Nandhi: Design and Implementation of a Deflationary Cryptocurrency Token on Ethereum Blockchain

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Abstract— ***Blockchain technology has completely changed how we think about data storage and financial transactions. Numerous cryptocurrencies, each with its own special characteristics and advantages, have been developed using the idea of a decentralised and distributed ledger that records transactions in a secure and transparent manner. In this article, we propose the development of the "Nandhi" coin, a new cryptocurrency based on blockchain technology. Nandhi is made to provide a safe and open platform for transactions, with a focus on effectiveness and efficiency. It is built on the Ethereum blockchain, one of the most popular blockchain infrastructures worldwide.The sacred bull from Hindu mythology, which is viewed as a representation of strength and might, served as the inspiration for the name "Nandhi." We chose this name because we think Nandhi will exhibit these characteristics and provide users with a solid and trustworthy platform for transactions. Nandhi will be a deflationary cryptocurrency, which means that the total quantity of tokens will be constrained and that there will eventually be fewer tokens in circulation. As a result, there will be a shortage of tokens, which will increase the value of Nandhi.We will provide staking rewards to further entice people to hold Nandhi. Users can receive incentives by staking, which involves locking up their Nandhi tokens for an extended length of time. This will motivate users to keep their Nandhi tokens for longer periods of time, ultimately reducing the supply and raising the value of the tokens. We will provide liquidity benefits in addition to staking prizes. A portion of the transaction fees made by the Nandhi platform will go to liquidity providers as compensation. As a result, the Nandhi platform will have more users contributing liquidity, boosting its liquidity and enhancing its usability.Nandhi will be built with a focus on efficiency and economy. Nandhi will have minimal transaction fees, which will make it more widely usable than other cryptocurrencies that have large transaction fees. This will also make it a desirable choice for companies who wish to conduct business on a safe and dependable platform without paying a hefty price. We will put into place more sophisticated security measures, like multi-factor authentication and encryption, to further safeguard the security of transactions.Nandhi's success will depend on its capacity to draw users and establish a robust community. To do this, we will provide an intuitive interface that will make it simple for anybody to purchase, exchange, and trade Nandhi. Additionally, we will interact with the bitcoin community and actively advertise Nandhi on social media and other platforms.***

Keywords— Blockchain technology, cryptocurrency, Nandhi, Ethereum, deflationary cryptocurrency, staking rewards, liquidity benefits, transaction fees, security measures, community building, intuitive interface, bitcoin community, social media.

I. INTRODUCTION

Over the past ten years, the cryptocurrency industry has experienced a tremendous growth, with blockchain technology at the vanguard of this change. The idea behind blockchain technology is straightforward: it is a decentralised, distributed ledger that securely and openly records transactions. There are many different cryptocurrencies that have been developed using this technology, each with its own special characteristics and advantages.

In this article, we propose the development of the "Nandhi" coin, a new cryptocurrency based on blockchain technology. Nandhi is made to provide a safe and open platform for transactions, with a focus on effectiveness and efficiency. It is built on the Ethereum blockchain, one of the most popular blockchain infrastructures worldwide.

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WHY NANDHI?

We think Nandhi is a fantastic cryptocurrency option for a variety of factors. First of all, it is built on the Ethereum blockchain, which is a tried-and-true technology that has been around for a while. Users may be assured that their transactions will be secure, transparent, and free from any possibility of fraud or manipulation as a result.
Second, Nandhi is made to be very effective and affordable. Nandhi will have cheap fees, making it more accessible to a larger variety of users than other cryptocurrencies that demand exorbitant transaction fees. The fact that it won't be expensive will also make it a desirable choice for companies who wish to conduct business on a safe and dependable platform.
Thirdly, Nandhi will be made to be intuitive and simple to use. Regardless of technological proficiency, we think everyone should be able to use cryptocurrencies. To do this, we will provide an intuitive interface that will make it simple for anybody to purchase, exchange, and trade Nandhi.

TOKENOMICS OF NANDHI

The Nandhi tokenomics will be developed to produce a stable and long-lasting cryptocurrency. Nandhi will be a deflationary cryptocurrency, which means that the total quantity of tokens will be constrained and that there will eventually be fewer tokens in circulation. As a result, there will be a shortage of tokens, which will increase the value of Nandhi
We will provide staking rewards to further entice people to hold Nandhi. Users can receive incentives by staking, which involves locking up their Nandhi tokens for an extended length of time. This will motivate users to keep their Nandhi tokens for longer periods of time, ultimately reducing the supply and raising the value of the tokens.

