MLH

MAJOR LEAGUE HACKING

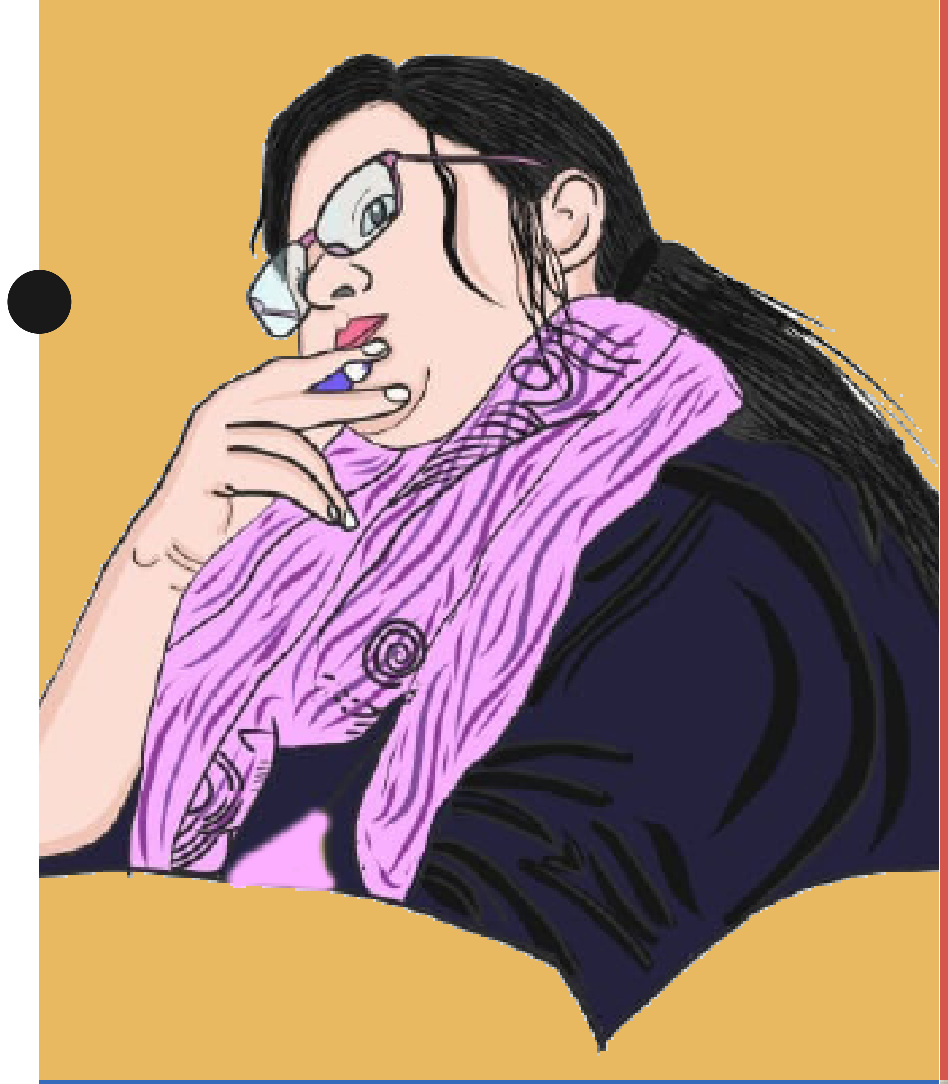
Transition from Web2.0 to Web3.0

MITGEEKS

Who am I ?

I am a software engineer with in-depth knowledge of languages and development tools. My interest revolves around designing, development, technical writing, and teaching. I am proficient with working on frontends and currently learning web3.0 to bootstrap a blockchain career.

midhatahir.me



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Web2 += 1

- Web3 refers to a **blockchain-based decentralized** internet environment.

