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TRUSTED CROWDFUNDING USING SMART CONTRACT

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Abstract : Crowdfunding is an online money-raising strategy that began as a way for the public to donate small amounts of money to help creative people finance their projects. Through crowd funding, individuals are able to invest in entrepreneurial start-ups using an intermediary agency like broker or dealer. The problem with the current sites is that they don't provide the donor Guarantee policy and they do not have control over the money they donated. The proposed system is a solution over the issue of previous work. It uses smart contract technology to develop trusted Crowd-funding platform. Through this, it will provide a safe, secure and transparent way for crowd funding. It includes interactive forms for campaign creators and donors can easily create and fund the campaigns. The donor would be able to track the money they are sending. The Block chain will record all the transactions and store as a block. Blockchain provides transparency, trust and security to the purposed system. The proposed work intends to help the creators and donors to increase funding, achieve high level of trust amongst them.

Keywords: Crowdfunding, Blockchain, Campaign, Smart contract, Ethereum.

I.

INTRODUCTION

The process of raising funds isn't easy, because it requires trust between many parties, the funders, intermediaries or organizations as an area to store temporary funds to the recipient of funds. Trust is that the main capital for fundraising organizations to draw in funders to donate their funds to recipients of funds. Many non-profit organizations play a job as fundraisers, especially within the condition of the Covid-19 plague. [2] Trust is their challenge in attracting donors to donate their money to the organization. Few non-profit organizations use technology to create it easy for donors to donate funds through them. In trust is that the main factor to urge as many funds as possible, technology also plays an enormous role during this yet. [5] Based on this, the Block chain is associated in nursing incorrupt digital ledger that records each dealing. It's a distributed system so all the records are kept in each node within the localized network. Ethereum permits running applications within the blockchain known as sensible Contracts. All the sensible contracts run on the Ethereum Virtual Machine. [1] The matter with this crowdfunding firms is that they are charging high fees and many frauds are reported. Implementing a crowdfunding strategy in blockchain can facilitate to avoid these sorts of issues. By incorporating blockchain, sensible contract for crowdfunding take away the normal dealing fees and platforms fees commonly related to alternative crowdfunding platforms.[4]

I. RELATED WORK

Firmansyah Ashari, et.al, [1] proposed research on the Smart Contract and Blockchain for crowdfunding platform. The author tries to analyze how to implement Blockchain and smart contract in the dominant schemes in crowdfunding. The result of this study indicates that Blockchain based smart contract can be applied to the dominant scheme of the crowdfunding process.

Sushanth Kumar, et.al, [2] proposed a research on Crowdfunding using Blockchain. It creates an smart contract in such way that entire funding amount will be inside the smart contract and when the manager make use of funding amount and buy something from a vendor. If the contract gets majority amount of vote the amount will be automatically send to the vendor.

MS. S. Benila, et.al, [3] worked on Crowdfunding using Blockchain. The work of this paper is to provide interaction forms for campaign creation donation and request approval through which both campaign creators and donors can easily create and fund the campaigns. The donor is able to track

the money that they were sent to you. The Blockchain will record all transactions and store them as a block.

Vikas Hassija, et.al, [4] worked on Bitfund: A Blockchain based Crowdfunding platform for future Smart and connected Nation. In this paper propose an iterative auction algorithm for cost optimal project assignment in a crowd funding environment.

Shafaq Naheed khan, et.al, [5] proposed a research on Blockchain Smartcontract: Application, Challenges and Future Trends. Supported the finding from the survey, both smart contract challenge and open issues are similar to be addressed in further studies then discussed future trends of smart contract. This study provides informational support to stakeholders fascinated by the research of smart contracts.

Hadi Saleh et.al, [6] has proposed implementation of the platform for tracking donations supported blockchain technology. The System offers transparent accounting of operations donors, charitable foundations and recipients supported blockchain technology, donation platform should provide transparent donation route, enable public users and donors to trace and monitors where, when and to who went resources of donation funds.

Hadi Saleh, et.al, [7] has proposed implementation of the platform for charity foundation using Blockchain. The system offers trust and also due to trust funds will increase. Actual Problem of Systems and Software Engineering (APSSE).

II. PROBLEM STATEMENT

In the existing system, the problem is that the companies charge heavily to both the donor and the user. There is no record of the records of the money, transparency, communication between the investor and the user who is developing the project.[6] The trust is the main problem when it comes to the crowdfunding with the existing companies. None of these companies provide the donor guarantee policy. The exiting crowdfunding platforms are not transparent, high charges and donor guarantee policy not available No track of Records

III. EXISTING METHODOLOGIES

1. Ethereum

Ethereum is a decentralized open source blockchain with smart contract computing platform. It generates a cryptocurrency token known as “ether”. Programmers can write “smart contract” on ethereum blockchain, and these

contract are automatically executed according to their code. The “decentralized platform” means anyone can setup and run an ethereum node, the same way anyone can run a bitcoin node. Anyone who wants to pay the operators of those nodes in ether, which is a cryptocurrency token tied to ethereum. Thus, people who run ether node provide computing power and are paid in ether, in a similar way to how people who run bitcoin nodes provide hashing power and are paid in bitcoin.

