

Kansas Blockchain Presents

# Smart Contract Development

# Todays Agenda



- 
- 01** What is Blockchain
  - 02** Applications of Blockchain
  - 03** Live Workshop
  - 04** Special Announcement

# What is Blockchain?

**A Blockchain is a Public Immutable Distributed Ledger secured by Cryptography**

## Decentralized

- No single point of control/failure
- Much more reliable and resistant

## Immutable

- Data cannot be altered once recorded
- Allows for “trustless” systems

## Transparent

- Open access to transaction data
- Enhanced audibility and traceability

## Secure

- Safeguards data through cryptography
- Consensus algorithms ensure data validity



# What about Distributed?

## Distributed 2026, Nischay Rawal Dictionary

Distributed means that the ledger is **not stored in one central location** that can be hacked or manipulated. Instead, it is **spread out across multiple computers** (nodes) around the world.

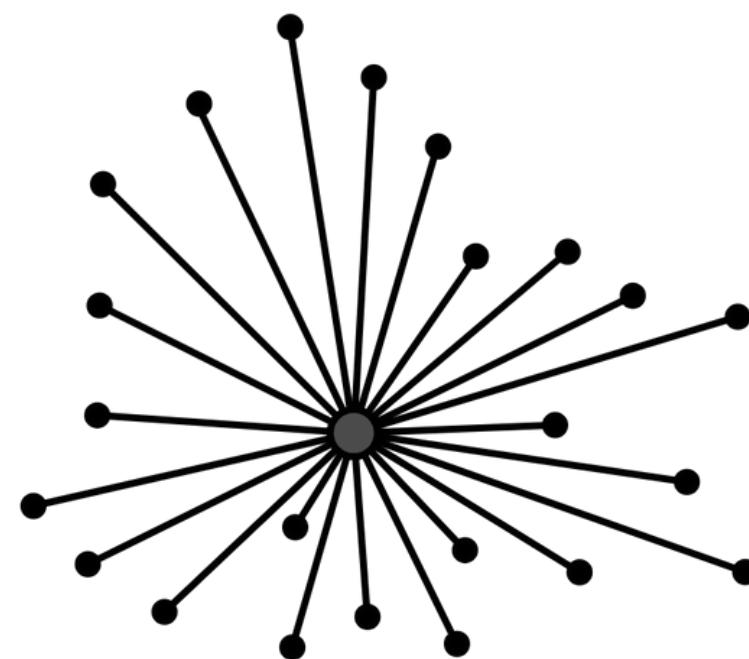


# So... What is Decentralized

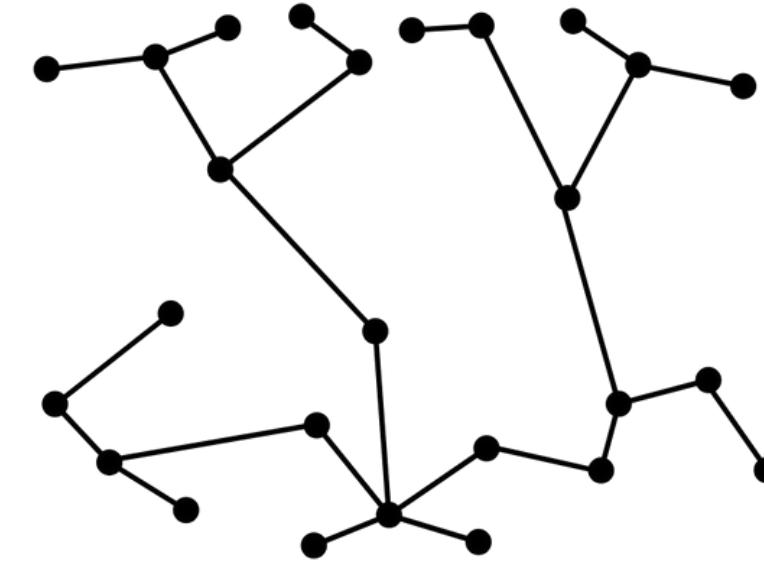
## Decentralized

2026, Nischay Rawal Dictionary (A very very credible dictionary)

A blockchain is decentralized because there is **no central authority** that controls the network. Instead, the network is powered by a **global community of users** who work together to **verify and approve transactions**. Anyone can join and participate in a public blockchain.



