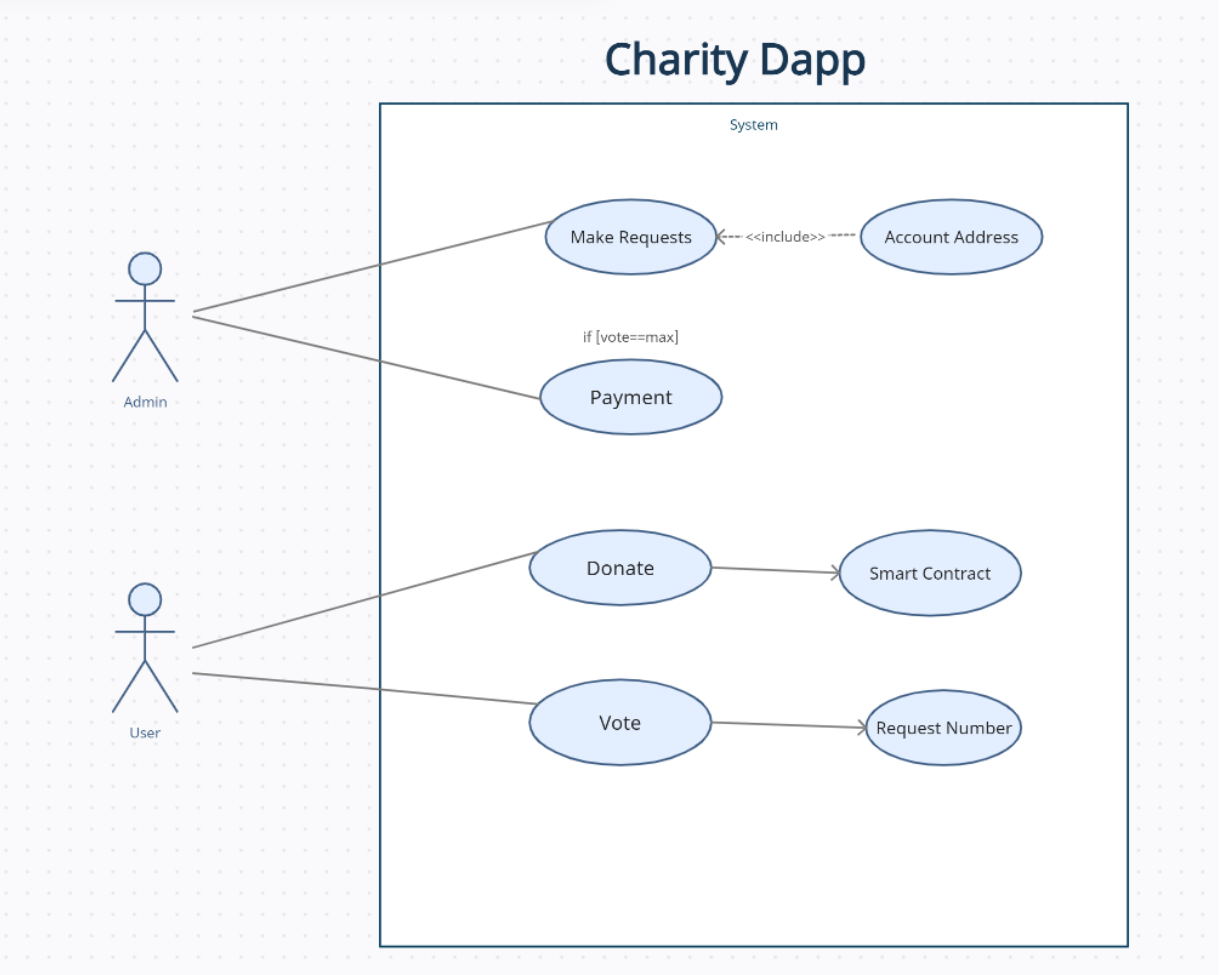


FIG 3 : Use Case Diagram

ii)Sequence Diagram

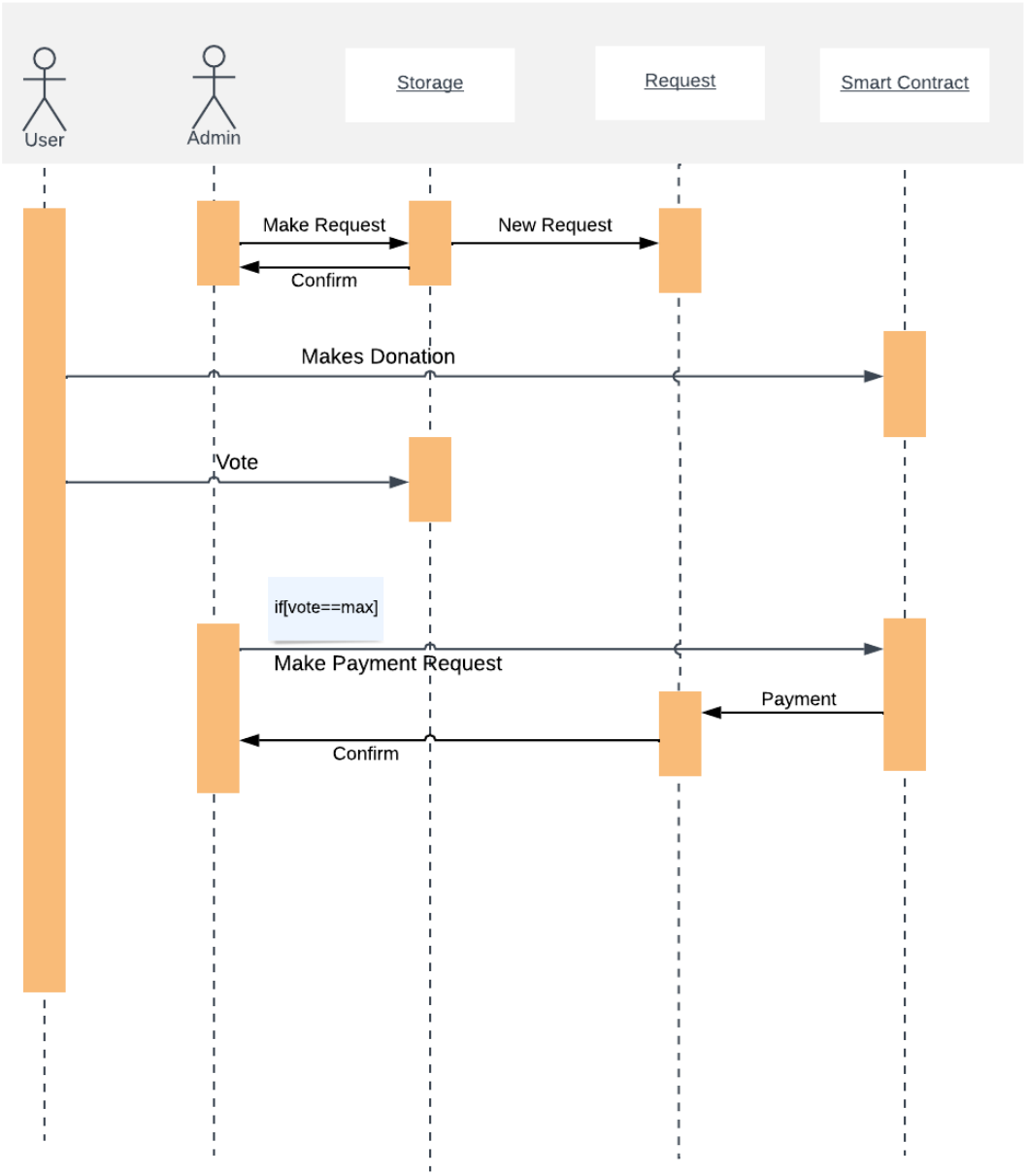


FIG 3 : Sequence Diagram

Implementation details and issues

SYSTEM ARCHITECTURE CONTAINS 2 MAJOR PARTS

FRONT-END:

User Interface: The UI is developed using **ReactJS.** ReactJS is a javascript library that allows building the UI components that can be reused and present data that is updated with time.

