

A graphic illustration of a blockchain structure. It features a central vertical column of five blue, three-dimensional cubes. Each cube has a grid of small white squares on its faces, with some squares containing the numbers '0' and '1'. This central column is flanked by two more cubes on each side, creating a symmetrical, slightly wider base. Two glowing blue spheres, representing nodes or transactions, are positioned on the left and right sides, connected to the central structure by thin blue lines. The entire scene is set against a dark blue background filled with a pattern of white binary digits (0s and 1s) arranged in vertical columns, giving it a digital, data-centric appearance.

Blockchain

Under The Guidance of Prof. V. G. Khetade

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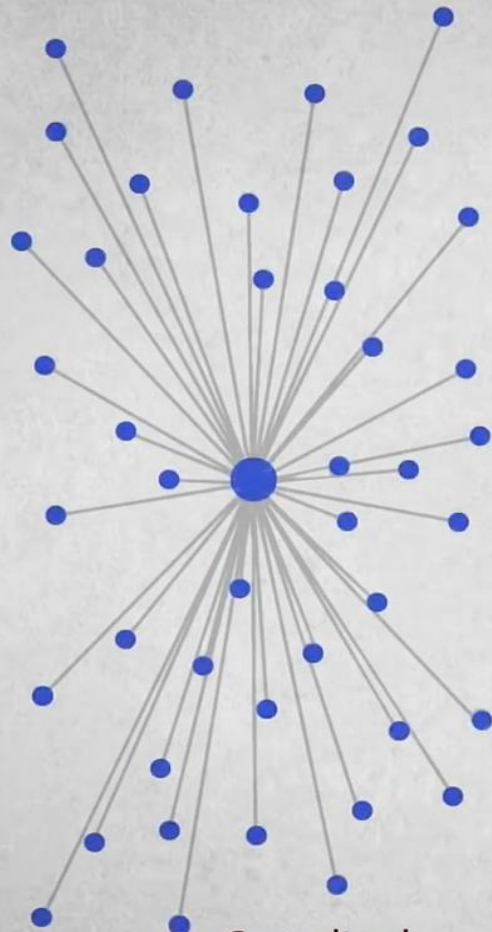


BLOCKCHAIN

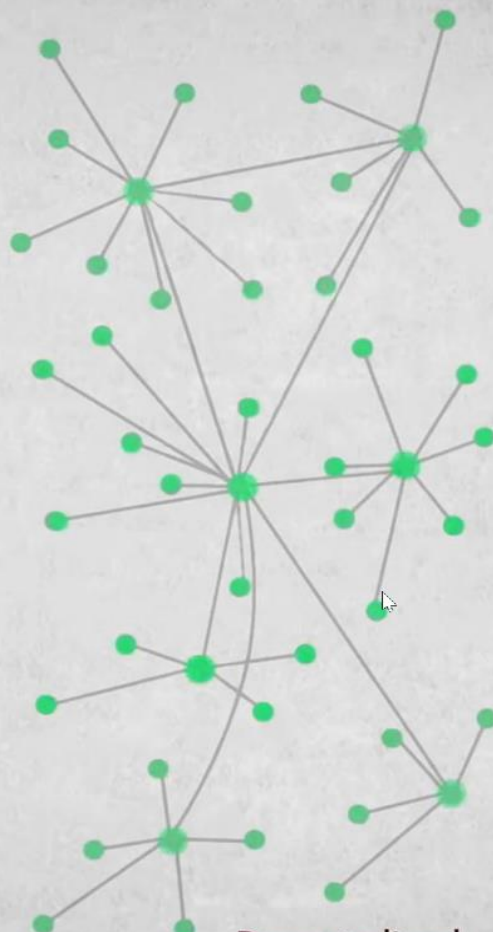
- Blockchain is a decentralized ledger of all transactions across peer-to-peer network.
- It is a technology that enables Bitcoin and is also applied to many business processes.
- It not only performs transactions but also ensures anonymity and security of the users.

Types of Systems...