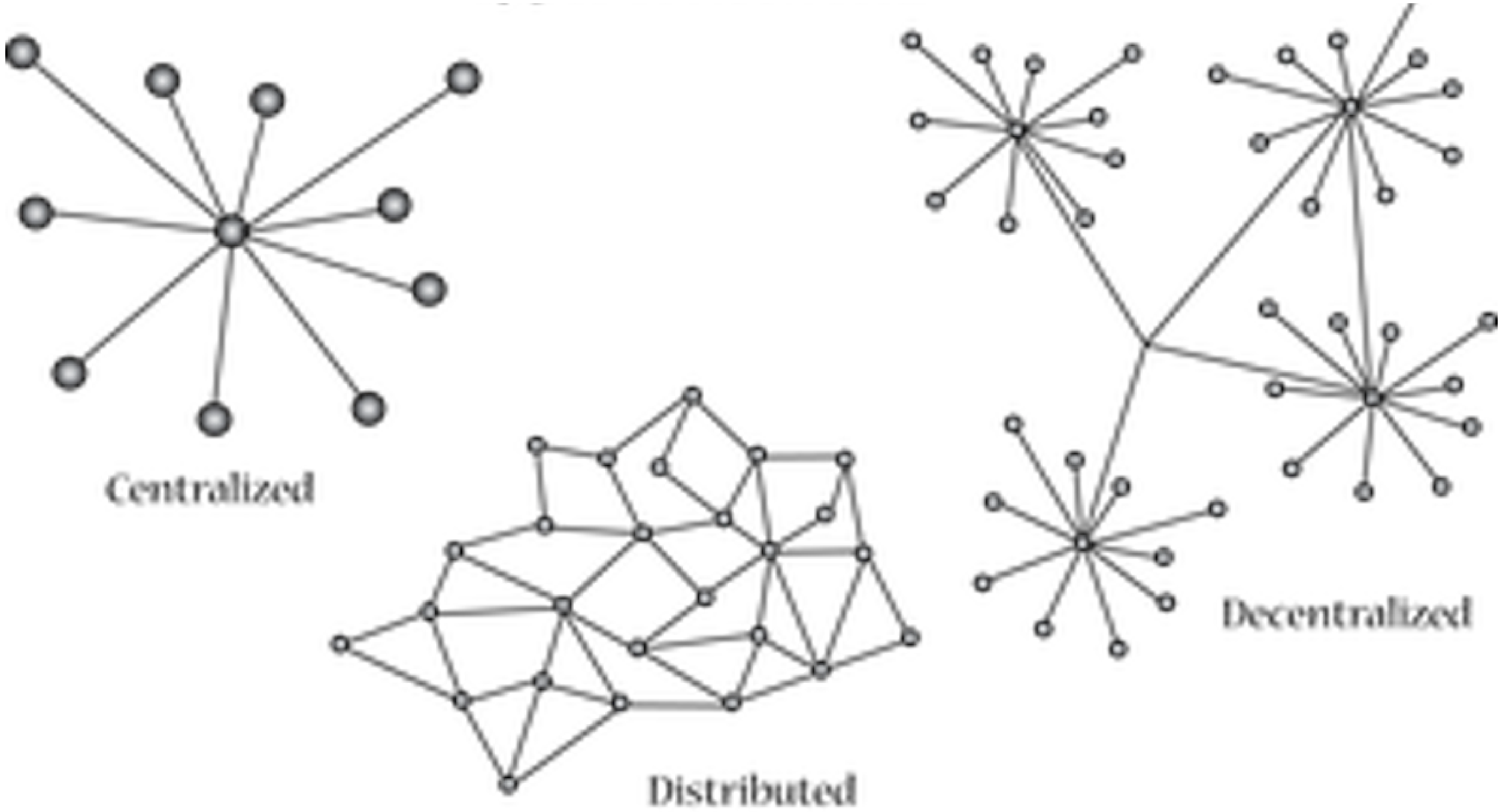
- Platforms and applications (apps) created on Web3 will **not** be controlled by a **centralized gatekeeper**, but rather by users who will earn their ownership interest by assisting in the development and maintenance of such services.

- Web3 provides people with complete control over their **content, data, and assets** via **blockchains**.

