



# Professional Blockchain Course

What is Blockchain?

“Blockchain is the tech. Bitcoin is merely the first mainstream manifestation of its potential.”

# What is Blockchain?

- Blockchain is a digitized, distributed ledger for all the records.
- A distributed database recording transaction in chronological order.
- Devised initially to power Bitcoin.

Blockchains are built from 3 technologies		
1. Private Key Cryptography	2. P2P Network	3. Program (the Blockchain protocol)
ECC	Torrent Networks	Hashing Algorithms
RSA	System of Records	Handshake Algorithms

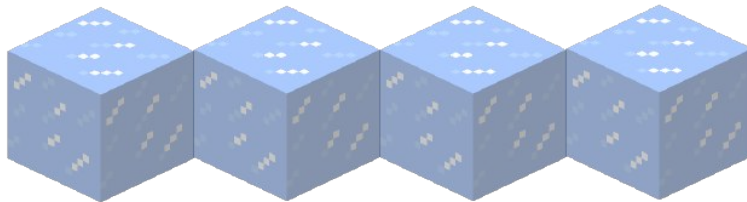


# Blockchain Analogies to Real World

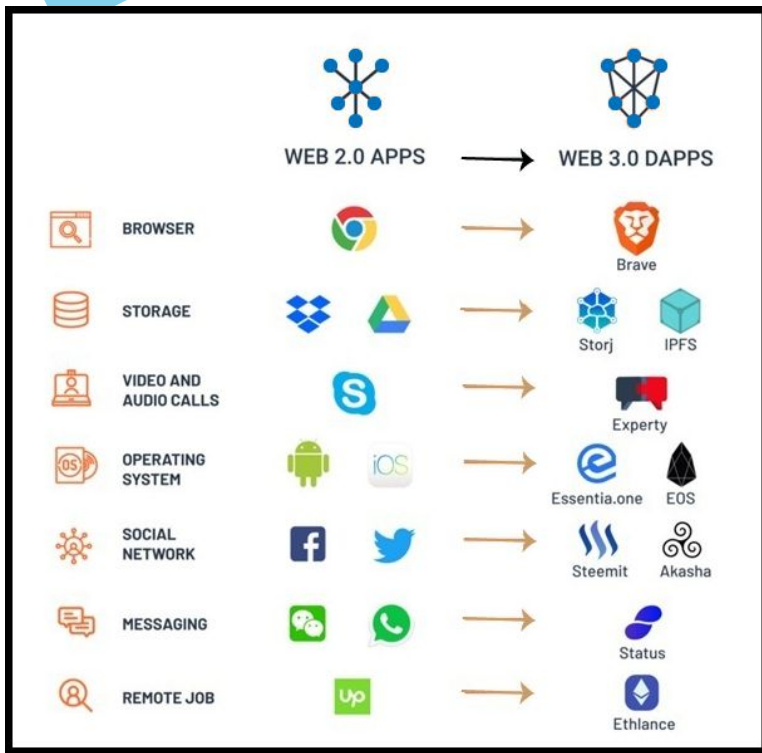
- Transparent Bank Vaults.
- Bank account statements.
- A spreadsheet which is duplicated hundreds of times across the network of computers.
- A large size notebook distributed across all the readers.
- A google doc shared between multiple parties.
- A street soccer game.

# Blockchain Analogy

- Imagine a massive vault system from a bank.
- The vault is filled with rows of deposit boxes.
- Each deposit box is made up of glass, allowing everyone to visualize the contents of the deposit box, but only have access to their vault.
- When a person opens a new deposit box, he/she get a key that is unique to that box.
- This is the fundamental concept of cryptocurrencies based on Blockchain. Anyone can see the contents of all other addresses.