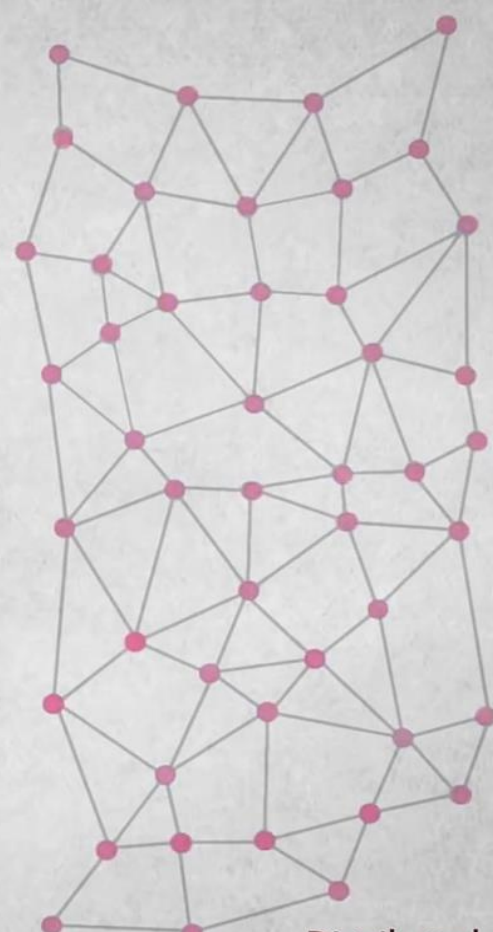
The background features a series of dark gray, three-dimensional rectangular blocks or planes arranged in a perspective view, receding towards the right. A single parallelogram, colored in a light greenish-blue, is positioned on one of the upper planes, slightly to the right of the center. Another similar but darker blue parallelogram is visible on a lower plane further to the right.



