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YIELD STAKING DAPP

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ABSTRACT

Decentralized Finance (DeFi) is revolutionizing the traditional financial system by offering trustless financial transactions and services worldwide through blockchain technology. Yield farming is a well-known DeFi application enabling users to earn passive income in cryptocurrency through providing liquidity to decentralized protocols. This research paper focuses on yield farming, its working mechanisms, the benefits and risks involved, the various strategies deployed, and its future in the DeFi ecosystem.

Keywords: DeFi, DApp, Yield Farming, Liquidity Pools, Staking.

I. INTRODUCTION

Centralized finance is the traditional financial system where banks and other financial institutions act as intermediaries between borrowers and lenders. Centralized finance is typically characterized by a centralized structure with a single point of control. It relies on centralized authorities, such as governments and regulatory bodies, to oversee and regulate financial transactions. In Centralized finance users are required to trust these centralized authorities to ensure the security and accuracy of financial activities. Examples of Centralized finance include traditional banks, credit unions, and insurance companies. The general problems in centralized finance are that it takes a lot of time in deals and also it's relatively delicate to access fiscal services. All these problems redounded in the preface of decentralized Finance. Decentralized finance eliminates the need for a centralized finance model by enabling anyone to use fiscal services anywhere anyhow of who or where they are. DeFi application aims to provide greater transparency, security, and accessibility across the financial ecosystem, as well as promoting financial inclusion and democratizing access to financial services. In Defi, a bank is replaced by a smart contract as in compared with centralized finance. Decentralized finance works on the blockchain technology which is also being used by cryptocurrencies. A blockchain is a distributed and secured database or ledger. A blockchain is a chain of blocks in which data or information is stored on a block and when the blocks are filled they're linked with the former blocks, in this way a chain of blocks are formed which is known as blockchain . DApps are the decentralized applications that are used to handle deals and run the smart contracts or the code that's programmed on the blockchain.

Introduction to Decentralized Finance- Decentralized finance (DeFi) is a financial system built on blockchain technology that eliminates intermediaries like banks, financial institutions, and other intermediaries that typically serve as intermediaries in traditional finance. DeFi facilitates peer-to-peer transactions, allowing individuals to interact and transact with one another directly. In simple terms, decentralized finance is any financial structure that uses blockchain technology to offer financial services without involving interposers or a third party. Decentralized finance is defined as the as the metamorphosis of traditional financial products into products that operate without an conciliator through smart contracts on a blockchain. In DeFi requests, all deals are transparent including the terms and conditions of the financial service provider, the customer or the client. A number of rudiments are necessary for a well- performing DeFi request, that is smart contracts, DeFi software protocols, decentralized operations, decentralized finance platforms, decentralized exchanges (DEXs) and decentralized finance lending platforms . Decentralized operations are operations that offer simple consumer- concentrated services. It offers a wide range of financial services such as lending, borrowing, trading, investment, and more, that are accessible to anyone with an internet connection, without the need for a centralized authority.

Introduction to Liquidity Pools- Liquidity pools in DeFi (decentralized finance) are pools of cryptocurrencies that users can contribute to and earn returns on. These pools are a key element of the DeFi ecosystem, as they provide liquidity for DeFi platforms and enable users to trade cryptocurrencies without relying on centralized

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exchanges. Traders can swap one cryptocurrency for another based on the exchange rate determined by the liquidity pool. The returns earned by liquidity providers come from trading fees, which are paid by traders in the form of a small percentage of the trades they execute. Liquidity pools are designed to incentivize increased liquidity on DeFi platforms, which can result in more efficient trading, lower fees, and a more stable market. They also help to reduce price slippage when large trades occur, as the trading volume is spread across both cryptocurrencies in the pool.

Introduction to Yield Farming- Yield farming has taken the cryptocurrency assiduity by storm, getting the foundation conception for DeFi in 2020 and probably far beyond. Yield farming is a way by which user can earn a passive income by staking its cryptocoins in liquidity pools so that user can get interest on it. This is how yield farming works. A user who's also called liquidity provider add his or her cryptocurrency means to a smart contract (liquidity pool) of a certain DeFi platform. For doing this, they admit a price in the form of commemoratives. Yield farming is generally executed on the Ethereum blockchain and its ERC- 20standard, since the prices generally also belong to the Ethereum ecosystem. still, this might change in the future as the demand for yield farming grows. At some point yield farming strategy will be supported by various blockchains.

