

Decentralised Code Sharing Platform

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ABSTRACT

Decentralised data storage represents a fundamental shift in the efficiency and economic of large-scale storage. Eliminating central control allows users to store and share the data without reliance on a third-party storage provider. Decentralisation mitigates the risk of data failures and outages while simultaneously increasing the security and privacy of data storage. It also allows market forces to optimize for less expensive storage at a greater rate than any single provider could. Although there are many ways to build such a system, there are some specific responsibilities any given implementation should address. We are going to implement a smart contract to interact with KADENA BLOCKCHAIN to store and read data in the decentralized

1.INTRODUCTION

Blockchain is described as a database that is used as a storage for a decentralized network. It is usually seen in its popularized usage on cryptocurrencies like Bitcoin, Ethereum, Litecoin, and Dogecoin. The Blockchain is not limited within the boundaries of financial usage, as it can be expanded further upon to encompass other types of systems, applications, and make a decentralized network. Asymmetric cryptography and distributed consensus algorithms are part of the systems within Blockchain, which provide user security and ledger consistency. In summary, Blockchain is a decentralized, and immutable database that facilitates its chain network with its participating nodes through a voting scheme. The process begins with the request of a transaction from a node, which would be packed into a block.

KEYWORDS

REST API.

Pact language

React js.

II. PROPOSED SYSTEM

- Proposed System using Blockchain which is distributed across all region and connecting together and sync with network. In blockchain, decentralization refers to the transfer of control and decision-making from a centralized entity (individual, organization, or group thereof) to a distributed network. It is used for new technology **WEB 2.0**

Advantages of Proposed System

- High performance.
- No single point of failure: : network can still function even if a large proportion of participants are attacked/taken out.
- Anyone can participate in the network.
- Censorship is much harder, as information has many ways to propagate across the network.
- Highly secured.
- High Computational Speed.

MODULES DESCRIPTION

Smart contract

- A smart contract is a self-executing contract with the terms of the agreement between buyer and seller being directly written into lines of code.
- 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

API Integration

- Blockchain allows data providers and consumers to exchange information directly in a single, open system.
- instead of subscribing to dozens of centralized services around the world and programming their software to
- Communicate with each of their APIs. Read this Blockchain API tutorial to learn how to use it in your blockchain development company.
- An API (application programming interface) is a description of methods (a set of classes, procedures.
- That a single computer program can use to interact with another program. It

UI-User Interface

- User Interface (UI) Design focuses on anticipating what users might need to do and ensuring that the interface has elements that are easy to access, understand, and use to facilitate those actions.

- UI brings together concepts from interaction design, visual design, and information architecture.
- In the industrial design field of human-computer interaction.
- A user interface is the space where interactions between humans and machines occur.

Wallet Integration

Blockchain wallets allow users to store, send, receive, and manage their digital assets on the blockchain. It can be used to store, send, receive, and manage a single or multiple types of blockchain assets say Bitcoin, Kadena, Ethereum, etc.. Blockchain wallets can be compared to cash wallet.

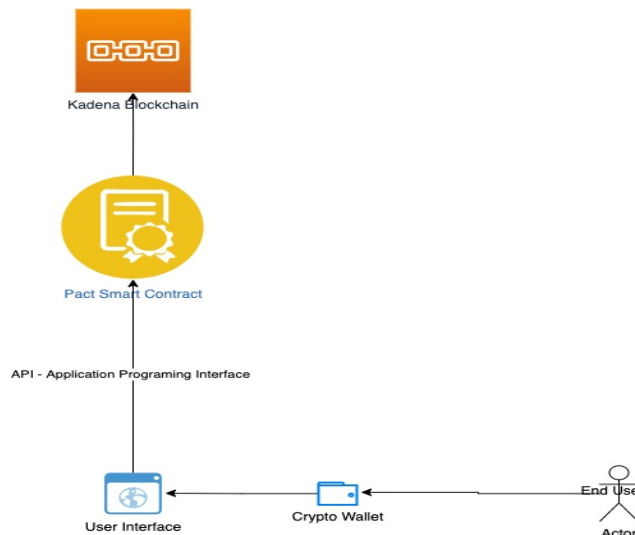
Result Generation

The Final Result will get generated based on the overall web sides and web browser. The performance of this proposed approach is evaluated using some measures like,

- Code sharing
- Wallet change
- Accuracy

III. SYSTEM ARCHITECTURE

Architecture



SYSTEM TESTING AND IMPLEMENTATION

System testing is the stage of implementation, which aimed at ensuring that system works accurately and efficiently before the live operation commence. Testing is the process of executing a program with the intent of finding an error. A good test case is one that has a high probability of finding an error. A successful test is one that answers a yet undiscovered error.

White Box Testing

White Box testing is a test case design method that uses the control structure of the procedural design to drive cases. Using the white box testing methods, we derived test cases that guarantee that all independent paths within a module have been exercised at least once.

