

BLOCKCHAIN

The Next Wave of Technology

Bitcoin, Ethereum, Dogecoin, Solana- These topics have garnered much attention in the news lately. Since the big announcement of cryptocurrency as a payment mode for buying Tesla's most anticipated electric cars came from multi-billionaire Elon Musk, there has been a sudden discussion about the same. However, cryptocurrency is not the product of the last two or three years; it has lingered for over a decade. Along with cryptocurrency, NFTs are captivating the attention of the audience too.

Let's understand the core concept behind the topics like cryptocurrency and NFT- Blockchain. Blockchain has its roots back in the 1980s.

However, a breakthrough for blockchain happened in 2008 when a developer, Satoshi Nakamoto, used the technology to build the first-ever cryptocurrency called Bitcoin.



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1 Data
2 Hash
3 Prev hash

How Does Blockchain Work?



In simple words, blockchain is the digital ledger that keeps track of every transaction in the form of blocks. These individual blocks are then connected to form a series of information that can be used to record all performed actions.



It is essential to understand what these blocks contain. A block's primary component is the data stored in it. Data that is stored varies depending on the application used. For e.g., in the case of bitcoin, it will consist of the amount to be transferred or received, involved parties, etc.



The next component is the Hash value of the current data and the previous block. A new block will be created and added to the blockchain as and when any information is processed.

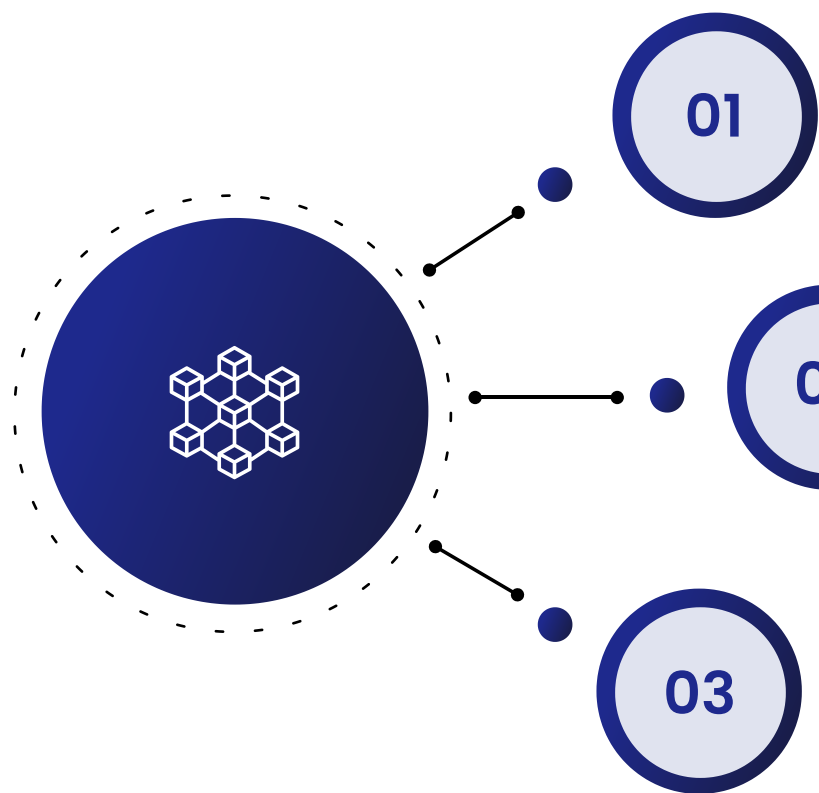


Hence it is possible to track the history of events along with the added layer of security. The change in the block's data will immediately affect the hash value of the block. Since the current block hash value is also shared in the next block, any change will result in identifying a change in information based on the difference between hash values.



Since the number of blocks is enormous, it is nearly impossible to make changes in every block to hide the alteration in a single block.

Types Of Blockchain



- Public blockchain:**
 An openly accessible stream of blockchain which can be used and implemented by anyone keeping the consensus protocol in mind. Examples are Bitcoin and Ethereum blockchains.
- Private blockchain:**
 Distributed ledger (DLT) is the alternative word for such blockchain, where a private network administrator controls the access.
- Hybrid blockchain:**
 This is a blockchain based on a combination of centralized and decentralized features.

Application Of Blockchain

Cryptocurrency
 Bitcoin, Ethereum, Solana, Dodge coin, Tether, Binance coin, etc., are a few popular examples.

Smart contract
 The digital form of physical, legal contracts is secured using blockchain. They are easy to keep track of and maintain a history of any record. E.g., the real estate property registration process.

Healthcare sector
 The application of blockchain in the health sector involves storing patients' health records in a hospital.

Gaming
 In-game purchases, NFTs, live streaming, character skins, etc., are a few use cases of blockchain in the gaming industry. CryptoKitties, launched in 2017, is the first known game that used blockchain technologies.

Conclusion

Along with this, detailed research is going on to leverage blockchain technology in different sectors like logistics, supply chain management, artist royalties, healthcare, Army intelligence, IoT, etc. While the use of Blockchain is on the rise, cybersecurity is a crucial concern. Security should be the prime concern at every level while designing any blockchain application. Hence it is imperative to find a way to keep the users and data secure while using blockchain applications.

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