2. Smart Contract

Smart contract could be a code running on top of the blockchain containing a group of rules under which the parties to it contract comply with interact with one another. If and when the pre-defined rules are met the agreement is automatically enforced. The smart contract code facilitates, verifies, and enforce the negotiation or performance of an agreement or transaction, it's the only kind of decentralized automation. Smart contract is tampered resistant, self-verifying, self-executing code.

3. Crowdfunding

Crowdfunding is that the use of small amounts of capital from an outsized number of people to finance a brand new business venture. Crowdfunding makes use of the straightforward accessibility of vast networks of individuals through social media and crowdfunding websites to bring investors and entrepreneurs together, with the potential to extend entrepreneurship by expanding the pool of investors beyond the standard circle of homeowners, relatives, and venture capitalists.

IV. EXPERIMENTAL WORK

Blockchain technology is a solution which can be accustomed to reducing problems that occur in crowdfunding. The contract is drawn up in such a way that every dollar is added to the fund. When the request meets the specified condition, all the cash is transferred to the recipient. [7] Figure 1 shows the workmodel. Ethereum is a distributed open-source platform, based on the public Blockchain and functioning for the functionality of smart contracts. It is the modified version of Bitcoin via transaction-based state transition. Ether could also be a crypto currency which is generated and utilized by the Ethereum platform. Ethereum provides a decentralized operating, the Ethereum Virtual Machine (EVM), which can execute an application on the final public node. Fig. 2 represents the flowchart of the proposed system. [3]

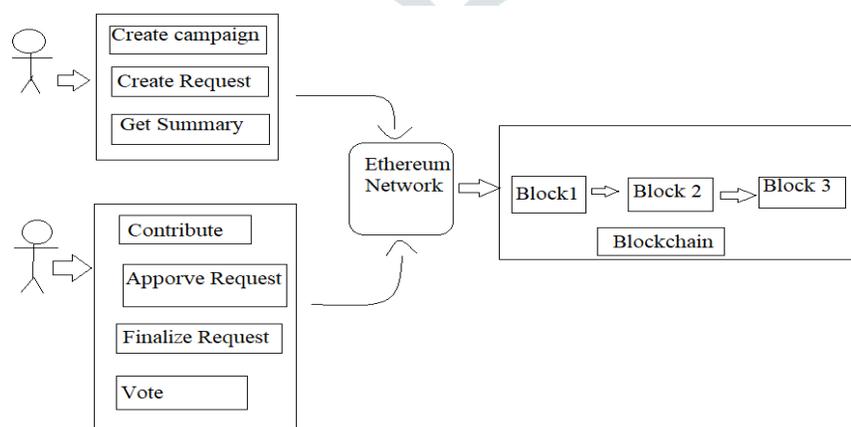


Fig. 1: working model

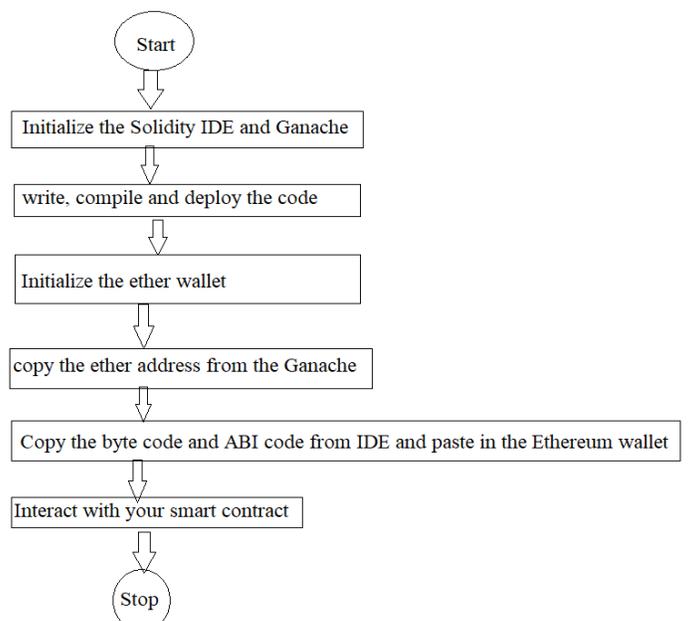


Fig. 2: flowchart

V. RESULT

CURRENT BLOCK	GAS PRICE	GAS LIMIT	HARDFORK	NETWORK ID	RPC SERVER	MINING STATUS	WORKSPACE	SAVE	SWITCH	⚙️
2	2000000000	6721975	MUIRGLACIER	5777	HTTP://127.0.0.1:7545	AUTOMINING	QUICKSTART			
BLOCK 2	MINED ON				GAS USED		1 TRANSACTION			
	2022-04-01 13:29:09				22324					
BLOCK 1	MINED ON				GAS USED		1 TRANSACTION			
	2022-04-01 13:26:33				1347360					
BLOCK 0	MINED ON				GAS USED		NO TRANSACTIONS			
	2022-04-01 12:23:09				0					

Fig. 3: Block created

The new block is added in the chain and the block contains the donor data which is stored by themselves.

VI. CONCLUSION

The proposed system user Blockchain for donation in crowdfunding works to make it more transparent through a decentralized system. This system will provide both the requirements which are better authentic and secure. Also, it will make the entire process more transparent. This will help get rid of middle men between donors and creators

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