A Blockchain Model to Uplift Solvency by Creating Credit Proof

C. K. Gomathy, V. Geetha, G. Lakshman, and K. Bharadwaj

1 Introduction

Blockchain technology guarantees the integrity and transparency of digital assets through decentralized hashing. Employing a distributed digital ledger, transactions are tracked on a blockchain by all network participants. Peer-to-peer transactions on a de-centralized network are made possible by blockchain. Establishing confidence between unidentified peers while documenting the transaction during a distributed, immutable system. Based on their credit history, an individual's solvency situation is represented by their credit score [1]. Giving credit for every transaction allows them to demonstrate that they are taking ownership of their own personal growth and uses. An individual's participation in the financial system, like eligibility for loans or mortgages [2], interest rates, and insurance premiums, is often determined by their credit ratings. It is going to also affect a person's ability to obtain credit or rent an apartment.

C. K. Gomathy (✉) · V. Geetha · G. Lakshman · K. Bharadwaj
Department of CSE, SCSVMV (Deemed to be University), Tamilnadu, India
e-mail: ckgomathy@kanchiuniv.ac.in

V. Geetha
e-mail: vgeetha@kanchiuniv.ac.in

G. Lakshman
e-mail: gidugulakshman02@gmail.com

K. Bharadwaj
e-mail: bharajchinnu@gmail.com

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2 Problem Statement

Everyone cannot access their credit score as it is difficult to record every transaction and know their true solvency. People having centralized and systemized accountability can use banks for this process as they pay. But a community who does not mainly depend on banks cannot know their true financial potential forever. The main problem lies here as there is no such system that provides credit proof for such people as they are not completely digitalized.

3 Existing System

Currently, our credit scoring systems are highly centralized, exclusive, and vulnerable to cyber-attacks. Technology has advanced to an extent that every employee who can access his credit score has a digitalized mode of transacting and recording for future credit score improvement. In the case of several communities who do not have that type of financial freedom, the existing system does not provide credit potential scores to them.

- As the existing system is centralized, there would be some security compromises.
- Not everyone is able to know their credit score
- Worthiness of solvency is being wasted
- True financial ability of an individual will not be known forever.

4 Proposed System

Credit will be given for each transaction. By addressing these issues, blockchain-based credit scoring [3, 4] has the potential to transform the banking industry [5] as we know it. Even the ability to obtain a credit card or rent an apartment may be affected. With a credit, you have more financial flexibility since you can use the lent amount as needed at any given time.

- Everyone who has an ability to earn will have a perfect credit score.
- Every transaction is being monitored so it is easy to predict credit score.
- As everything is recorded perfectly, it is difficult to vulnerability and cyber-attack.

5 System Architecture

See Fig. 1.

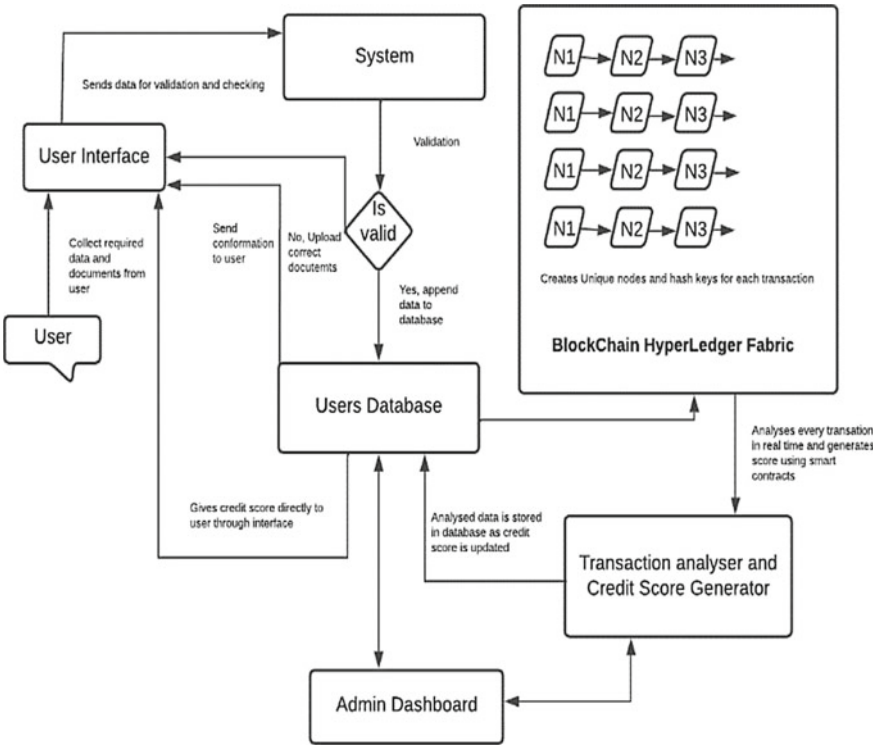

Fig. 1 System architecture

6 Results and Discussion

This work has processed the transaction and verified a transaction. This transaction has been included in a block. A list of blocks containing transactions has been displayed (Figs. 2, 3, and 4).