We will provide liquidity benefits in addition to staking prizes. A portion of the transaction fees made by the Nandhi platform will go to liquidity providers as compensation. As a result, the Nandhi platform will have more users contributing liquidity, boosting its liquidity and enhancing its usability.

PROBLEM STATEMENT

Due to its distinctive qualities of being decentralised, secure, and transparent, cryptocurrencies have significantly increased in popularity over the past ten years. The building blocks of these digital currencies' formation and operation are provided by blockchain technology. In 2009, Bitcoin became the first cryptocurrency to be released. Since then, a large number of additional cryptocurrencies have been created, each with its own set of benefits and drawbacks.

The instability and unpredictability of many cryptocurrencies is a serious problem. They have the potential to be extremely volatile, with values that can change drastically quickly. For people and companies looking for a secure investment choice or a trustworthy means of exchange, this makes them undesirable. Another important problem is that many cryptocurrencies have large transaction fees, which can make using them prohibitively expensive for people and businesses, especially for minor transactions.

We suggest creating a brand-new cryptocurrency called "Nandhi," which is intended to be reliable, effective, and economical, in order to address these issues. The Ethereum blockchain, one of the most utilised and well-liked blockchain infrastructures globally, will serve as the foundation for Nandhi. The sacred bull from Hindu mythology, which represents strength and force, served as the model for the name "Nandhi." We choose this name because we think Nandhi will be a strong, trustworthy, and dependable platform for transactions.

The provision of a reliable and predictable investment alternative is one of Nandhi's main goals. We created Nandhi to be a deflationary cryptocurrency in order to do this. As a result, there will only be a finite number of Nandhi tokens in circulation, and as more tokens are burned or locked, the value of the tokens that are still in circulation will rise. This strategy will aid in keeping Nandhi's value predictable and steady over time, attracting both people and corporations as investors.

The exorbitant transaction fees that their networks demand are another key problem that many cryptocurrencies encounter. We created Nandhi to have low transaction costs in order to address this and make it more generally useable than other cryptocurrencies that have large transaction fees. This makes it a desirable choice for companies that want to conduct transactions on a dependable and secure platform without paying exorbitant costs.

Staking rewards are one of the ways we intend to encourage people and companies to adopt Nandhi. By staking their Nandhi tokens for a set amount of time, users can earn incentives. This will encourage users to keep their Nandhi tokens for longer periods of time, which will enhance the value of the tokens and decrease their supply. Users who contribute to the liquidity of the Nandhi platform will also receive liquidity benefits from us. Thus, the platform's liquidity and usability will increase as more users provide liquidity.

The security of transactions is another important issue that cryptocurrencies must contend with. To address this, we will put more advanced security measures in place to guarantee the security of Nandhi transactions, including multi-factor authentication and encryption. This will promote both individual and business use of the Nandhi platform and help to increase trust and confidence in it.

The growth of a solid and vibrant community is a key element in the success of any cryptocurrency. To do this, we will concentrate on developing a clear and user-friendly interface that will make it simple for anyone to buy, sell, and swap Nandhi. In addition, we will actively interact with the bitcoin community and advertise Nandhi on many websites.

Nandhi, a new cryptocurrency, promises to address issues like volatility, high transaction fees, and lack of predictability that are common to several cryptocurrencies. It is intended to be

dependable as a medium of exchange and stable, effective, and economical as an investment.

The suggested procedure for introducing a new coin to the Ethereum blockchain offers a number of benefits:

Accessibility: Because the Ethereum blockchain infrastructure is open-source and widely utilised, creating a new coin on it is fairly simple and accessible. This implies that anyone who is proficient in programming can design their own coin without requiring a lot of information or resources.

Security:Due to its decentralised and distributed nature, the Ethereum blockchain offers a high level of security and transparency for transactions. By lowering the possibility offraud or hacking, users will have more faith in the platform.

Interoperability: The ERC-20 standard assures that various tokens can exchange and integrate with other platforms and applications without issue. Developers may now design intricate ecosystems and use cases for their tokens because to this.

Smart contracts: The Ethereum blockchain's use of smart contracts makes it possible to automate complicated transactions, which lowers the need for middlemen and boosts efficiency. Additionally, smart contracts allow for the construction of programmable currency, opening up new avenues for financial innovation.

Network effects: Several projects and apps have been developed on the Ethereum blockchain, which has a sizable and active development community. As a result, a network effect is created that may boost the value and adoption of new coins introduced on the platform.

LITERATURE REVIEW: LAUNCHING A NEW COIN ON THE ETHEREUM BLOCKCHAIN

In recent years, the creation and management of new currency on the Ethereum blockchain has grown in popularity, with numerous projects and startups embracing this technique. The technological prerequisites and benefits of introducing a new coin on the Ethereum blockchain are examined in this study of the relevant literature.