- Web3 enhances the web we know today by making it **decentralized, distributed, open, trustless, and permissionless.**

Decentralization

It is getting built such that everything would happen in a **decentralized distributed way** giving **no central authority access** to control the system.



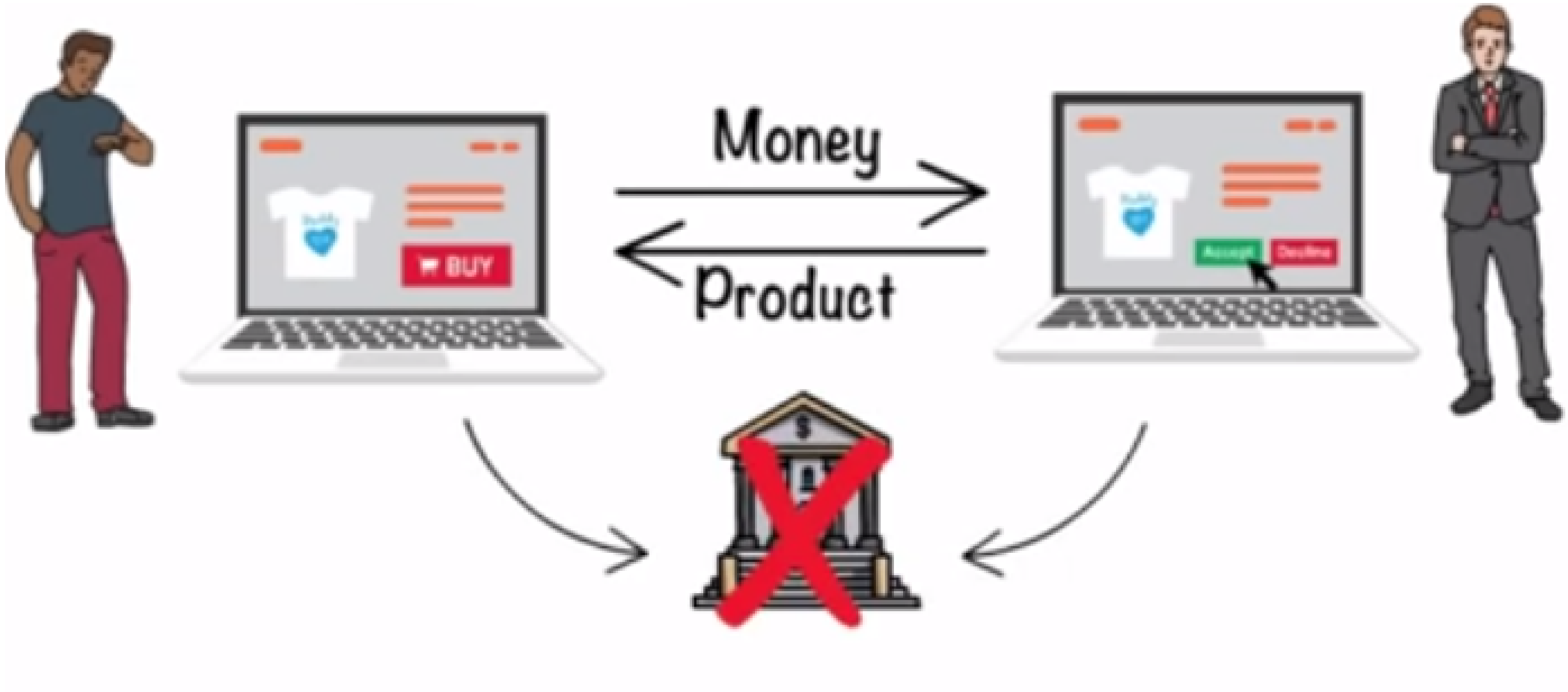
Open

‘Open’ as it would be **open-sourced** software built by an **open and accessible** community of **developers** and **executed** in full view of the world.