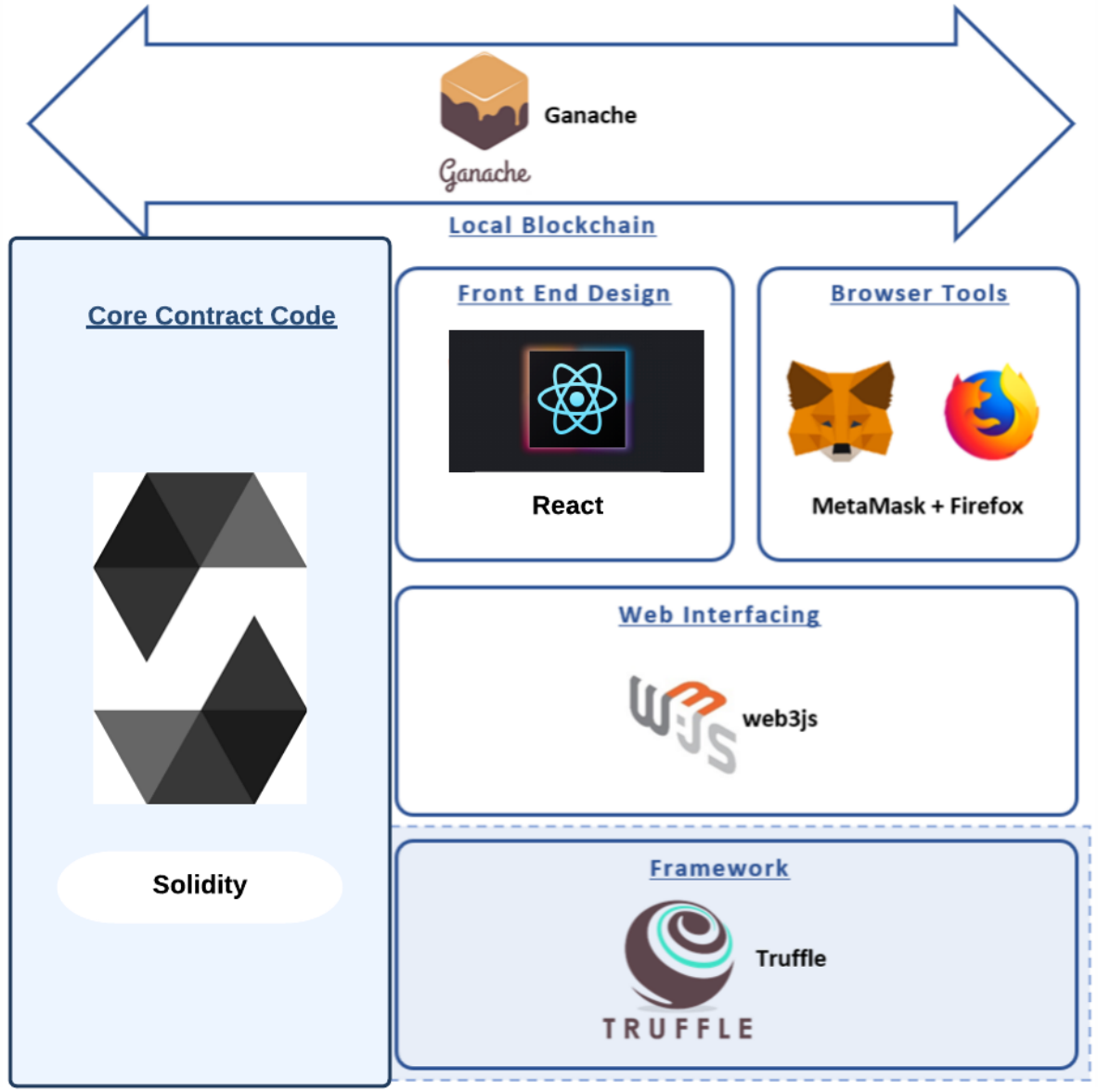
Web3.js: It is the collection of libraries that allow you to interact with a local or remote Ethereum node using HTTP, IPC, or WebSocket.

BACK-END:

The back-end of the website is developed using ***solidity smart contacts*** and it consists of the Ethereum node connected to the blockchain network. Each node consists of an EVM that translates a smart contract to a set of instructions and converts them to bytecode and then deployed them to the blockchain by the miners in the network.

Smart contracts are basically a set of rules that are agreed upon by multiple parties in the blockchain network. It helps in carrying out transactions in a transparent way which avoids the third party and brings decentralization to the system.