Centralized

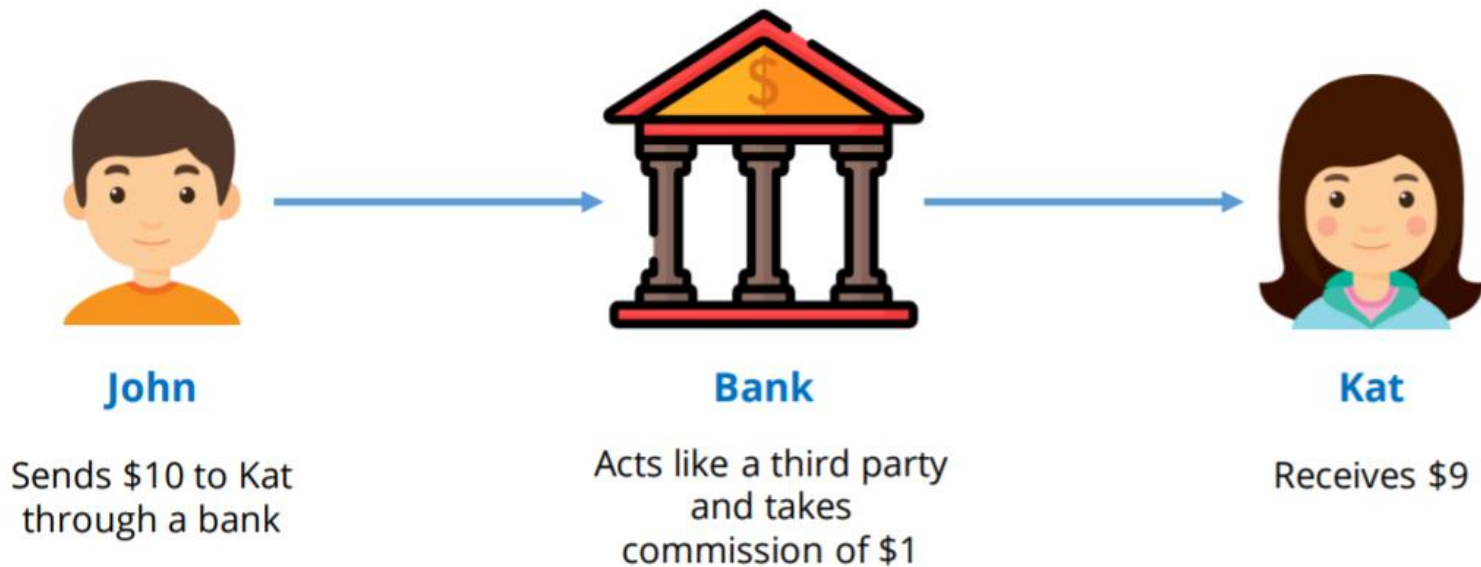


Decentralized



Distributed

Current Banking System

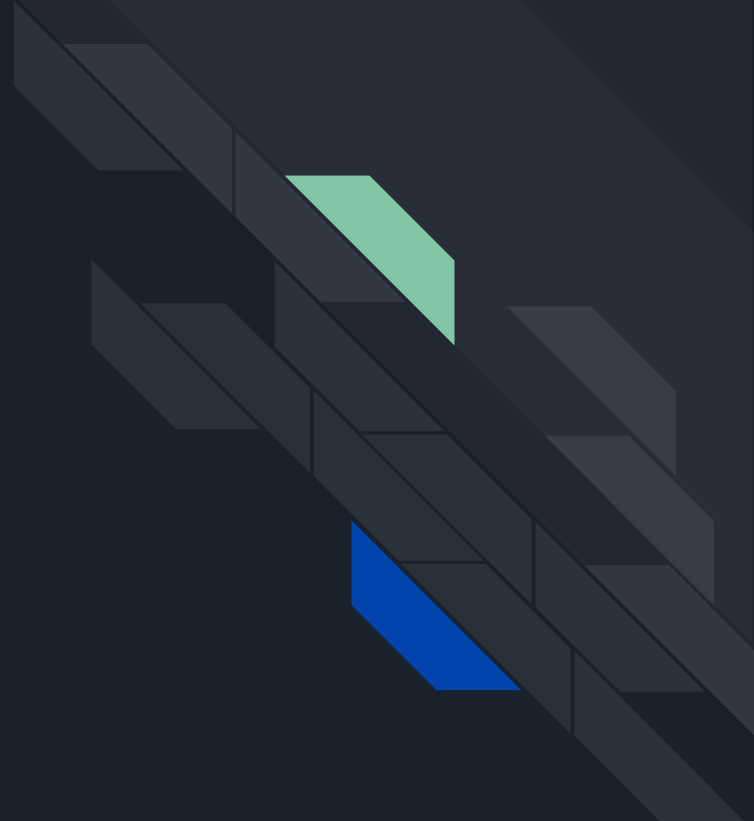


Issues in Banking System

There were few issues in the previous banking system that lead to the rise of Blockchain technology.



How Blockchain Works?



**In the Blockchain, the information is
Structured in the form of Blocks**

Each block is made up of 3 Main things

- 1. Data**
- 2. Hash**
- 3. Hash of the previous block**

DATA



TO:

FROM:

AMOUNT:



BITCOIN BLOCK EXAMPLE

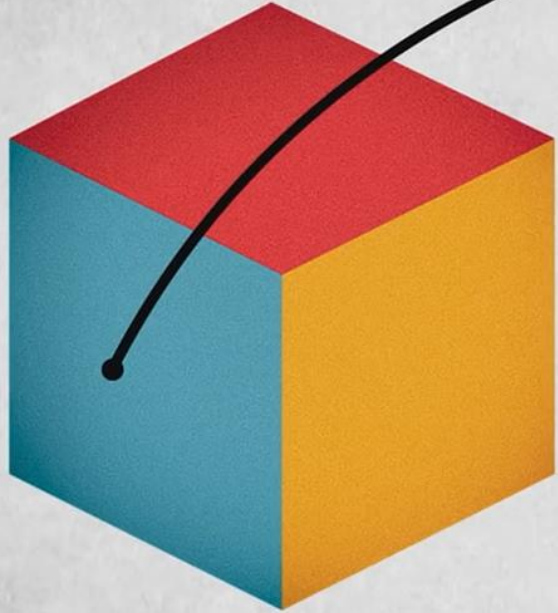


HASH

e2f9f0948jf8h2085hfk83hcdmh923



**HASH OF THE
PREVIOUS BLOCK**

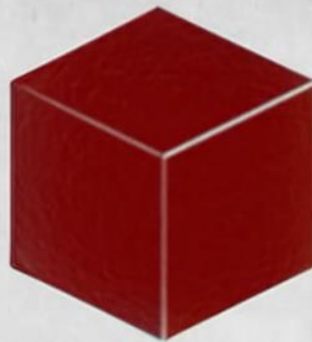
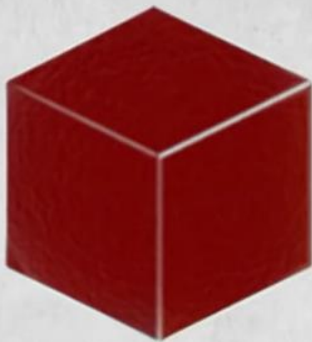


LINKS ALL THE BLOCKS





DATA TAMPERED



Hash

U8G3

2K8F

V9Ho

78D8

Previous Hash

0000

U8G3

2y y 7

I G3u

**Whenever new data is added
to the blockchain, It's the work
of the miners to verify it**

**All miners verify it as well
as record it**



- **A 51% Attack is an attack on a blockchain by a group of miners who control more than 50% of the network's mining hash rate**