Trustless and Permissionless

‘**Trustless**’ in that the network allows participants to interact publicly or privately **without a trusted third party.**

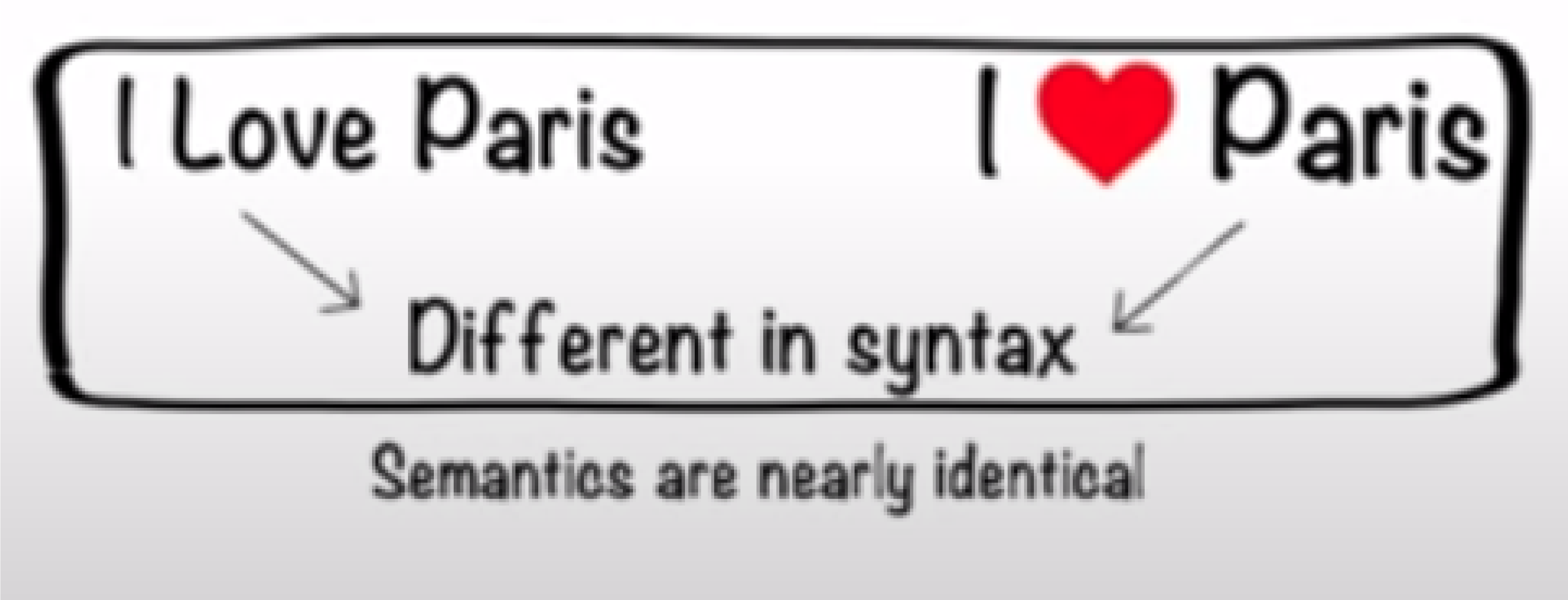
‘**Permissionless**’ means anyone, both users and suppliers, can participate **without authorization** from a governing body.

