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Blockchain based Digital Storage System

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Abstract: ***The idea is to construct a platform which allow the people to store their legal identifications without the fear of identification theft. The people using this platform will have complete control on the information they want to share or not. Identity theft is the deliberate use of someone else's identity, usually as a method to gain a financial advantage or obtain credit and other benefits in the other person's name, and perhaps to the other person's disadvantage or loss. The person whose identity has been assumed may suffer adverse consequences, especially if they are held responsible for the perpetrator's actions. Identity theft occurs when someone uses another's personally identifying information, like their name, identifying number, or credit card number, without their permission, to commit fraud or other crimes. Identity thefts have increased exponentially in this era of digitalization. Using this platform, not only the people will have best in class protection but also full authority on what information should be shared and on which platform.***

Keywords: Blockchain, Storage, IPFS

I. INTRODUCTION

One of the most challenging threats in today's Digital era is data security and data theft. There are some systems which provide digital platforms for storage of documents and other forms of data files. But a crucial point to be observed among these platforms is that all these platforms are centralized hence are always prone to cyber threats. In the past few years there has been a constant rise in cyber crimes, which have Identity thefts at the top of the chain like credit card fraud. According to an article of self.inc there were 650,572 cases of identity theft in the U.S. in 2019. Of those, 41 percent, or just over 270,000, were credit card fraud. Our proposed system is a decentralized digital storage platform which is based on blockchain technology on which end user can store there legal documents without any fear of data theft.

In existing platforms, data owners do not have a complete control over the access and use of data. In most of the cases, the owner himself is not involved in the sharing of data. For example, owner is the passive entity, while escrow is solely responsible for data distribution and payment settlements. At the end, owner gets some percentage of royalty. Without blockchain, it is very difficult to ensure the transparency of funds. It means that a fair share of money cannot be guaranteed. In this scenario, blockchain can provide trust and transparency among the nodes of network for the fair distribution of received payment from requestor of data.

II. RELATED WORK

In recent era, blockchain such as; bitcoin [2], Ethereum [3] and Zcash are considered as hot and fundamental technologies of cryptocurrency. As a result, researchers and industrialists are paying more attention to establish a trust based model in a decentralized manner. In this section, few studies regarding blockchain are presented.

A. Digital Content Protection

The personal data of identifiable data encryption on the blockchain, and Wu et al. In [4], a system is proposed, which ensures the authenticity and the non-negativity of the digital content. The problem can be solved by the user's public key, that is, when it is shared with other devices as well, which will give some information to the user. In this case, the public key is damaged, or is being abused, which makes it difficult to analyze the initial secret key. Also, the leak of sensitive data, access control system, the bottlenecks, which are available on the system.

B. Blockchain in Cloud

Researchers are making efforts to expand the blockchain within the broader domain of its striking features. The blockchain provides a secure, reliable, and trustworthy version, created an atmosphere of trust and sharing of information. The record of any unauthorized access to your data, so it gives the chain of custody. However, its distributed nature, to weaken, to manage the capacity of their networks. In addition, the immutable nature of the blockchain can lead to the danger of the fact that a majority of attacks on the network. In order to solve the above problems, the authors propose a data management system, the management of the blockchain, which is called the CBDM, specially prepared for the use of cloud-based infrastructure. Belief gets in the way, in order to implement secure data system, which is a higher-level network management system. In the future, such as in the prototype, it can be prepared for the real-time installation..

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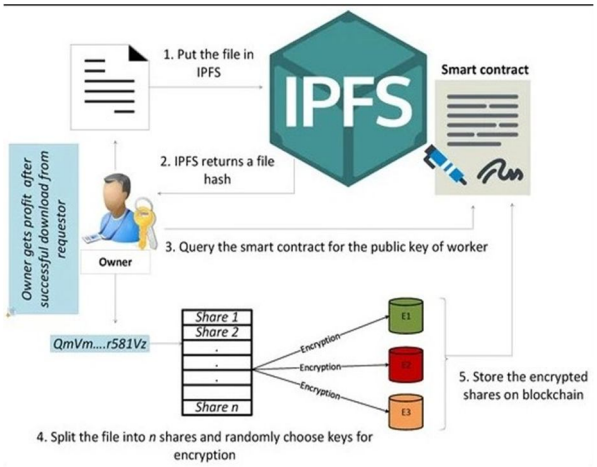
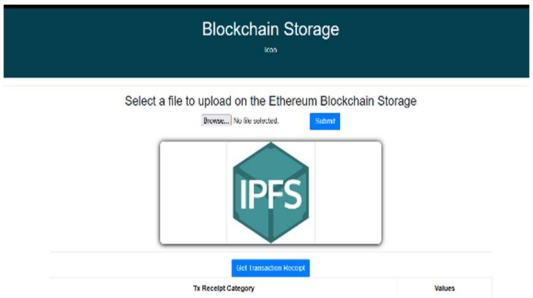
III. METHODOLOGY

In our proposed system, As the internet continues to grow in popularity, immense new opportunities arise, the most important issue in today's world is the security of user data.



1) Blockchain is the field of technology which helps in maintaining the security of your data. Our webapp will help users to store and access their legal documents anytime from anywhere with the help of internet.