Ethereum is a blockchain-based decentralized platform on which decentralized applications (Dapps) can be built.



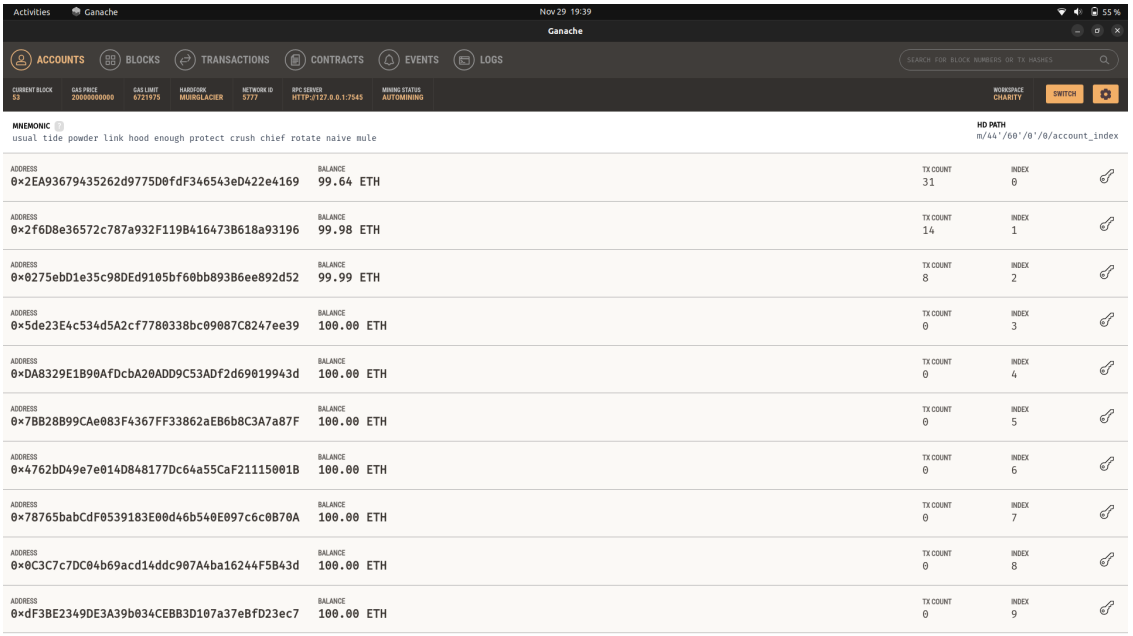
Block Diagram

Smart contract is deployed by creating a blockchain environment locally using **Ganache** (Local Blockchain stimulator)

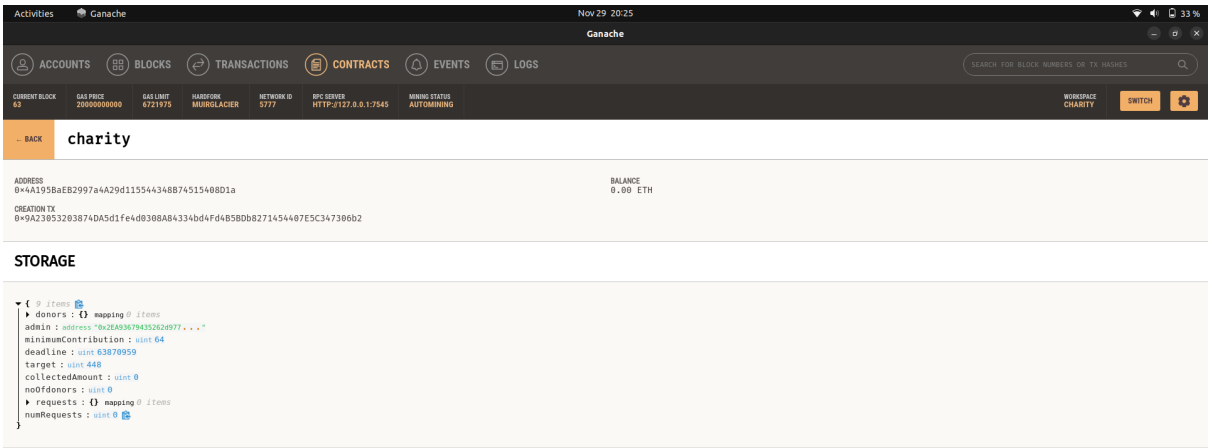
Ganache

- it's a local blockchain stimulator
- creates a blockchain environment in your computer