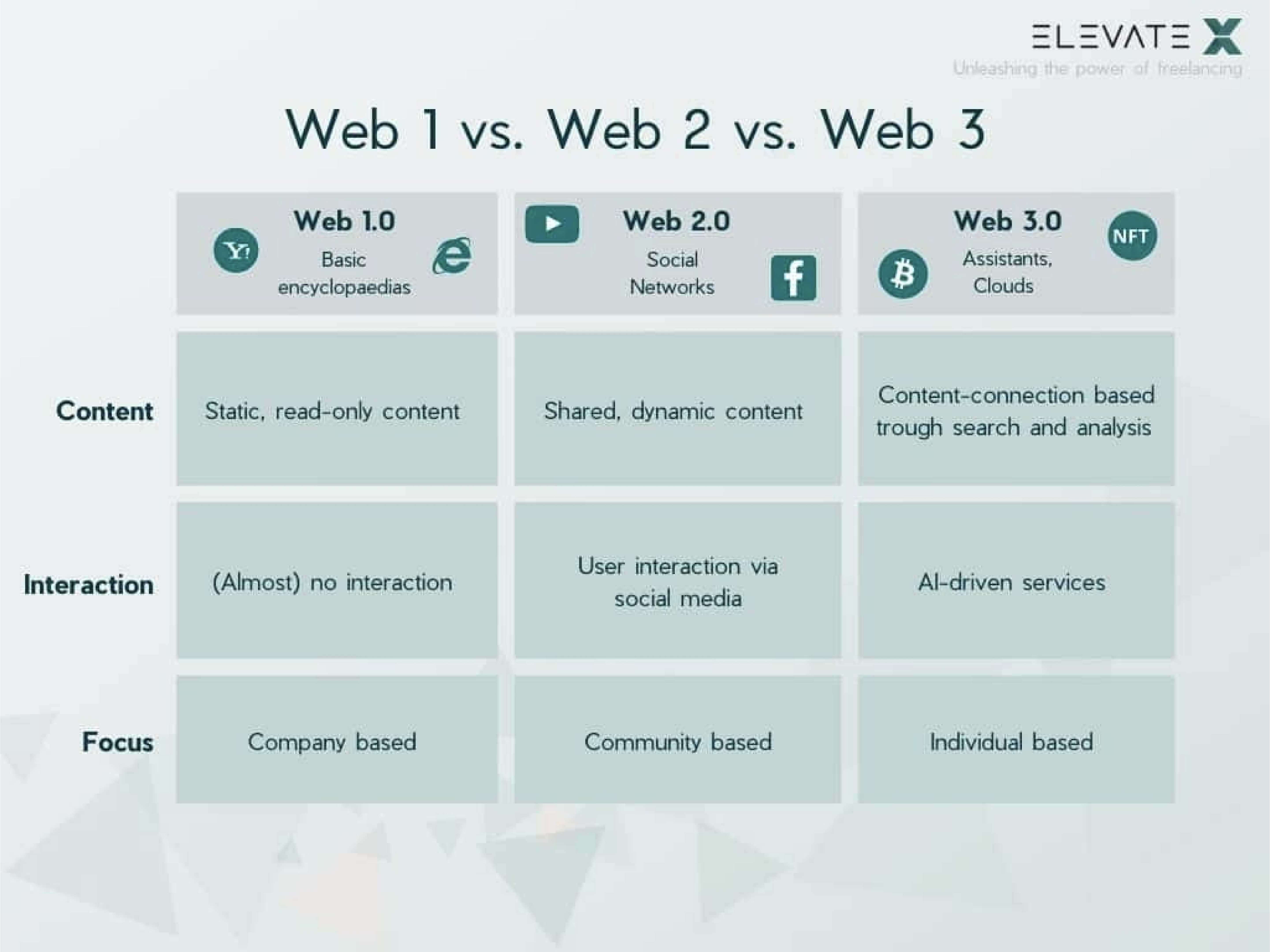


Semantic Web and Artificially Intelligent

The **semantic web** improves web technologies to comprehend the meaning of words, rather than keywords or numbers.

Combining this capability with natural language processing, in Web 3.0. Computers become more **intelligent** to **fulfill the requirements of users.**

