

INTRODUCTION TO BLOCKCHAIN

Presentors



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What is blockchain?

Blockchain is a secure digital record book that stores information across many computers, making it hard to change, fake, or delete.

Lets see [practically](#) what blockchain is.

How nodes reach consensus?



Proof of Work



Proof of Stake

What if we **save code** directly into the blockchain's data field?

This was the idea behind Ethereum: storing code on the blockchain.

What if the code was unchangeable and unstoppable?

Such code could hold and transfer funds based on conditions. That's powerful!

Ethereum took this idea and created the first blockchain that could run any kind of code (Turing complete).

What is web3?

Web3 represents the next evolution of the internet, aiming to give users more control over their online activities and data.

To understand Web3, it's helpful to look at how the internet has developed over time

Web1, web2, web3

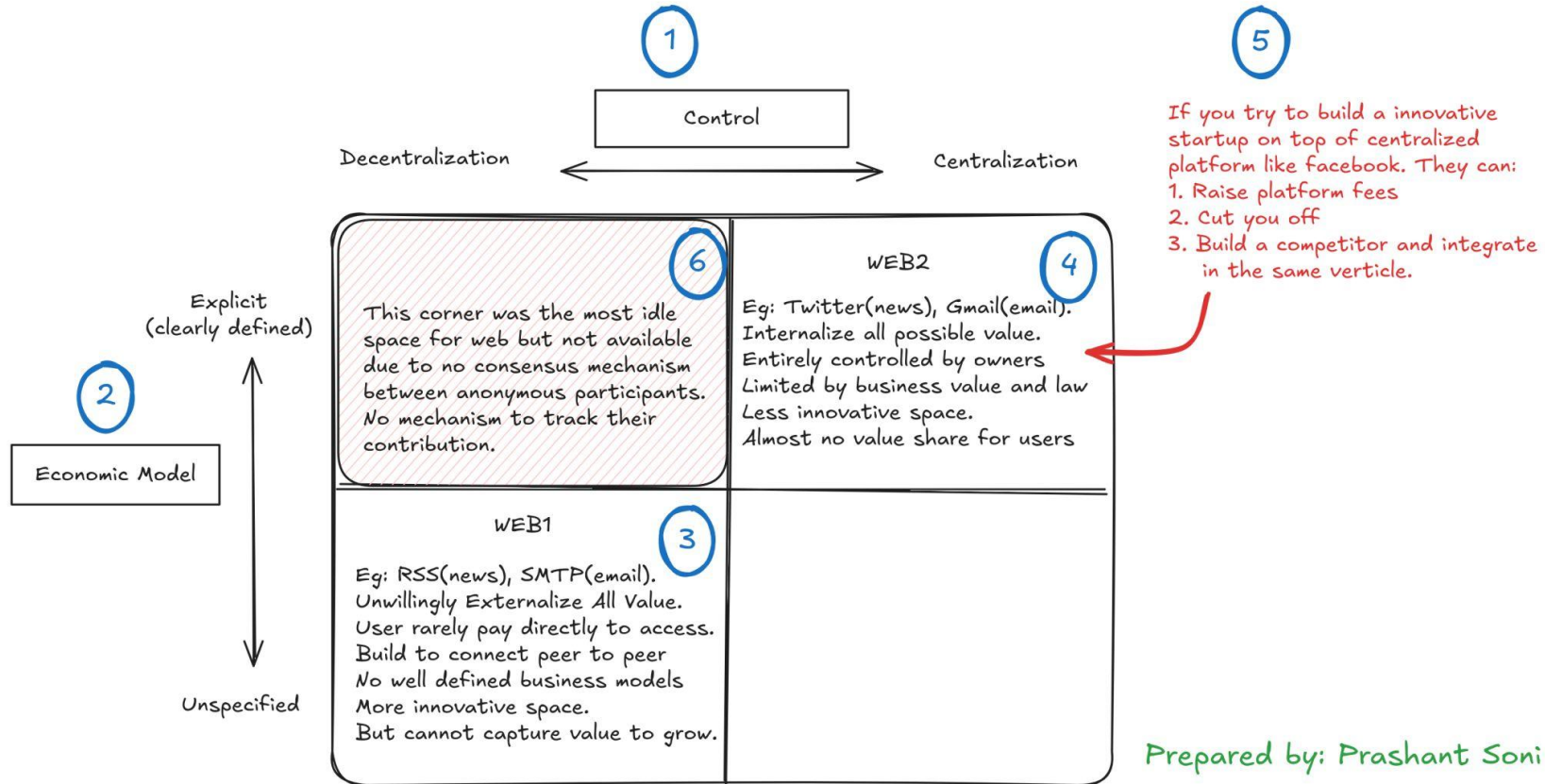
- Web 1.0 (Read-Only Web)
- Web 2.0 (Read-Write Web)
- Web3 (Read-Write-Own Web)

What do we mean by owning data?