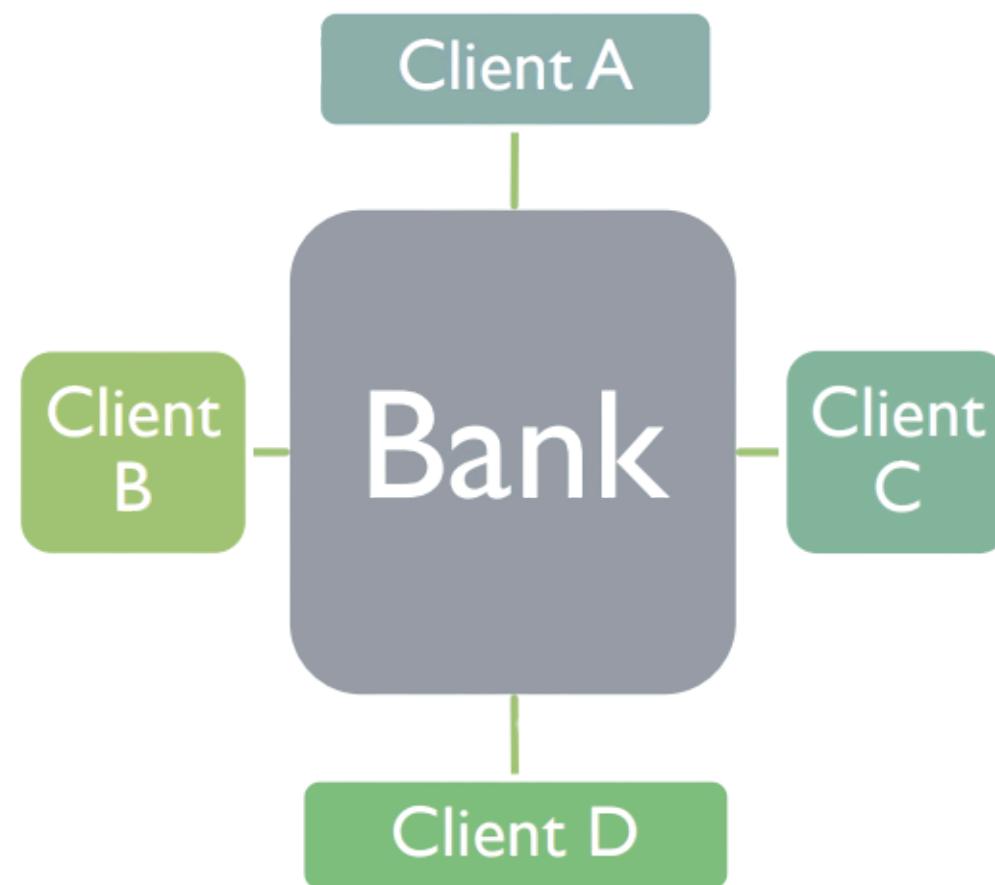
CENTRALIZED



DECENTRALIZED

# Example

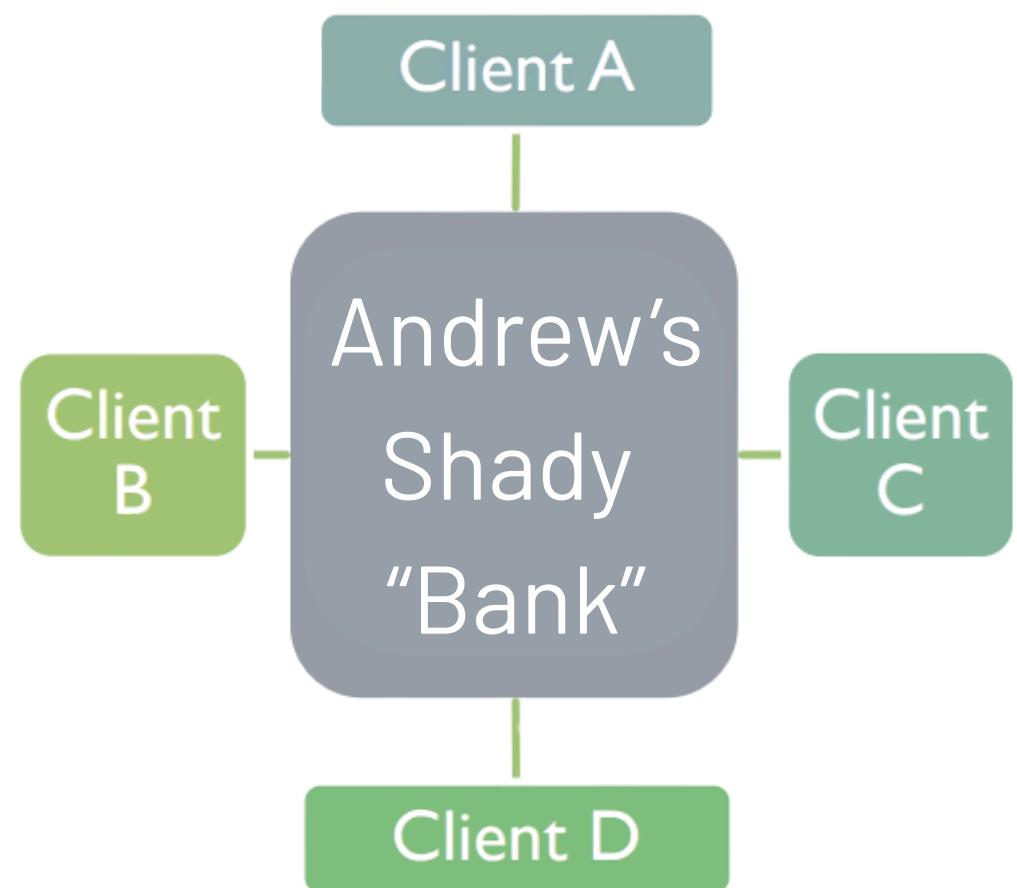
## Centralized Ledger



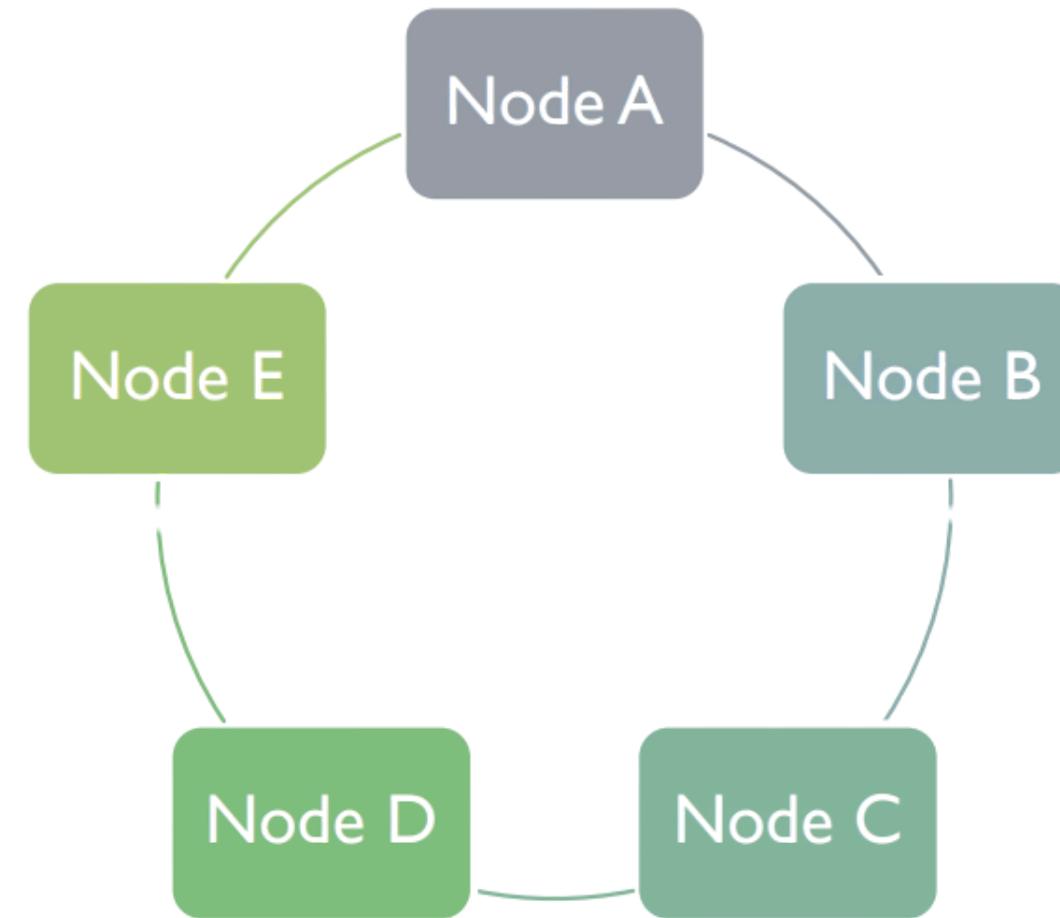
- There are multiple ledgers, but Bank holds the “golden record”
- Client B must reconcile its own ledger against that of Bank, and must convince Bank of the “true state” of the Bank ledger if discrepancies arise

