Web 1.0, Web 2.0, and Web 3.0

Introduction

Before discussing Web3, it is important to understand how the internet has evolved from Web 1.0 to Web 2.0. Each stage brought major changes to the way we access, share, and manage information.

Web 1.0: The Era of Static Information (1990s)

Web 1.0 was the first generation of the internet. At this stage, websites only displayed static information. Users could only read without the ability to add comments or make updates.

Core Technologies of Web 1.0:

- HTML (HyperText Markup Language): a markup language for building web page structures.

- URL (Uniform Resource Locator): a unique address to identify resources on the web.

- HTTP (HyperText Transfer Protocol): a protocol to fetch and transfer data.

Examples:

- Company profile websites in the 1990s.

- Online encyclopedias that could only be read without any comment features.

Analogy: Imagine a library where you can read the collection, but you cannot write notes inside the books.

Web 2.0: The Era of Social Interaction (2000s)

Web 2.0 brought significant changes. The internet became more social and dynamic. Users were no longer just readers; they could create content, share opinions, and interact with others.

Examples of Web 2.0 platforms:

- Facebook & Instagram: social media for sharing statuses, photos, and comments.

- YouTube: a platform for sharing and watching videos.

- Wikipedia: an encyclopedia that anyone can edit.

Analogy: Like a café in the city center, where people gather, chat, share stories, or listen to others.

Web 3.0: The Era of Decentralization and Intelligence (Present)

Web 3.0 is the next evolution. It is smarter, more secure, and gives users greater control. Its key principle is decentralization: data is no longer controlled by a single central authority but distributed across many nodes (computers).

Key Characteristics of Web3:

- Decentralization: decisions are not controlled by a single party.

- Data Ownership: users have full control over their personal data.

- Interoperability: applications are interconnected on top of blockchain.

Real-world examples:

- Bitcoin & Cryptocurrency: financial transactions without banks.

- dApps (Decentralized Applications): apps, games, or social media running on blockchain instead of company servers.

- NFT (Non-Fungible Token): digital proof of ownership for artworks, tickets, or certificates.

Analogy: Web3 is like a self-sustaining city. Everyone has their own home, makes their own rules, and can fulfill their needs without depending on a single central authority.

Conclusion

- Web 1.0: static information, only readable.

- Web 2.0: interactive, social, and dynamic.

- Web 3.0: decentralized, giving greater control to users.

By understanding these differences, we can see how the internet continues to evolve and why Web3 is considered the future of a fairer, safer, and more transparent digital world.