- Own your audience: Move your audience from platform A to platform B.
- Own your digital assets: Resell your in-game purchase
- Own you online contribution: How much revenue does facebook share us?

Why do we need web3?

Without Blockchain



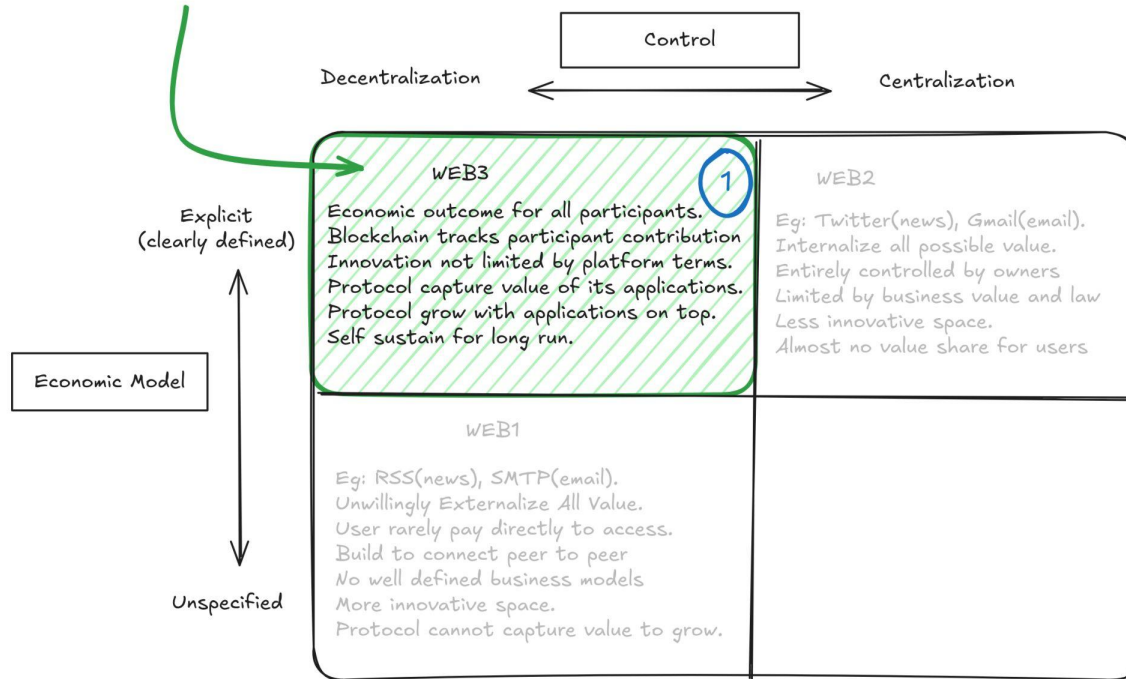
Prepared by: Prashant Soni

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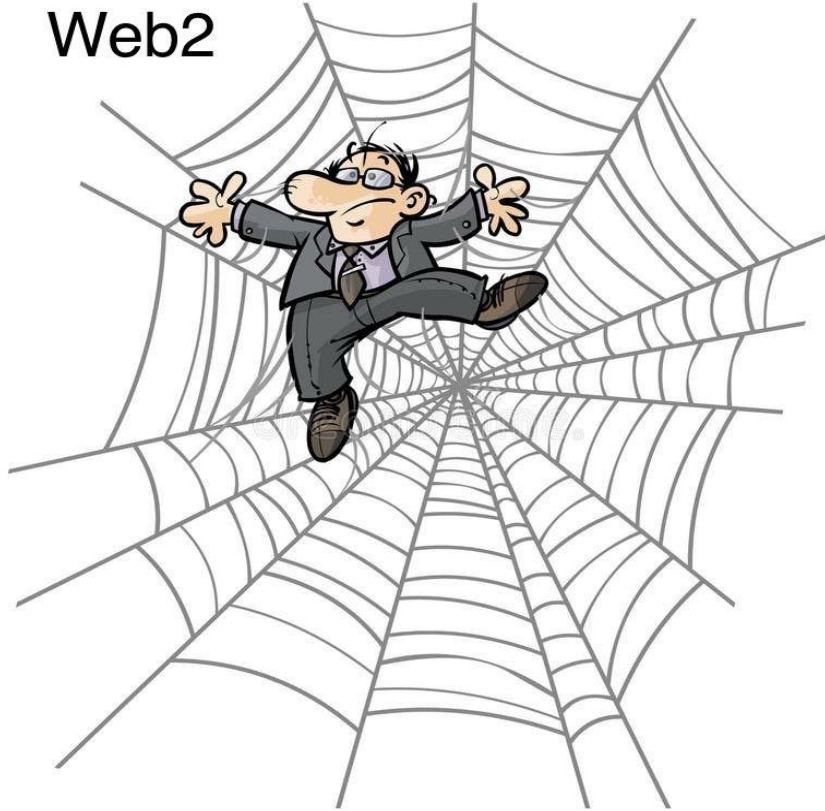
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Idle space for web protocol to sustain. A sustainable model to support limitless innovation and growth.