# Why Blockchain is Web 3.0?



- No Central point of control.
- Ownership of Data.
- Reduction in Hacks and Data Breaches.
- Uninterrupted Service



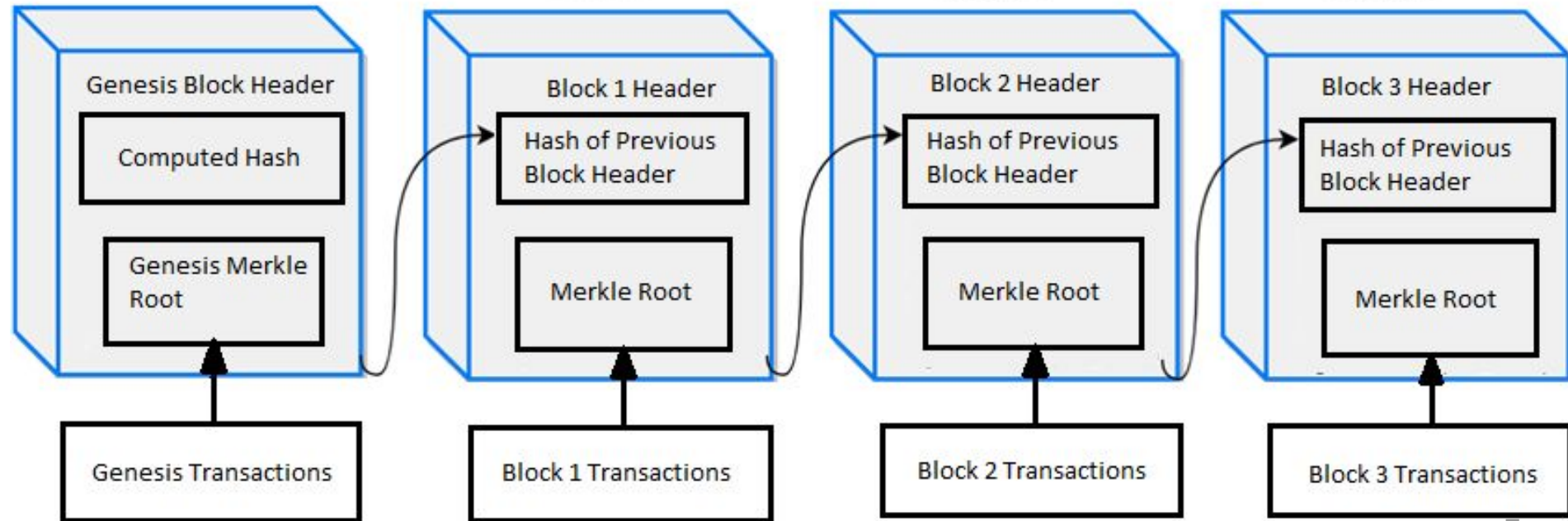
# Peek Inside Blockchain

Genesis Block 0

Block 1

Block 2

Block 3



# Blockchain Characteristics

- Each block is built on top of the previous block and uses the block's hash to form a chain.
- Validating and confirming blocks over the chain is handled by miners.
- Blocks created are cryptographically sealed over the Blockchain, which means that it is nearly impossible to delete and modify data over the Blockchain.
- Consensus algorithms make sure that all the transactions are validated and only added once over the Blockchain.
- Miner receives a reward for running the consensus algorithms; the current reward is 12.5 BTC in case of Bitcoin Blockchain and 2 ETH in case of Ethereum Blockchain.
- All the Blocks added are in chronological order and time-stamped.



# Summarising Blockchain

- It's a digitized store for information in the form of transactions.
- It is distributed. Thus, nobody controls it.
- Consensus algorithms make sure of the security and immutability.
- When a new block is added to a blockchain, it is linked to the previous block using a cryptographic hash.
- Data gets recorded in chronological order.
- Everyone present over the network can view the transactions.

Blockchain Definition:

**“A blockchain is a digitized, distributed, consensus-based secure storage of information protected from revision and tampering over the peer-to-peer network.”**



# THANK YOU

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