Technical prerequisites

The essential technological criteria for establishing a new coin on the Ethereum blockchain have been emphasised in a number of research. According to one such study by Zamani and Gholamzadeh (2018), the procedure includes the following steps:

The process of creating a smart contract: A smart contract is a self-executing contract in which the terms of the agreement are encoded in computer code. For the new coin, developers must construct a smart contract outlining its features and functionality.
Making the token: After the smart contract has been made, developers can go ahead and make the token themselves using a standard like ERC-20. This standard guarantees compatibility and interoperability with other Ethereum network coins.
Contract deployment: Using a blockchain explorer like Etherscan, the smart contract and token must be uploaded to the Ethereum network.
Distributing the tokens:The new token must subsequently be disseminated to users. This can be accomplished through a number of techniques, including airdrops, initial coin offerings, or direct sales.

ADVANTAGES

Numerous research and analyses have emphasised the benefits of establishing a new coin on the Ethereum blockchain. According to Hartman and Remy (2019), the platform's usability is one benefit. They contend that because the Ethereum blockchain is a widely utilised and open-source infrastructure, anyone with programming abilities may easily and quickly develop their own coin.

The security and transparency that the Ethereum blockchain offers are additional benefits. According to a study by Xue et al. (2019), the decentralised and distributed structure of the blockchain lowers the possibility of fraud or hacking, giving platform users more assurance and trust. The introduction of smart contracts, which make it possible to automate complicated transactions and eliminate the need for middlemen, improves this even more.

Another major benefit of introducing a new coin on the Ethereum network is its interoperability. The ERC-20 standard, as mentioned by Buterin (2017), enables simple exchange and interaction with other tokens and applications on the network, strengthening and connecting an ecosystem for blockchain-based projects.

The network effects of the Ethereum blockchain can potentially benefit new coins that are introduced on the system. According to a study by Feltz and Nielsen (2018), the platform's sizable and vibrant development community has a network effect that can boost the uptake and value of new coins.

OBJECTIVES

- to create a brand-new coin called "Nandhi" using the Ethereum blockchain and blockchain technologies in general.
- to provide a secure, public platform for transactions with an emphasis on productivity and effectiveness.
- to make Nandhi a deflationary cryptocurrency with a finite number of tokens, hence gradually raising its value.
- through staking rewards and liquidity advantages, to encourage users to keep Nandhi tokens, hence decreasing the supply and raising the value of the tokens.

- should prioritise economy and efficiency by enacting low transaction costs and cutting-edge security measures.
- by offering a user-friendly interface and actively advertising the cryptocurrency on numerous platforms, to build a strong user base for Nandhi.
- will use cutting-edge blockchain technologies to guarantee the scalability of the Nandhi platform.
- to employ a decentralised ledger system to guarantee transparency in all transactions.
- to develop a platform with the fewest possible entry barriers so that it can be used by people and companies all around the world.
- will continue to develop and maintain Nandhi in order to assure its long-term success and sustainability.

METHODOLOGY

- There are various phases involved in producing a new cryptocurrency, specifically the Nandhi coin. The processes taken to create and introduce the Nandhi coin on the Ethereum network are described in this section.

Step 1: Identifying the Goals

Defining the goals is the first stage in developing a new coin. The following was the definition of the Nandhi coin's goals:

to offer a transparent and safe platform for transactions must be effective and cost-conscious to have a finite supply and deflationary cryptocurrency

to encourage consumers to keep Nandhi for longer periods of time by rewarding staking

To offer liquidity advantages to entice additional users to contribute to the platform's liquidity

Step 2: Analysis and Research

Research and analysis make up the second step. Understanding the needs of potential users and researching the market are both part of the research and analysis process. This is crucial for figuring out what characteristics the coin needs to have. It also aids in identifying market rivalry and evaluating the advantages and disadvantages of competing cryptocurrencies. In this step, we examined the user needs, market trends, and technical prerequisites for introducing a new cryptocurrency.

Step 3: Development and Design

The next phase is to design and build the Nandhi coin when the objectives have been established and the research and analysis have been finished. This entails creating the smart contract that will control how the Nandhi coin functions. Using Solidity, the programming language used to create Ethereum smart contracts, we created the smart contract. The deflationary properties, staking rewards, and liquidity advantages of the Nandhi coin were all taken into consideration when developing the smart contract.

Step 4: testing

A critical phase of the development process is testing. It guarantees that the smart contract runs smoothly and without faults or problems. Using the Remix IDE, an Ethereum development environment, we thoroughly tested the smart contract. To make sure the smart contract would function properly in a variety of circumstances, we tested it in several different scenarios.