# Example

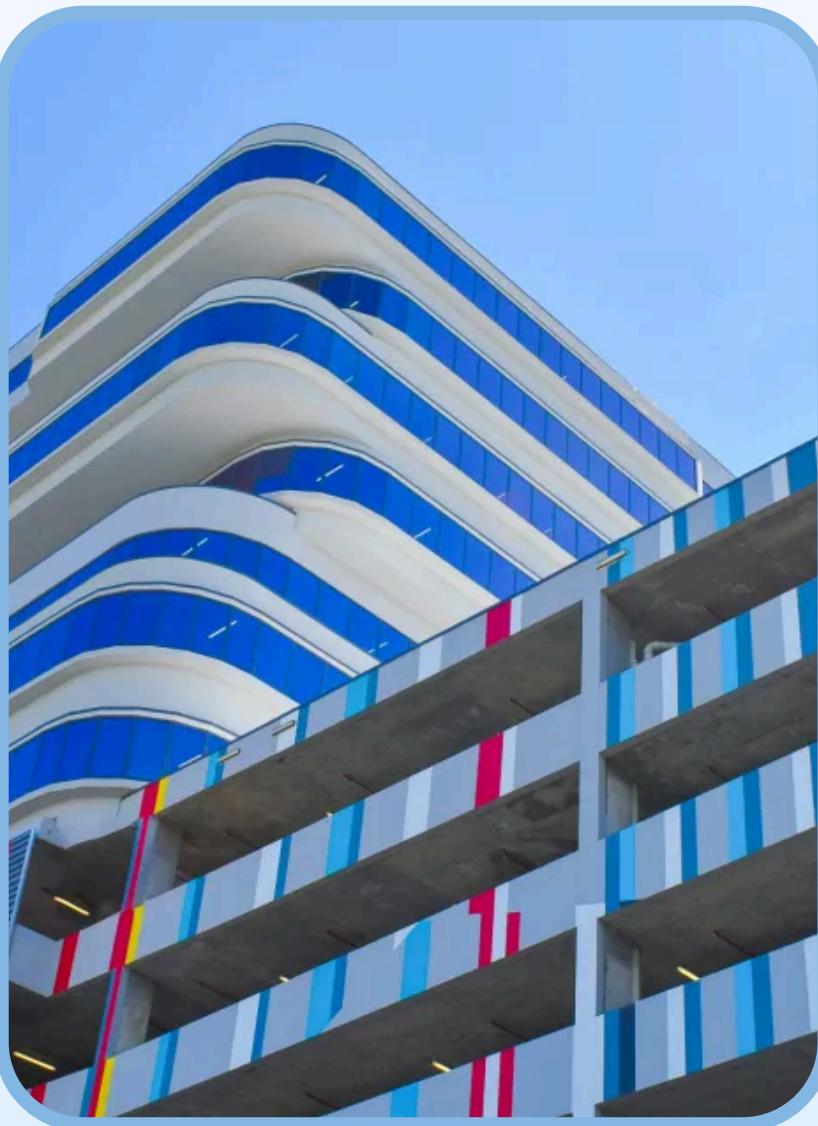
Centralized Ledger



Distributed Ledger



# How are blockchains used in industry?



**Ripple**

Uses XRP Ledger (XRPL) to facilitate fast, low-cost, and secure cross-border payments



**Walmart**

Uses a blockchain for supply chain operations and food traceability.