with Blockchain



Web2



Web3



PeYo

The strength of
online community

HEADQUARTERS



WINDOWS



iOS



LINUX

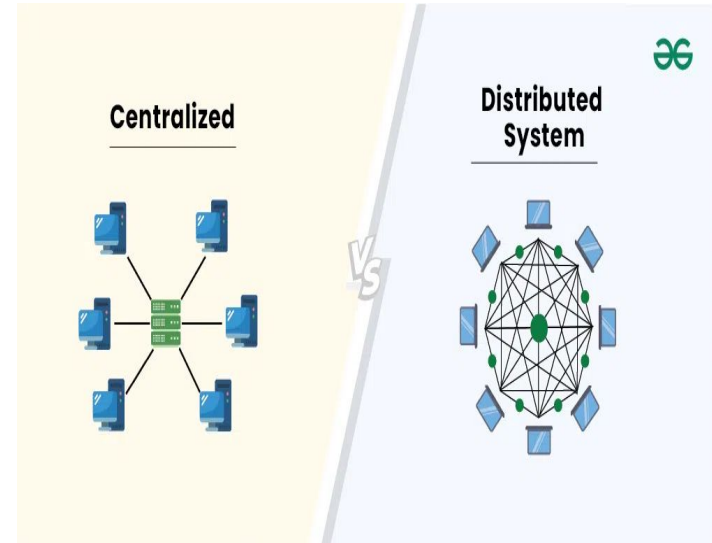
The future of web is decentralized

QUERIES SO FAR ?



Decentralization in Web3

- Shift from centralized to distributed control
- Power distributed among individuals instead of central authority
- Challenge: How can such systems function without central authorities?



Blockchain: The Tool for Decentralization

- Google Sheets analogy as a centralized and Decentralized system



Blockchain: Enabling Decentralization

- Key challenges of central authority :
 - Data Integrity: Once data is on the blockchain, it cannot be changed, ensuring the integrity of the data.
 - Transparency: Everyone in the network can verify the data, removing the need to trust a central party.
 - Trust: Blockchain builds trust between parties by using a distributed system rather than relying on traditional intermediaries like banks or governments.

Integrity in Blockchain: The Pillar of Trust

- Integrity – Quality of being honest and adhering to moral principles, even when no one is watching
- Data immutability: Once data is written, it cannot be altered.
- Cryptographic hashing ensures data authenticity.
- Tamper-proof: Changes are visible to all participants.

hello	2cf24dba5fb0a30e26e83b2ac5b9e29e1b161e5c1fa7425e73043362938b9824
Hello	185f8db32271fe25f561a6fc938b2e264306ec304eda518007d1764826381969

Privacy in Blockchain



Privacy in Blockchain- Contd.

- Data is pseudonymous, not entirely anonymous.
- Data confidentiality: Sensitive details can be encrypted and shared selectively with permissioned participants.
- Selective Disclosure.
 - Using zero-knowledge proofs to enable sharing specific data without revealing everything

Cryptography in Blockchain

- Cryptography— practice of securing information through encryption and transformation techniques.
- A hash function transforms input data into a fixed-size alphanumeric string (hash).
- Cryptographic algorithm - Symmetric Cryptography, Asymmetric Cryptography
- Used for Data Integrity, Block Linking, Digital Signatures, Smart Contract
- SHA-256(used in bitcoin), keccak-256 (used in ethereum)

How to Get Started in Blockchain

- Get to know basic jargons on blockchain
- <https://roadmap.sh/blockchain>
- Encode bootcamps
- Coursera courses on blockchain
- Youtube channels - Patrick Collion, A16Z Startup School
- Join Communities - Web3 Alliance Nepal , KTM Web3 Devhub

How my journey in web3 has been?

- Starting scenario
- Learning curve
- Projects I have worked on
- What about web3 excites me

Career in blockchain

- Smart contract
- Smart contract audits
- Fullstack , UI /UX
- Cybersecurity, cryptography
- Game Development
- Devops for node management

About Us

<https://venture23.xyz>



QUESTIONS ?



THANK YOU !!!