2) The process involves a user-friendly interface of our digital identification system to easily store the legal documents and this data will be stored at the server side of our webapp using blockchain technology, each



3) Document will be highly encrypted and will have a unique-hash.

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IV. CONCLUSION AND FUTURE SCOPE

In the above proposed storage system, more functionality can be added to authorize the identity by the govt. authorities and concerned authorities

The major underlying problem in research data sharing is the fear of researchers regarding misuse and misinterpretation of data. This is because data sharing approaches are still immature in the context of trust, which is slowly going to be established among research community. To tackle this issue, various solutions are proposed, for example, protection of identities of every individual and controlled access to the data rather than making all the data open access. Still these solutions cannot provide trust, immutability to digital data, and traceability regarding data usage.

Cloud servers store the excessive amount of data, which is a centralized authority. There are various type of risks associated with a central authority, such as single point failure. To avoid such failure, third parties are involved to provide data backups. To eliminate third party for developing a trust based model, a blockchain is introduced to provide trust and transparency. Decentralized storage is a solution, which allows storage of data independently on multiple nodes of the network in the form of a distributed ledger. The problem is the storage and processing limitation of network nodes. For this purpose, interplanetary file system (IPFS) is adapted, which is a peer to peer architecture [4].

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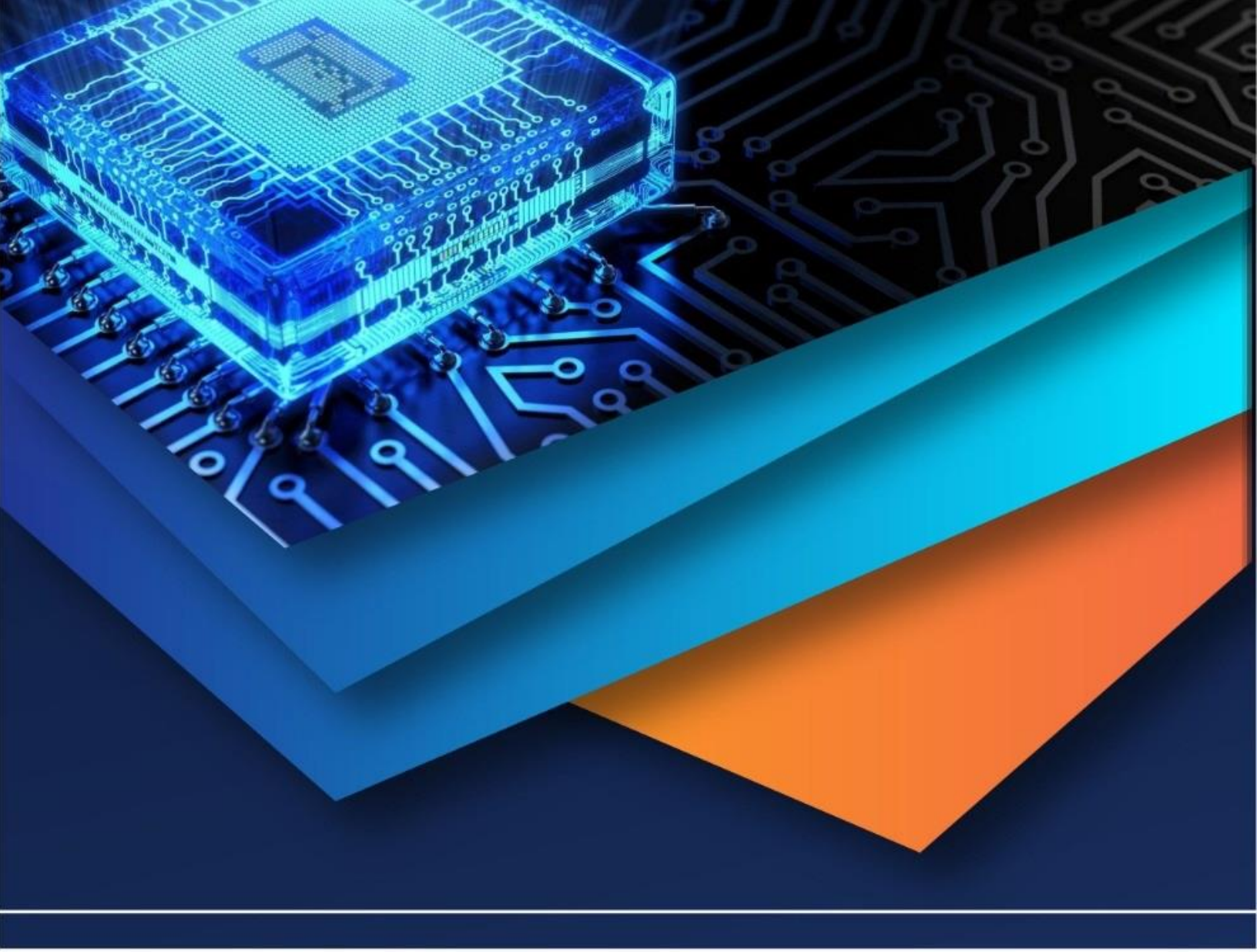

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