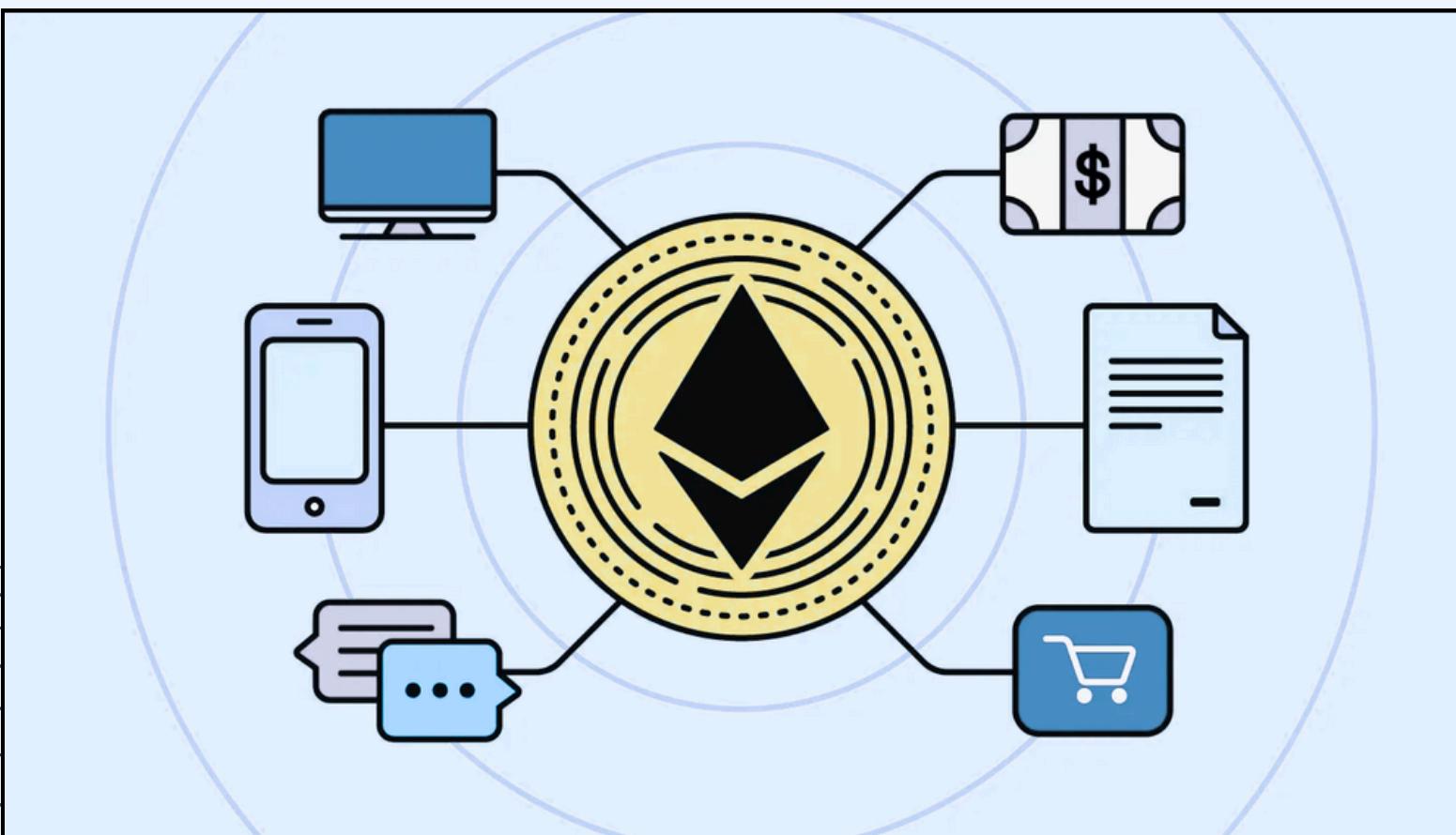


**JPMorgan**

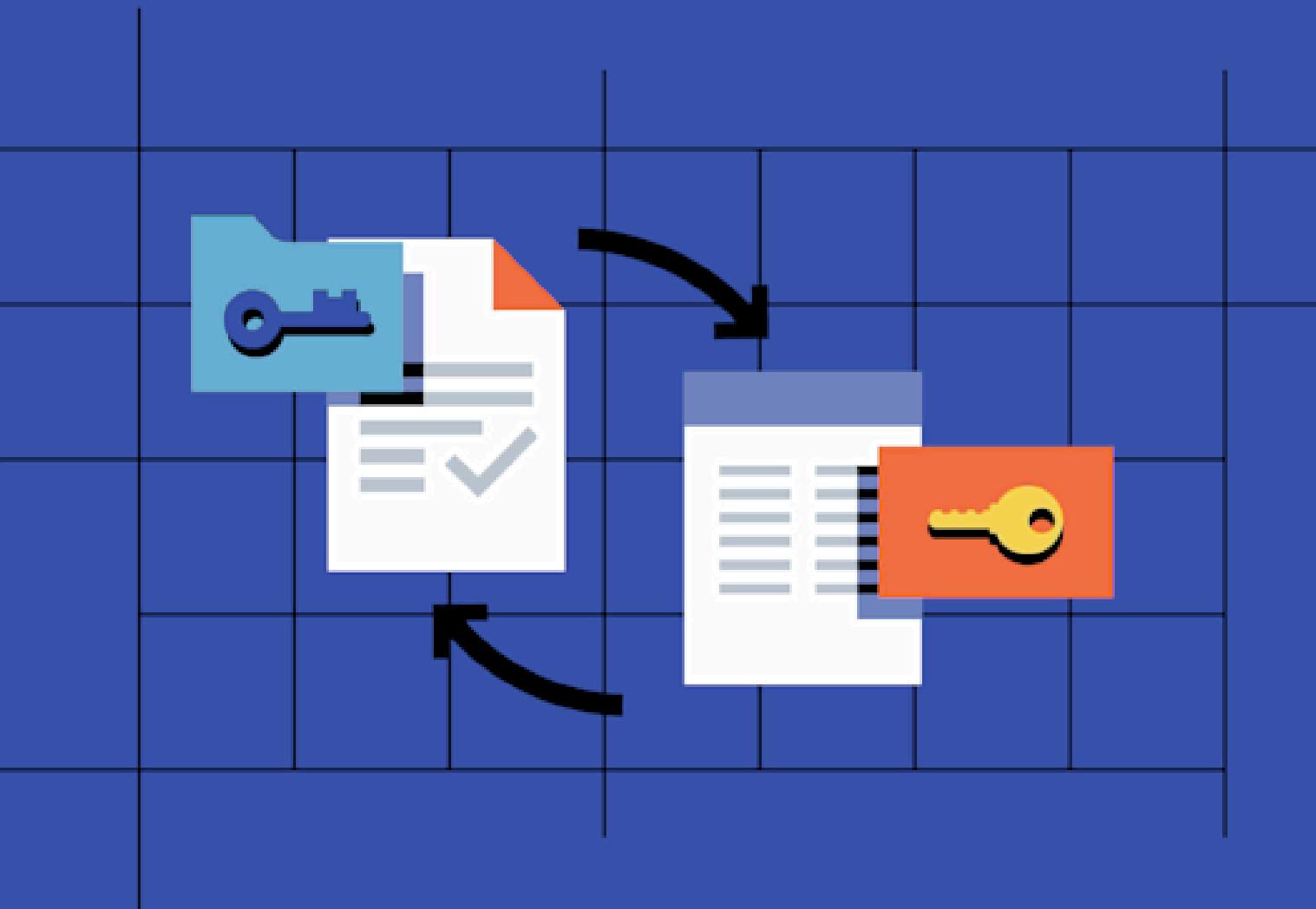
Uses a “permissioned” blockchain called Liink to streamline account verification and payment resolution.