FROM : **A**
[f93jd0h2vb6lz]

TO : **B**
[2hv4kj6sh1bc7]

AMOUNT : **Rs. 50**





FROM : **A**
[f93jd0h2vb6lz]



TO : **C**
[dsa0ir20x921sk]

AMOUNT : **Rs. 50**



Blockchain Applications

- Secure sharing of medical data
- NFT marketplaces
- Music royalties tracking
- Cross-border payments
- Real-time IoT operating systems
- Personal identity security
- Anti-money laundering tracking system
- Supply chain and logistics monitoring
- Voting mechanism
- Advertising insights
- Original content creation
- Cryptocurrency exchange
- Real estate processing platform

Advantages of Blockchain

- **Process Integrity**
- **Traceability**
- **Security**
- **Faster Processing**

Disadvantages of Blockchain

- **Power Use**
- **Cost**
- **Uncertain Regulatory Status**

Conclusion of Blockchain Technology

- The Bitcoin is the first successful implementation of blockchain.
- Today, the world has found applications of blockchain technology in several industries, where the trust without the involvement of a centralized authority is desired.

The Future

While cryptocurrencies are the most well-known use of blockchain technology, their potential extends far beyond digital currencies. For example, blockchains could be used to secure every aspect of the supply chain, store property records, create a reliable digital identity system, and even store and count votes in an election. As investors continue to pour money into this technology it's only a matter of time before it fundamentally reshapes our world.

Use Cases

The background features a series of dark gray, three-dimensional rectangular planes that create a sense of depth and perspective, receding towards the right. Two distinct parallelogram shapes are placed on these planes: a light green one on a higher plane and a blue one on a lower plane, both oriented diagonally to match the perspective of the background.



TRANSPARENT

The world's first blockchain-supported elections just happened in Sierra Leone



REUTERS/OLIVIA AGLAND

Powered by blockchain.

FROM OUR OBSESSION

Africa Innovators

This is an exploration of African solutions to global problems.

**By Yomi Kazeem**

Africa reporter

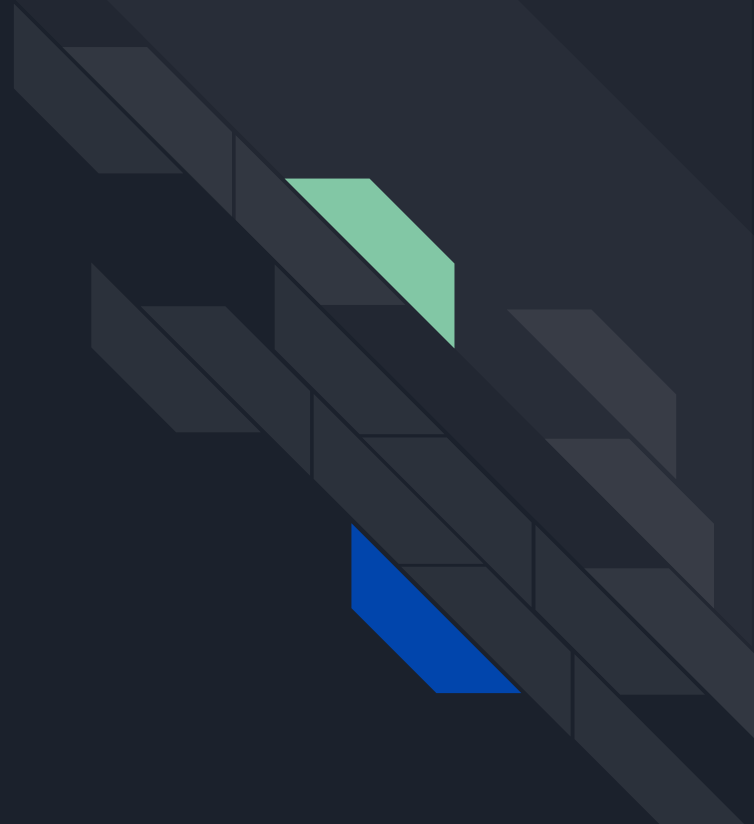
March 13, 2018 • This article is more than 2 years old.

Corrected: This story was updated to clarify the extent to which blockchain was used in the election.

References

- <https://youtu.be/ENrjn-lD1e8>
- <https://youtu.be/YJyXfjbBmc8>
- <https://101blockchains.com/blockchain-fundamentals-presentation/>

**Any
Question?**



Thank You!

