

Block chain

[24th July, introduction class]

It has roots from 1992. It started to eliminate central intermediary [banks, central authority, hospitals.] It's not like doesn't want to pay for it. It's about the trust, capability, ...

[server → client]

Web 1 - Read Data [only 1 way]

Web 2.0 - Read & Write → helped in many ways [Reviews, most loved, sharing opinions, ...]

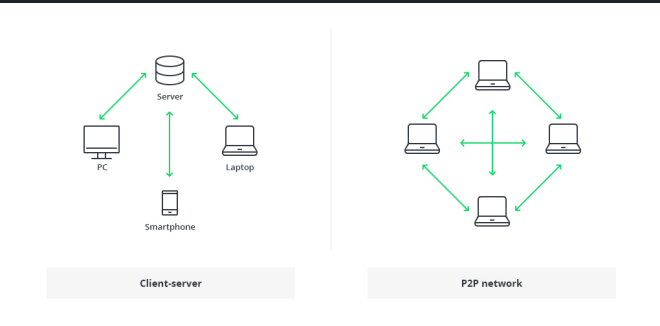
[client ↔ server]

uploading our data

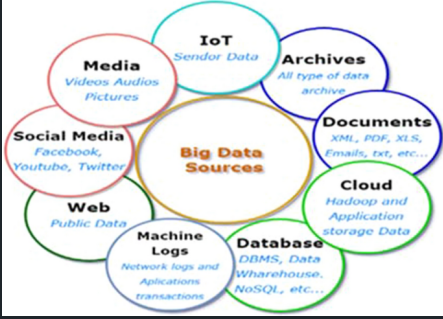
?? But how to know these are genuine?
?? How to ensure that our data is safe.

Technology will never be a "problem". It's the intension.

\\ may be data is underrated here. But we got separate technology out of it.



→ Using data for AD's
→ Using data for targ-
-etting people
social dilemma
Netflix documentary



Silicon Valley
Season (scrum, blockchain, ...)
Comedy

→ Using data to influence people
// influencers really!!!

Everything is 'OK' upto a point. & good if its genuine.

web 3.0

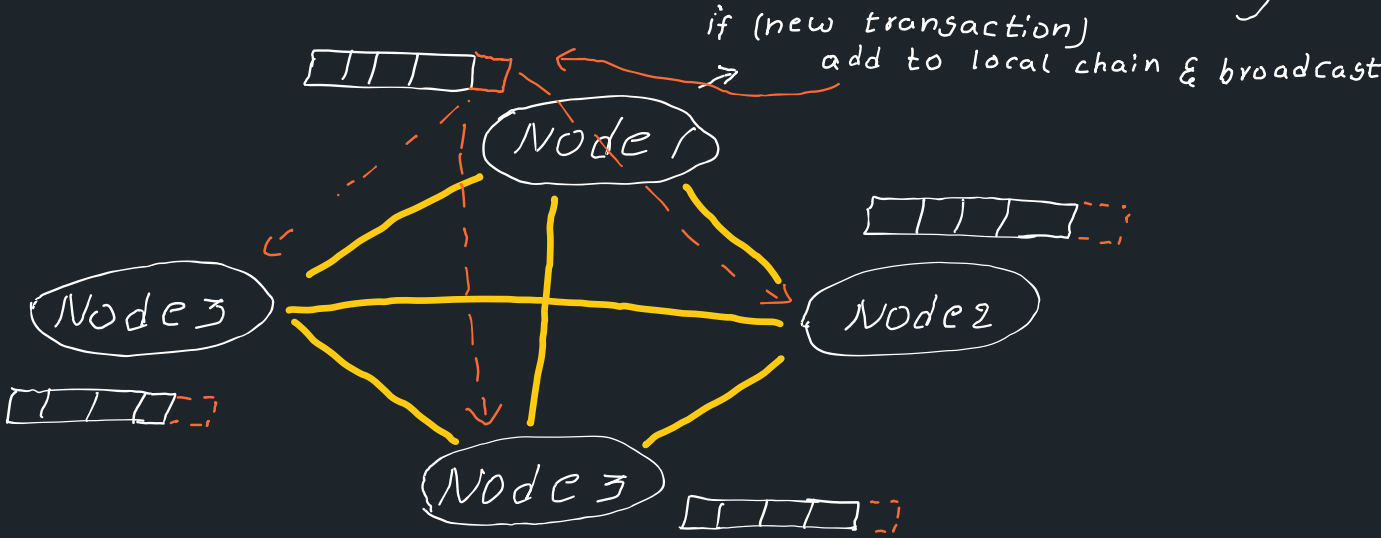
↳ Instead on client - server architecture, P2P
it's just like client ↔ client ≈ Peer - Peer (Node - Node)
⇒ web 3.0 builds on peer-to-peer architecture.

//work → Basics of networking [Topology, TCP-IP, protocols (IP, TCP, UDP, SMTP)]
→ HTML & CSS

{Jack Dorsey} - web 5 ← web 2 + web 3

Data accessing Security
Will give access to the nodes which are needed & for specific time.

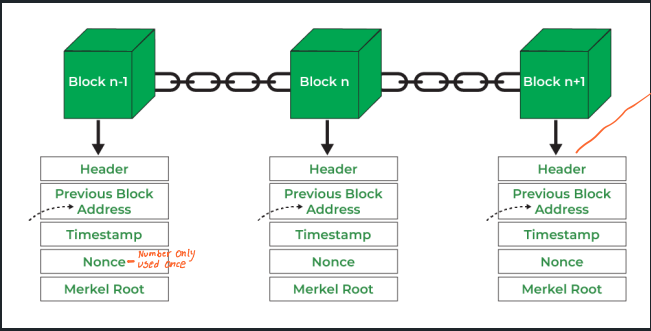
Blockchain in simple words, continuous list of records (blocks) having some special properties



→ Blocks are cryptographically linked one way (SHA 256) → developed by NSA.
→ Decentralized [no control associated with single entity] Activities, decisions, ... are delegated from central
→ Distributed database.
• Stored in multiple machines. But can't be accessed directly because of cryptography.
→ Immutable ledger

Blockchain Structure:

Block 0 - - -
Genesis block
This block doesn't contain any transactions
→ previous hash = 0



Simple Block structure:

Block #
prev. Hash
Data
Nonce
Hash

→ Block number
→ Hash of previous block.
→ Transactions
→ 'Nonce' is some thing which need to be added inorder to meet criteria (Ex: Hash should start with 5 zeros)
→ Hash of all the above fields.

→ Explore: andersbrownworth.com/blockchain/hash

→ ?? Hash Limit - 256²⁵⁶ ??
→ ?? Blockchain Size Limit ??
→ ?? Memory pool ??