Black Box Testing

Black box testing is done to find incorrect or missing function

- ✓ Interface error
- ✓ Errors in external database access
- ✓ Performance errors
- ✓ Initialization and termination errors

In 'functional testing', is performed to validate an application conforms to its specifications of correctly performs all its required functions. So this testing is also called 'black box testing'. It tests the external behaviour of the system. Here the engineered product can be tested knowing the specified function that a product has been designed to perform, tests can be conducted to demonstrate that each function is fully operational.

Validation Testing

After the culmination of black box testing, software is completed assembly as a package, interfacing errors have been uncovered and corrected and final series of software validation tests begin validation testing can be defined as many, but a single definition is that validation succeeds when the software functions in a manner that can be reasonably expected by the customer.

IV.WORKING

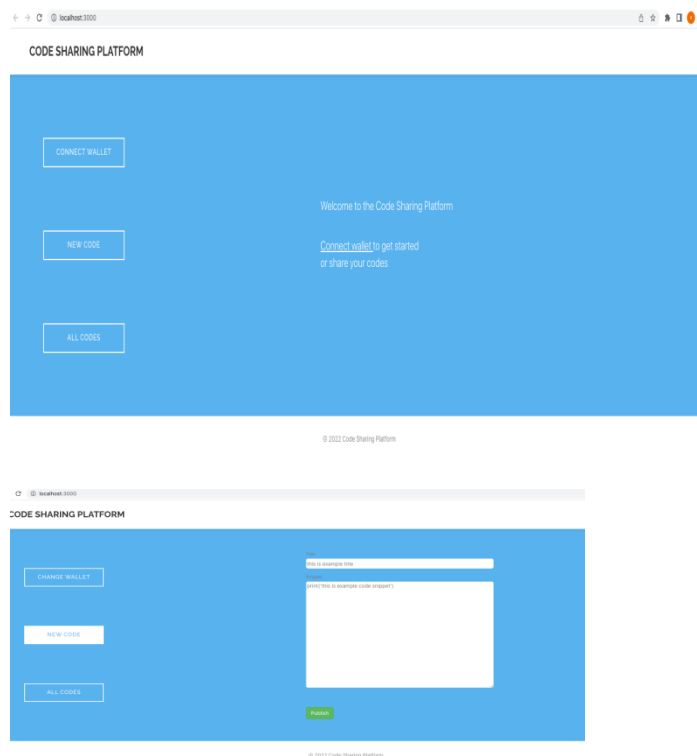
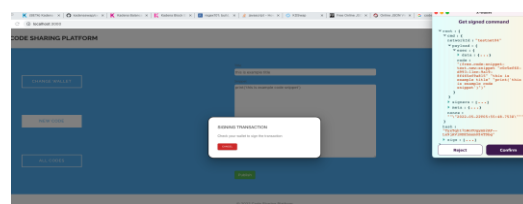
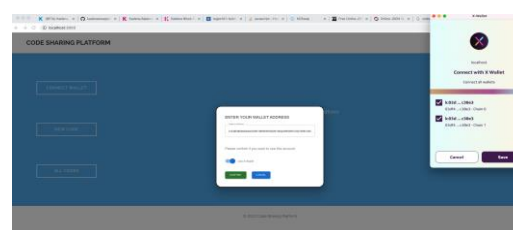


FIG1 :Sample code sharing

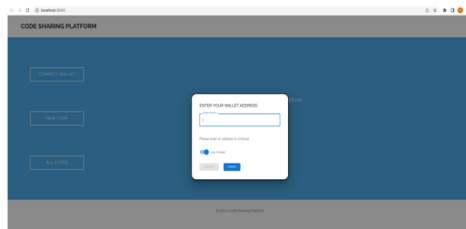
CODE SHARING PAGE



WALLET INTEGRATION



WALLET CONNECTION



Conclusion

We desing a decentralized data storage and access framework for pingER using permissioned blockchain technology. The proposed framework eliminates the need For the decentralized repository as the upward path from the monitoring agents are replaced by write access data entries on the permissioned blockchain. The approach decentralized the pingER framework and remove the project dependency upon centralized computing resources storing.

Future Work

At the end of 2021, the global cryptocurrency market cap reached \$3 trillion – an all-time high.¹ Cryptocurrencies like Bitcoin and Ethereum are underpinned by blockchain technology. The adoption of blockchain, and the technology and products it supports, will continue to impact business operations dramatically But blockchain

technology is much more than a system for securely transferring cryptocurrencies. Outside of finance, it can be used in applications including healthcare, insurance, voting, welfare benefits, gambling, and artist royalties. With the technology already impacting business and society on many levels, the global economy is preparing for the blockchain revolution. If ‘revolution’ sounds dramatic, consider that eight of the world’s 10 largest companies are building an array of products incorporating blockchain.

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