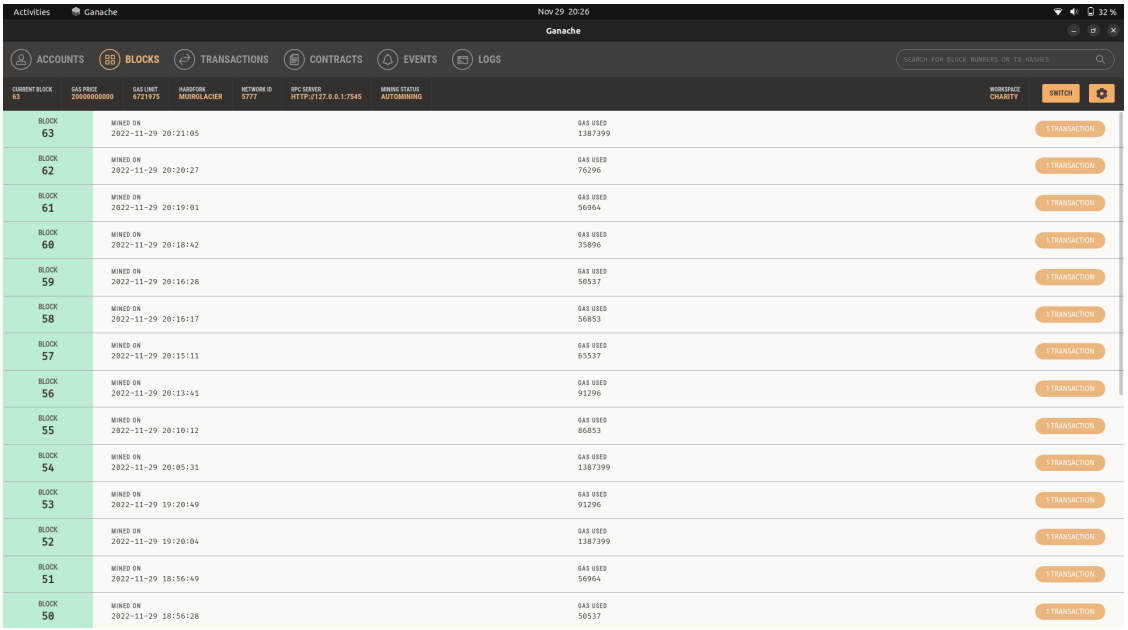
Accounts provide by Ganache:



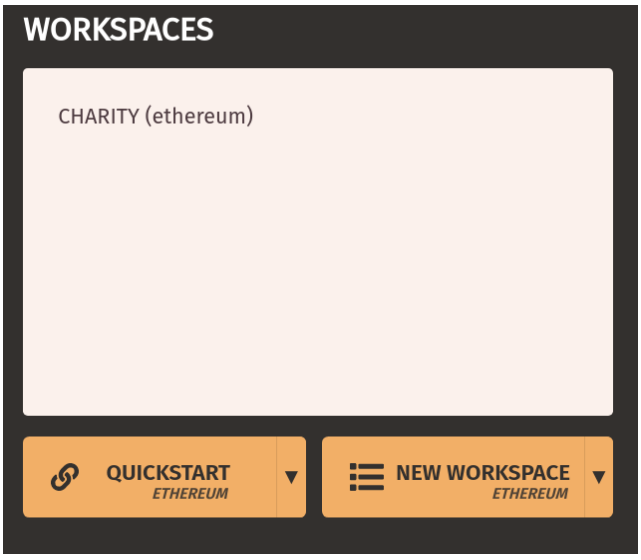
Deployed Smart Contract:

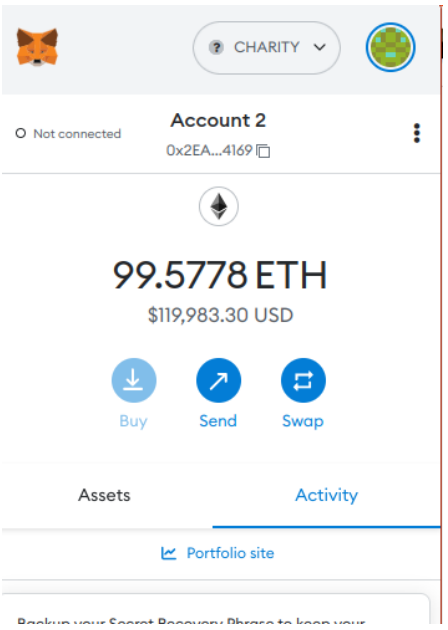


Block of Smart Contract:

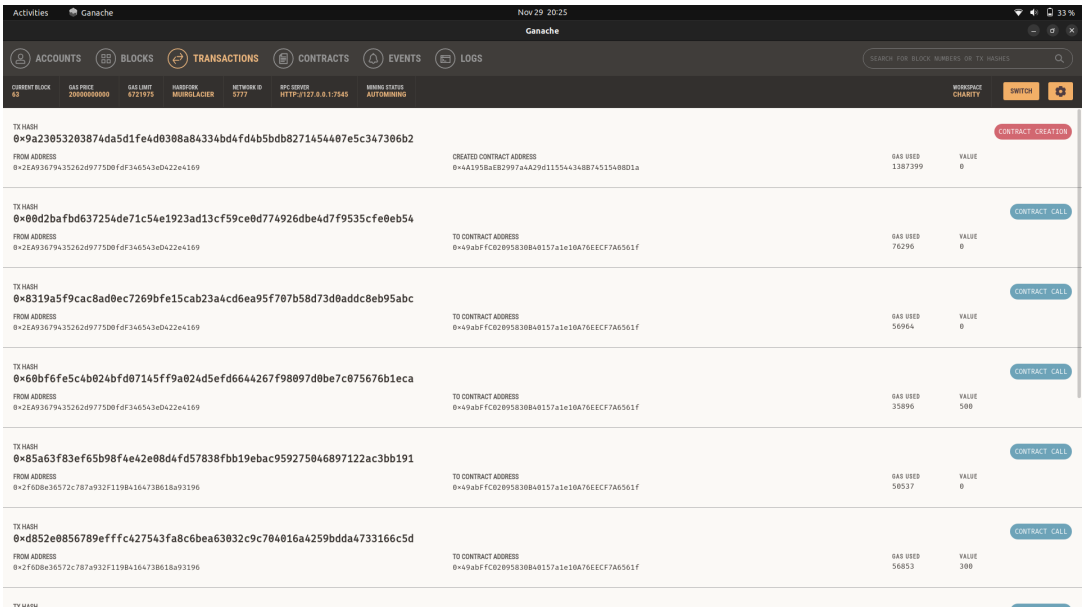


Transactions are done using metamask which is connected to the same network as Ganache (Charity).