7 Conclusion and Future Enhancements

A blockchain ledger makes transaction histories more transparent than ever before. Due to the fact that it is a distributed ledger, all nodes in the network have access to the data. Like the Internet, transparency of transaction history has never been greater than it's with a blockchain ledger. All nodes within the network have access to the data since it is a distributed ledger. With speedier cross-border payments, identity management, smart contracts, cryptocurrency, and provide chain, blockchain technology, just like the Internet, is here to remain and will soon overtake all other innovations. Your credit-worthiness is shown by your credit score, which may be a

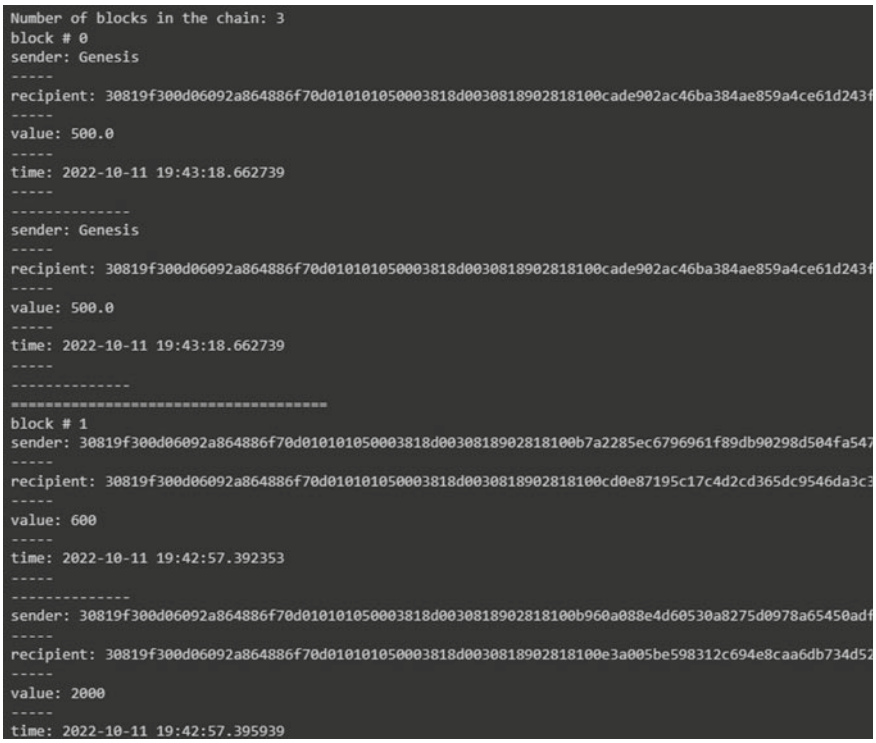

Fig. 2 Transactions added to a block

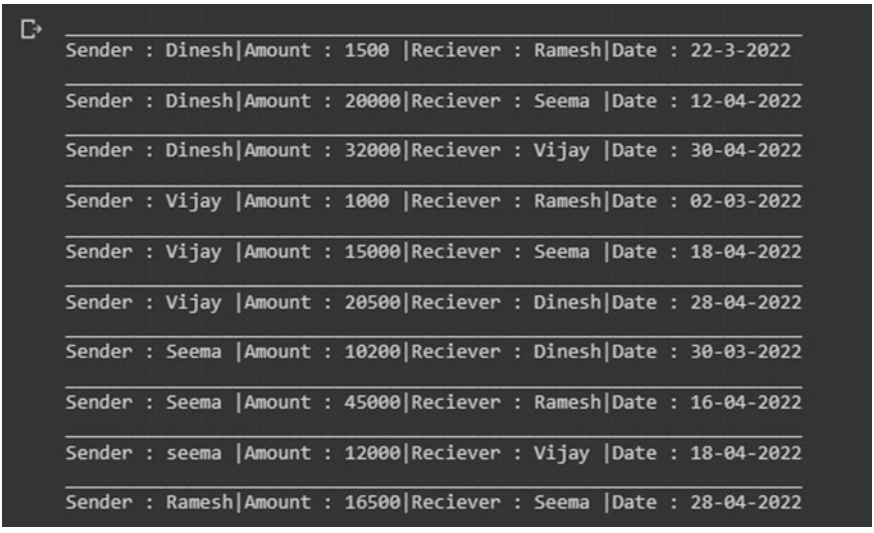

Fig. 3 Transactions stored in database

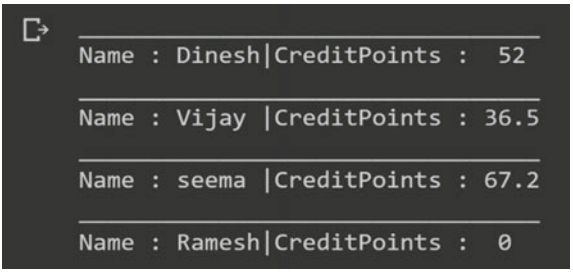

Fig. 4 Credit points assigned

three-digit figure. Every transaction that a customer processes receives a credit score from us. The likelihood of getting your loan accepted increases with a higher credit score. Additional advantages like reduced interest rates, improved payback terms, and a speedy authorization procedure are also probably going to be provided for you. Credit score transparency is often improved using a blockchain ledger. Transparent transaction records make it simpler to identify recurring patterns of activity that can indicate a high or low credit score. This might make credit scoring more accurate and make it more difficult for people to lie about their credit history to get a loan.

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