Overall, yield farming is a popular application in DeFi that offers users a way to earn passive income while also providing liquidity to the DeFi ecosystem.

II. PROBLEM STATEMENT

In general we see that people buy crypto coins and then these are kept idle unless they are being sold. One can find ways to generate passive income with the crypto coins they hold. The way through which a person can generate passive income is yield farming which is becoming popular among DeFi investors. However, there are certain challenges that investors face, such as high gas fees, the complexity of the process, and the need to keep track of the earnings from multiple platforms. Therefore, there is a need for a user-friendly and efficient yield staking platform that allows investors to stake their tokens across multiple DeFi projects and earn a share of the total transaction fees.

III. PROPOSED METHODOLOGY

The user visits the decentralized application where it interacts with the metamask to connect to the user's account. Whatever the balance of the user in cypto wallet is displayed on the application. On the application the user can stake their crypto tokens in bank and can withdraw it any point of time. User can see its staking balance , the amount staked in the liquidity pool. There is a reward token which will be provided to user on the basis of the contribution of the amount of coins staked. All the transactions are managed by the smart contracts which is stored on the blockchain. Here is the application software architecture work-flow:

Figure 1: Software Architecture Workflow

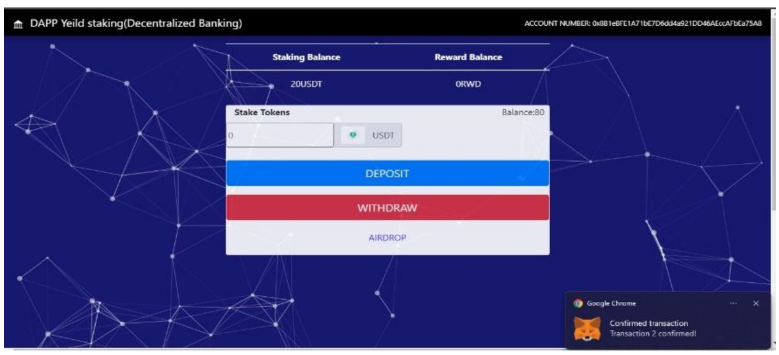

Figure 2: User Interface

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IV. RESULTS

The Yield Staking Decentralized Application developed as a result of this project enables users to stake their tokens across multiple DeFi projects and earn a proportion of the transaction fees generated on the platform. The platform has a user-friendly interface, making it easy for investors to stake their tokens and track their earnings. During testing, the platform was able to integrate with multiple DeFi projects and generate significant transaction fees. The smart contract used for distributing earnings was transparent and secure, ensuring that all stakers received their fair share of the earnings generated.

V. CONCLUSION

In conclusion, Yield farming is a powerful DeFi application that offers several advantages and risks to investors. It can cultivate a more efficient and decentralized financial system, promoting financial freedom and access to a wider range of financial services to all with an internet connection. Yield farming is gaining popularity in the DeFi ecosystem, marking a significant shift in the financial industry's operation through blockchain technology. It provides investors the opportunity to earn passive income by lending, borrowing, and staking cryptocurrencies, supplying liquidity to decentralized platforms. However, before investing, investors must comprehend the risks and benefits involved.

VI. FUTURE SCOPE

Yield farming has emerged as one of the most popular use cases of the decentralized finance (DeFi) ecosystem. Yield farming allows users to earn passive income on their cryptocurrency holdings by lending, staking, or providing liquidity. The future scope of yield farming in DeFi appears promising, with more sophisticated yield farming strategies expected to be developed. Additionally, the integration of yield farming and insurance products is also expected to emerge as a trend. However, challenges such as liquidity, regulatory uncertainty, and smart contract vulnerabilities remain, and efforts should be made to address these issues to sustain the growth of yield farming in the DeFi ecosystem.

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