# DApps

- Applications built off of smart contracts
- Offer increased security and functionality when compared to traditional applications
- Leverage traditional technologies like JavaScript, React, Python, Java, etc.
- Connect to the blockchain using APIs and/or SDKs
- Usually rely on a wallet to send and pay for transactions



# Smart Contracts



- Smart contracts are the basis of all dApps built on the blockchain
- First proposed in 1994 by Nick Szabo, the founder of a digital currency called “Bit Gold”
- Defined smart contracts as computerized transaction protocols that execute the terms of a contract
- Smart contract logic is permanent and automatic, removing the need for an intermediary
- Smart contracts are perfect for transactions and important logic, completely removing human error.

# Smart Contract Examples



- Finance: Decentralized Finance (DeFi) platforms like Aave and Uniswap use smart contracts to enable lending, borrowing, and trading without banks.
- Supply Chain: The contracts can be used to track goods as they move through a supply chain. For example, when a shipment reaches a destination, the payment is automatically released.
- Real Estate: Smart contracts can automate property transfers. Once a buyer pays the agreed amount, the smart contract transfers the deed to their name.
- Gaming: Smart contracts can govern in-game asset ownership and trades while ensuring fairness and security.
- Healthcare: Smart contracts can be used to hold patient records securely and allow controlled access based on predefined conditions.



# Live Workshop

**Idea:** Secure Betting/Gambling Smart Contract

**Contract:** Two people deposit money into an Escrow.

A coin is flipped, and the money is automatically routed to the winner.