Various transaction



CHAPTER-5

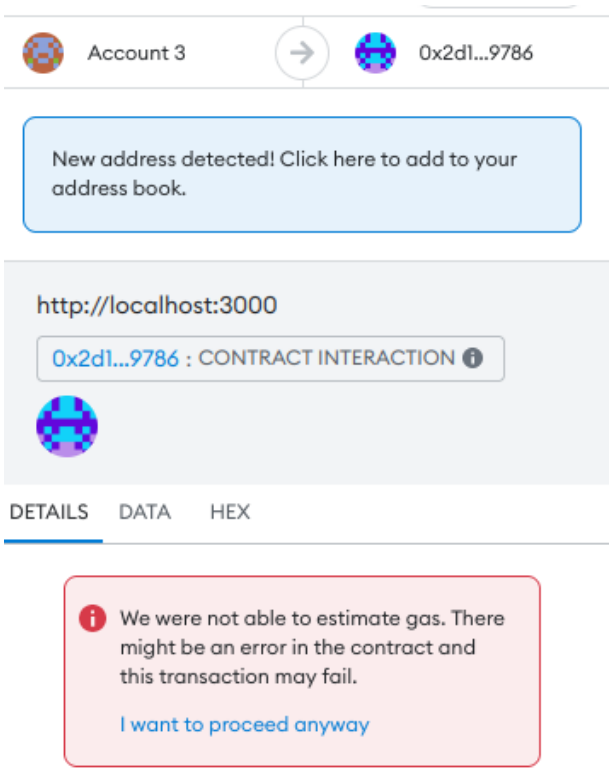
TESTING

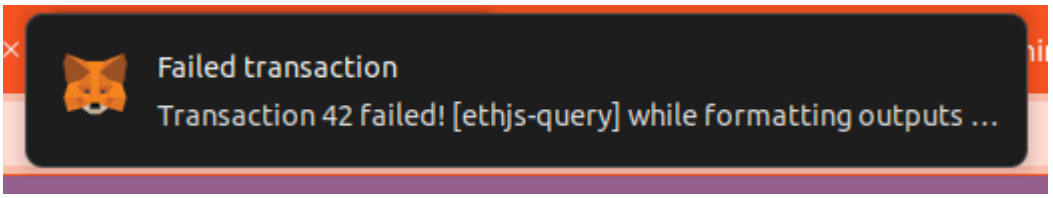
Test cases:

- Not admin account try to add request and make payment
- Admin try to make payment before voting
- Contributors try to contribute when deadline has passed

Error and Exception Handling:

If any of the above mentioned test cases occurs, Metamask will give errors as follows and the transaction will fail.





Limitations of the solution

- Blockchain storage is costly.
- A gas is worth 0.00000005 ETH and if you plan to store data or let's say a 256-bit word it will cost you 20,000 gas.
- A kilobyte is thus 640k gas or 0.032 ETH or 16.70 USD as per the current rate of Ethereum
- As per the current price of Ethereum, 1MB of data will cost you up approx. 17,100 USD.
- Every change to the blockchain, no matter how small, costs gas (or "money" in legacy parlance) For instance, sending ether with the built-in send() method costs 21,000 gas
- All the requests including description, account address, amount, and votes are stored in Blockchain.

CHAPTER-6

FINDINGS, CONCLUSION, AND FUTURE WORK

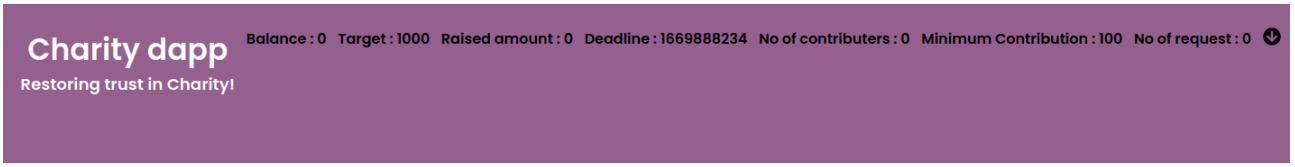
Findings

Initial :

Target and Deadline are pre set in the smart contract

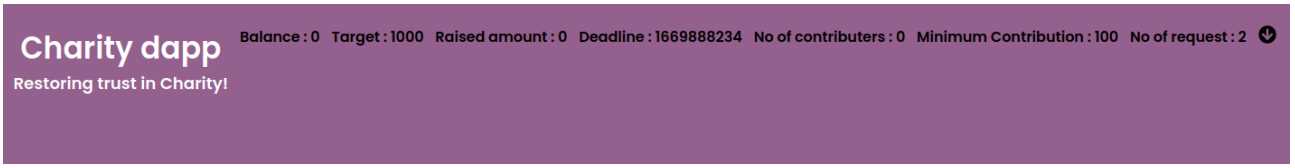
Target = 1000

Deadline = 1 hours (3600 sec)



Adding request:

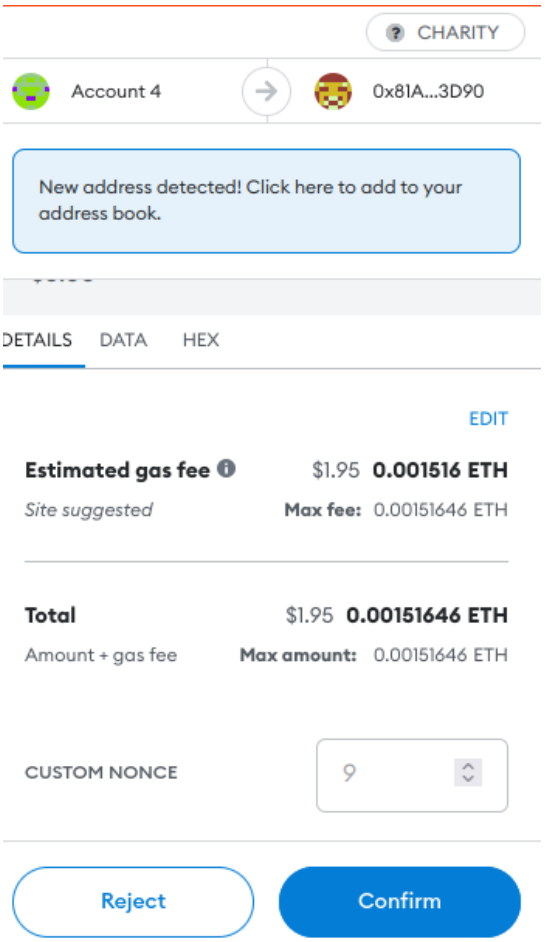
After adding 2 request by admin

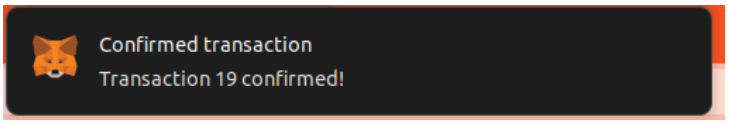


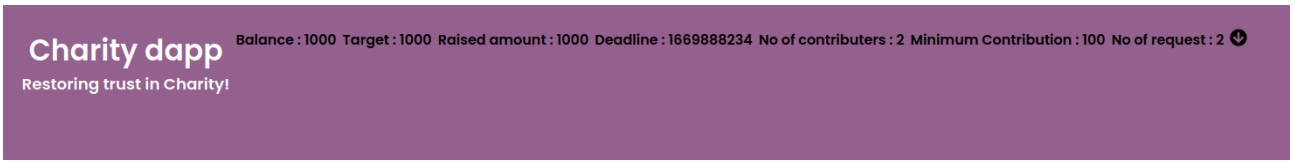
Donation and vote:

Adding donations from two different accounts

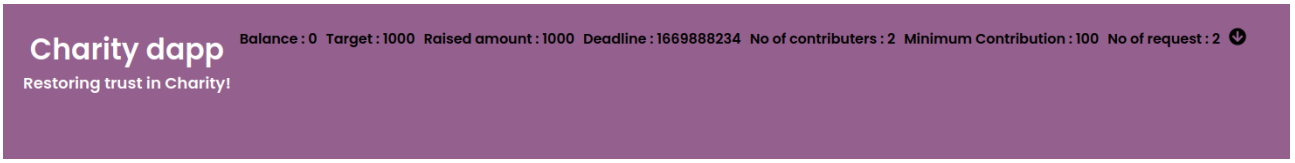
(500 wei each)







Final payment:



Conclusion

Blockchain restores trust in charity

A system is proposed using Blockchain for charity work to make it more transparent through a decentralized system. This system will provide both the requirements which are better authenticity and security. Also, it will provide a trusted system and will make the entire process more transparent.

This will help get rid of middlemen between donors and charity donors. Because the system doesn't believe an intermediary to transfer funds, the speed and price for handling aid is reduced. it'll also help to extend revenues, or a minimum of reduce the quantity of criticism from those that react negatively to budget cuts.

- Blockchain technology allows you to make the method of donations and transactions of funds transparent.
- Blockchain-based Decentralized charity system built on Ethereum will provide transparency, accountability, and direct reach to the intended recipients through smart contact.
- By removing the need for third parties blockchain technology acts as a trusted gatekeeper.
- Due to the encryption feature, Blockchain is always secure
- The transactions are done instantly and transparently, as the ledger is updated automatically
- As it is a decentralized system, no intermediary fee is required
- The authenticity of a transaction is verified and confirmed by participants

Github: https://github.com/tusharpasricha/Dapp-charity

Future work:

As blockchain storage is costly each small detail cannot be stored in blockchain storage as mentioned in the limitation of solution above.

A centralized data storage (Firebase , Mongodb) can be used to store the information with less risk.

References

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