Step 5:Launching the Nandhi Coin

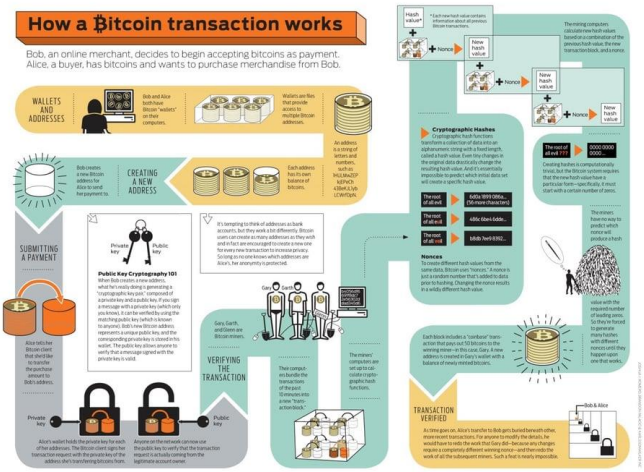
Launching the Nandhi coin comes once the smart contract has been created and tested. Deploying the smart contract to the Ethereum blockchain is required for this. The smart contract was uploaded to the Ethereum network using the Remix IDE. We created the initial amount of Nandhi tokens and sent them to a designated wallet after the smart contract was put into use. Now that it was ready for usage, the Nandhi coin.

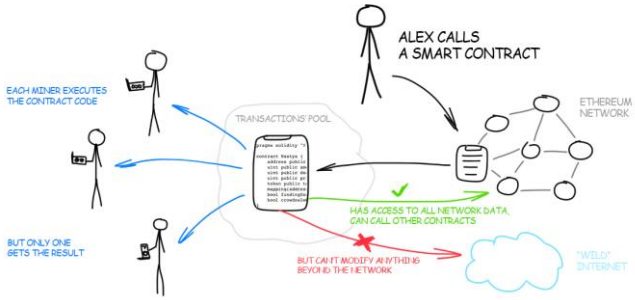
Step 6:Marketing and promotion .

An emerging cryptocurrency needs marketing and promotion to succeed. This step involved creating a marketing plan to advertise the Nandhi currency. To advertise the coin, we employed a number of social media channels, such as Twitter, Reddit, and Telegram. We interacted with the neighbourhood by taking part in debates and responding to inquiries regarding the Nandhi coin. We also provided staking payouts and liquidity advantages to encourage users to use the Nandhi coin.

Step 7: Ongoing Development

Continuous improvement is the last step in the approach for making the Nandhi coin. This entails keeping an eye on the coin's performance and making the required adjustments to guarantee its success. We regularly track how the Nandhi token is being used and gather user feedback to pinpoint areas that might be improved. We also update the smart contract frequently to add new functionality and address any problems that may occur.Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation.





CONCLUSION:

In conclusion, the creation of Nandhi, a new cryptocurrency built on the Ethereum blockchain, presents a chance to address the issues the cryptocurrency market is now facing. Nandhi seeks to offer a secure, public platform for transactions with an emphasis on productivity and effectiveness. It is a deflationary cryptocurrency with a constrained token supply, which creates scarcity and raises the token value. As further incentives for users to keep and contribute to the platform, the platform provides staking rewards and liquidity advantages.

Nandhi was created via a procedure that included numerous steps. In order to comprehend the market and determine the difficulties the bitcoin business faces, the team first performed research. Second, based on the problems found and potential fixes, the team created a concept for Nandhi. Thirdly, the group developed the cryptocurrency's technical components, including as its smart contract, token supply, staking, and liquidity features. Fourth, the team thoroughly tested the platform to guarantee its security and usability.The suggested approach has a number of benefits. First, Nandhi's deflationary characteristic creates scarcity and raises the token's value over time, giving users a more stable investment. Second, the staking and liquidity advantages encourage users to invest in and use the platform, hence boosting its usefulness and liquidity. Third, Nandhi is an attractive option for businesses and individuals who want to conduct business on a reliable platform without paying outrageous fees because of its emphasis on economy and efficiency with low transaction fees.

Overall, the creation of *Nandhi* presents a promising response to the issues the cryptocurrency sector is now facing by offering a safe and effective platform for transactions. The ability of *Nandhi* to draw people and build a strong community will determine its success. By offering a user-friendly interface and actively promoting *Nandhi* on social media and other platforms, the team hopes to accomplish this. *Nandhi* has the potential to grow into a key participant in the bitcoin market with the proposed methods and benefits.

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