**WE DO NOT  
CONDONE  
GAMBLING**

**WE DO NOT  
CONDONE  
GAMBLING  
...AT SCHOOL**



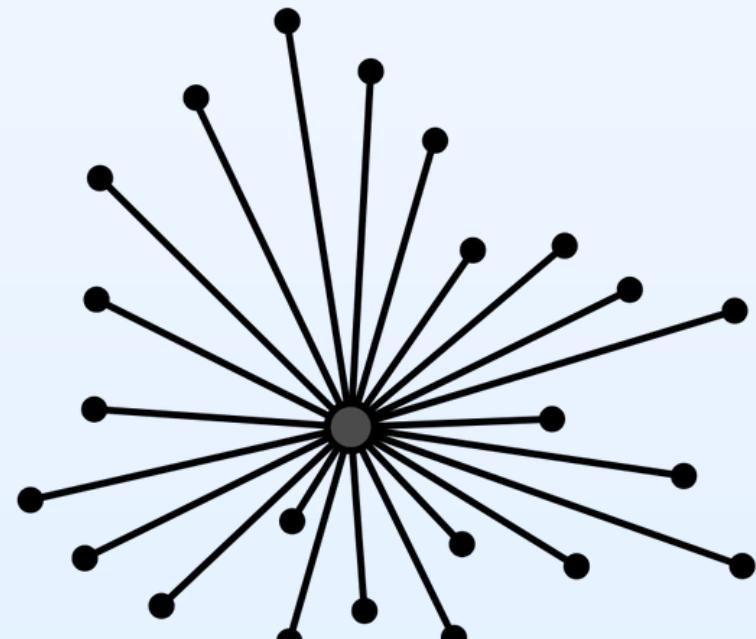
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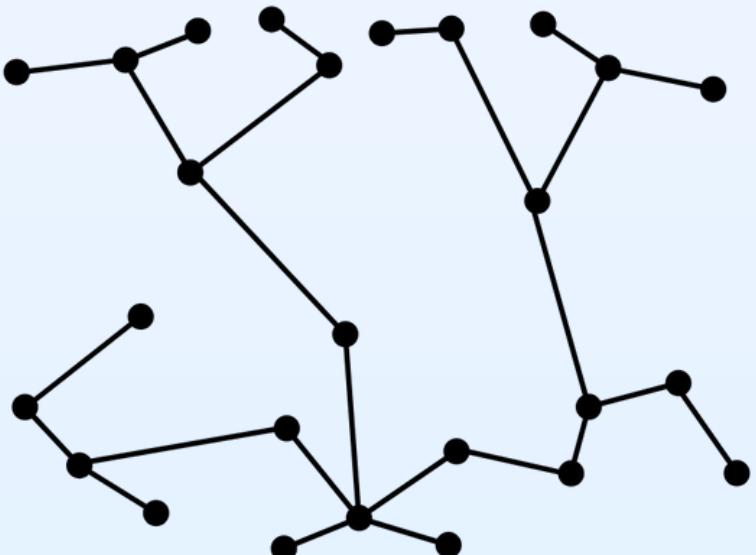
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# Live Workshop Reflection



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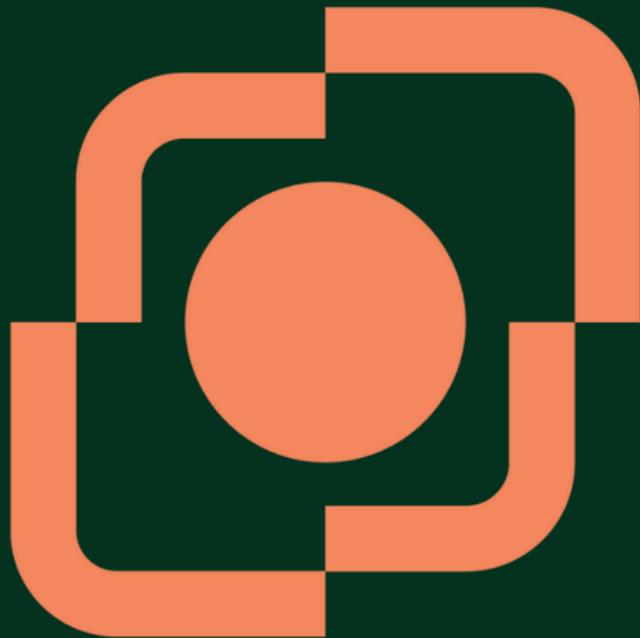


DECENTRALIZED

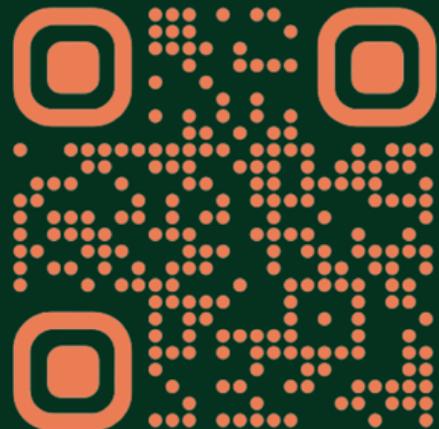
- **Decentralized and Trustless**
- **Combining with traditional applications**
- **Applications for other purposes**

# MIDWEST BLOCKA THON 2026

*hack.kublockchain.com*



*Apply Now!*



**March 6 - 8<sup>th</sup> 2026**  
A 36-hour Blockchain and Web3  
Hackathon

# Registration Link



# E-Points

