

DEFYN - A DEFI PORTFOLIO MANAGER

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Abstract–

DeFi is short for “decentralized finance,” is a financial application which is highly secured. Decentralized Finance (DeFi) for transferring and managing crypto assets similar to managing fiat assets at present i.e., bank accounts. It gives us exposure to the global markets and alternatives to the currency we use or banking options. DeFi is connected with blockchain, which is decentralized, immutable, and that enables all computers (or nodes) on a network to hold a copy of the history of transactions. DeFi helps us to control and visibility over your money. There is no single entity that has control over, or can alter, that ledger of transactions. It also replaces the bankers and brokers that are enforcing laws against money laundering, creating an unknown economic environment that the regulators would have to traverse and DeFi can address many of the flaws in the existing financial systems, including giving the unbanked access to the financial system. DeFi is distinct as a result of it expands the utilization of blockchain from easy price transfer to complex financial use cases. DeFi products open up financial services to anyone which requires internet connection and they're largely owned and maintained by their users all over the world. So far billions of dollar's worth of crypto has flowed through DeFi applications and it's expanding day by day. DeFi will be the future which will replace all kinds of transactions.

Keywords: DeFi, Blockchain, Money laundering

I. INTRODUCTION

So we know that the world has evolved in terms of buying and trading. In ancient times, people could buy things by exchanging their resources with another. Then it evolved by trading goods by currency which was different in each country. So, in future trading will be done by using cryptos, tokens or even by NFT [1]. So, using DeFi needs some basic knowledge on how it works. There are 18,465 cryptocurrencies in existence but not all cryptocurrencies are active or valuable. There are 106 million people who use cryptocurrency across the globe. DeFi is a platform for transferring the crypto from one person to another by using a crypto wallet. Meta Mask is a software cryptocurrency wallet

used to interact with the blockchain. It allows users to access their wallet through a browser extension or mobile app like MetaMask, which can be used to interact with decentralized applications. MetaMask is one of the leading crypto wallets, and aims to be the gateway to the world of Web 3, decentralized finance (DeFi) and NFT's. To use Meta Mask, we will need either Chrome extension or a Chrome-based browser such as Brave, or Firefox. You don't even need an email address. Just set up a password and remember (and store) the private keys, and you're done. It only supports Ether and other Ethereum-related tokens, including one of the famous ERC-20 tokens. Cryptocurrencies (excluding Ether) on Ethereum are built as ERC-20 tokens [4]. MetaMask stores your information locally. So, in case you switch browsers or machines, you can restore your Meta Mask wallet with your private keys. Your information is encrypted in your browser that nobody has access to. If we lost a password, we need the 12-word secret recovery phase (also called a seed phrase / private keys) for recovery. Notably, it's essential to keep the seed phrase or private keys safe, as even Meta Mask has no information about it, once lost, it can't be retrieved. Each user has a specific public address which is a key to make a transaction and users are able to create multiple hash (public address) to make multiple crypto transactions, which is easily understood for the users. A transaction ID (TXID) or transaction hash is a unique string of characters given to every transaction that is verified and added to the blockchain [5]. In other words, a TXID is a number for identification and labels each transaction on the blockchain. When you make a transaction, it gets added to the blockchain. The goal of DeFi is to create a financial market wide open that is trust less and permissionless.

II. RELATED WORKS

- Decentralized Finance (DeFi) could be a future, it's a replacement variety of money application that doesn't need an associate intermediary. Banks or money establishments. The creators of Ethereum,

additionally to Vitalik Bulletin, and conjointly different introduction members UN agency co-founded Ethereum, a number of them are bent produce their own networks, like Gavin Wood UN agency spun off to make Polkadot (DOT), or Charles Hoskinson UN agency spun bent produce Cardano (ADA), and Fabian Vogelsteller UN agency spun bent produce Lukso (LYX), etc. These networks are referred to as third-generation Blockchain Ethereum. It's on the brink of having a serious update referred to as "Ethereum two.0" which will modify the network to Proof-of-Stake together with modifying numerous systems to create it easier to use for the final public. This update is anticipated to require impact within the year 2022 [1].

- This article examined however transactions that are kept within the digital ledgers are recorded within the Blockchain. It stores all the dear knowledge regarding the user's transactions. By the employment of cryptocurrency within the blockchain technology, the Ethereum market has an additional rise into the second-largest cryptocurrency platform in 2021. What is more, a key side of the user's gain on share markets as investments once it's worth goes peak. Because of the DeFi, several of the users felt insecure whereas connection into the network. however, once the employment of transactions within the blockchain, through serial investigational issue study, the recently grow scale was adapt to involve seven main characteristics of team-development intervention (i.e., Decentralization, unchangeableness, transparency, perseverance, auditability, security, and privacy). Several of them came forward to implement blockchain technologies within the Ethereum platform or the other network to try to do the localized money [Defi] exchanges. During this article, the theoretical associated sensible implications of building an application for financially exchanging bitcoins (Crypto-coins) by victimization of the compound protocol [2].
- The inspiration of Satoshi Nakamoto to make Bitcoin was the world money Crisis of 2008, caused by the build-up of excessive money risk. Now, quite 10 years later, localized Finance (DeFi), a peer-to-peer money paradigm that leverages blockchain-based sensible contracts to confirm its integrity and security, contains over 702m USD of capital as of April fifteenth, 2020. We tend to specialize in DeFi disposal protocols as they presently represent most of the DeFi system with a

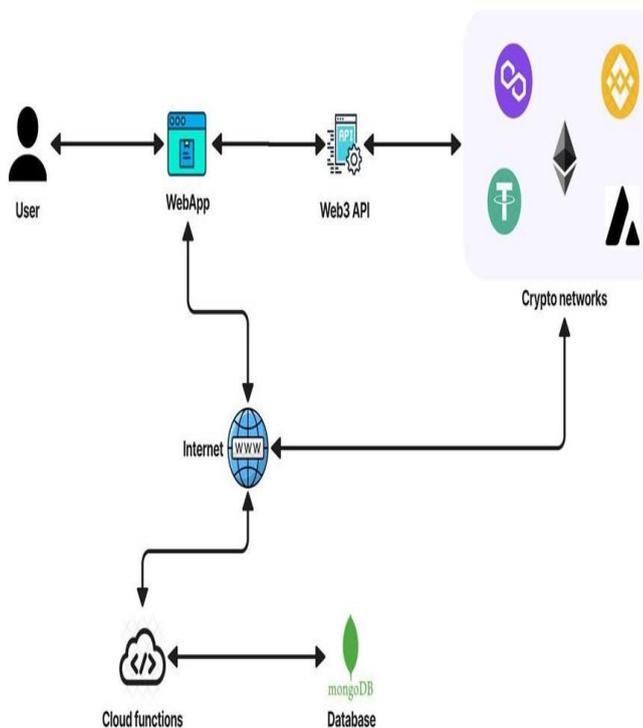
seventy-six-market share by capital as of April fifteenth, 2020. Supporting our parameters, we discover that with sufficiently illiquidity a disposal protocol with a complete debt of 400m USD might become undercollateralized within nineteen days. [3]

III. PROPOSED SYSTEM

Our DeFyn app has the following merits over the other apps present:

- The new user needs to sign up by giving essential details like email id and need to type a password. The existing user can login to the app by using those credentials.
- Wallet spoof proof is one of the key features in our project. By using this the user account will only pair with the registered wallet. If any existing user can login their account with another user's system, then the new user must logout the existing user wallet and login his own wallet by using private keys.
- Analytics dashboard (Tokens, expenditures with category and much more). Although if all information is provided to the user, the user feels a bit tough about all the information we provided. So, we are designing our dashboard as an analytics tool where users can identify the information very clearly and easily. For e.g., the monthly expenses can be shown separately for each token in a number array.
- Apart from that the user can see the note (for which the transaction is done) so that the user can easily recollect for what purpose it is done. The user also sees the monthly expenses in the dashboard in the form of a bar graph.
- Download reports (History of transactions, Mini statement). The user can easily download their statement for references or tax filing. Users can download the specific token's transaction history.
- Options to add friends, block and share only the address of your choice to your friends. This is something fun like an internet banking app having the feature of Facebook friend request model

IV. IMPLEMENTATION



Once the user signs in into the DeFi portfolio manager then the user needs the Chrome extension or mobile application to access the Meta Mask wallet to link with the portfolio account. Then the user needs to add the existing user as a friend to transfer the cryptos. The user requires the public address of others to add as a friend in the portfolio, once the receiver accepts the request mutually then they can transfer. The user can block the people through this to avoid transactions with them. The transfer page consist of sender and receivers public address and the sender needs to choose the network for the transaction (i.e., Ethereum, Polygon, Binance, Avalanche) etc. Each network has one native coin and other tokens. Ethereum network has around 508,074 ERC-20-compatible tokens that exist on Ethereum's main network and Ether as a native coin. The user can see the transaction status i.e., completed or pending. The dashboard contains a number of transactions both (send and receive) and it also shows for each and every token. By assuming that the crypto transaction is the future, a pie chart was prepared for the expenditure, so that the user can see for what the transaction has made. The user can download the transaction history for their personal use and it consists of the username of sender and receiver, transaction hash id, time stamp, and a note. The transaction history has been downloaded for each and every network, so the users can download it for what they need.

V. CONCLUSION

DeFi is a new, fast-growing area. Yet it remains immature, with a variety of unresolved economic, technical, and operational issues that are important to be addressed. Retail investors, professional traders, institutional actors, and regulators, will need to temper enthusiasm for the innovative potential of DeFi with a clear understanding of its challenges. To overcome some of the challenges We developed a web application to make a smooth transition from web2.0 to web3.0 and also, we have introduced wallet spoof proof, Analytics dashboard and also able to Download history of transaction. In addition to that we introduced options to add friends, block and share only the address of your choice to friends to manage risks efficiently. The motive of the project is to increase transaction safety and easy usage of crypto assets.

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