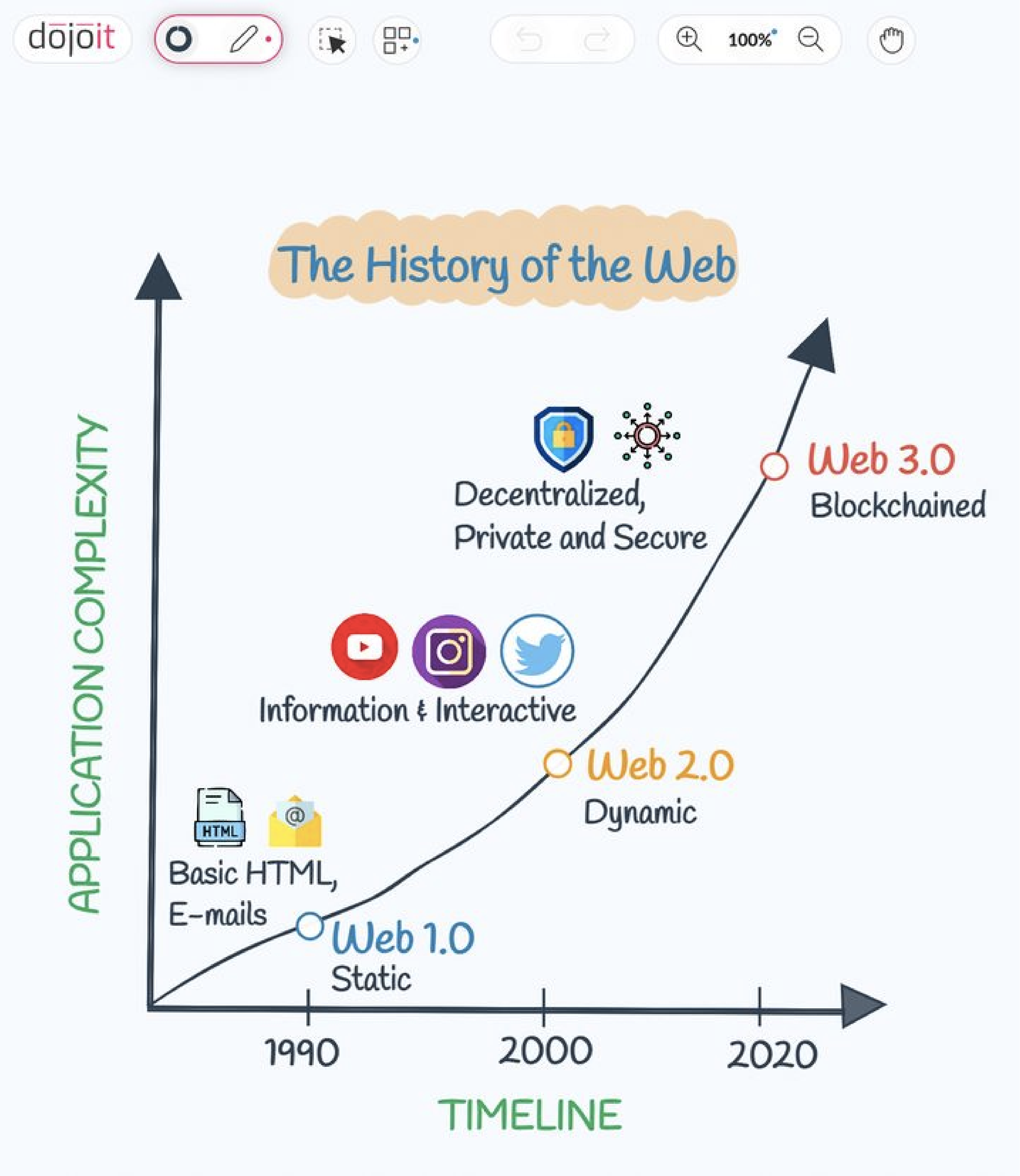




ELEVATE X
Unleashing the power of freelancing

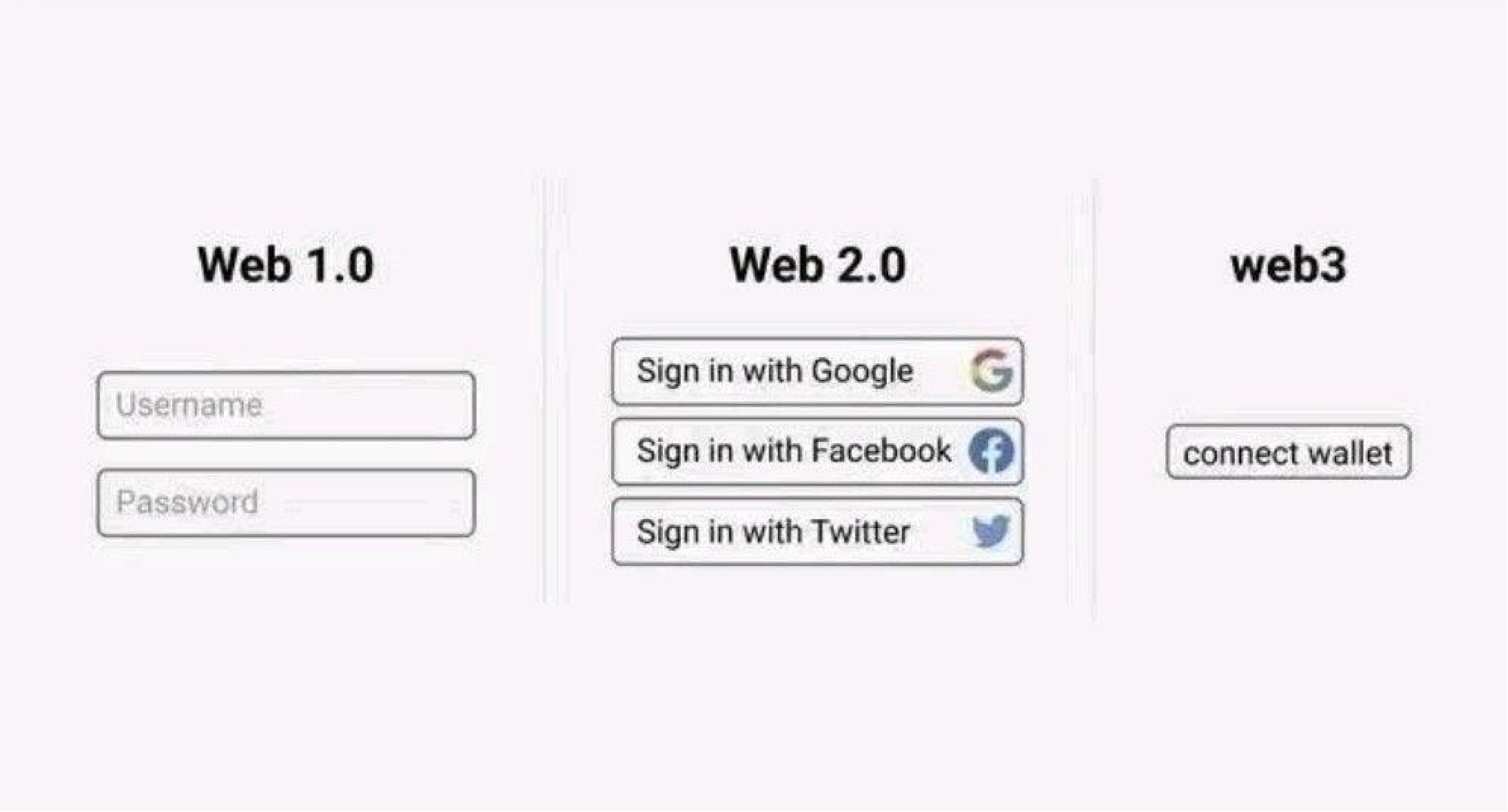
Web 1 vs. Web 2 vs. Web 3

	Web 1.0 Basic encyclopaedias	**Web 2.0** Social Networks	**Web 3.0** Assistants, Clouds
Content	Static, read-only content	Shared, dynamic content	Content-connection based trough search and analysis
Interaction	(Almost) no interaction	User interaction via social media	AI-driven services
Focus	Company based	Community based	Individual based



The History of the Web

WEB1 VS WEB2 VS WEB3



How to become a Blockchain Developer

Web3.0

Web3 is an idea for a new iteration of the **World Wide Web based** on blockchain technology, which incorporates concepts such as decentralization.

Intro to Web3.0 Course

1 ETHEREUM

Ethereum is a technology that's home to digital money, global payments, and applications. Learn about the basics of blockchain and Ethereum:

Intro to Blockchain

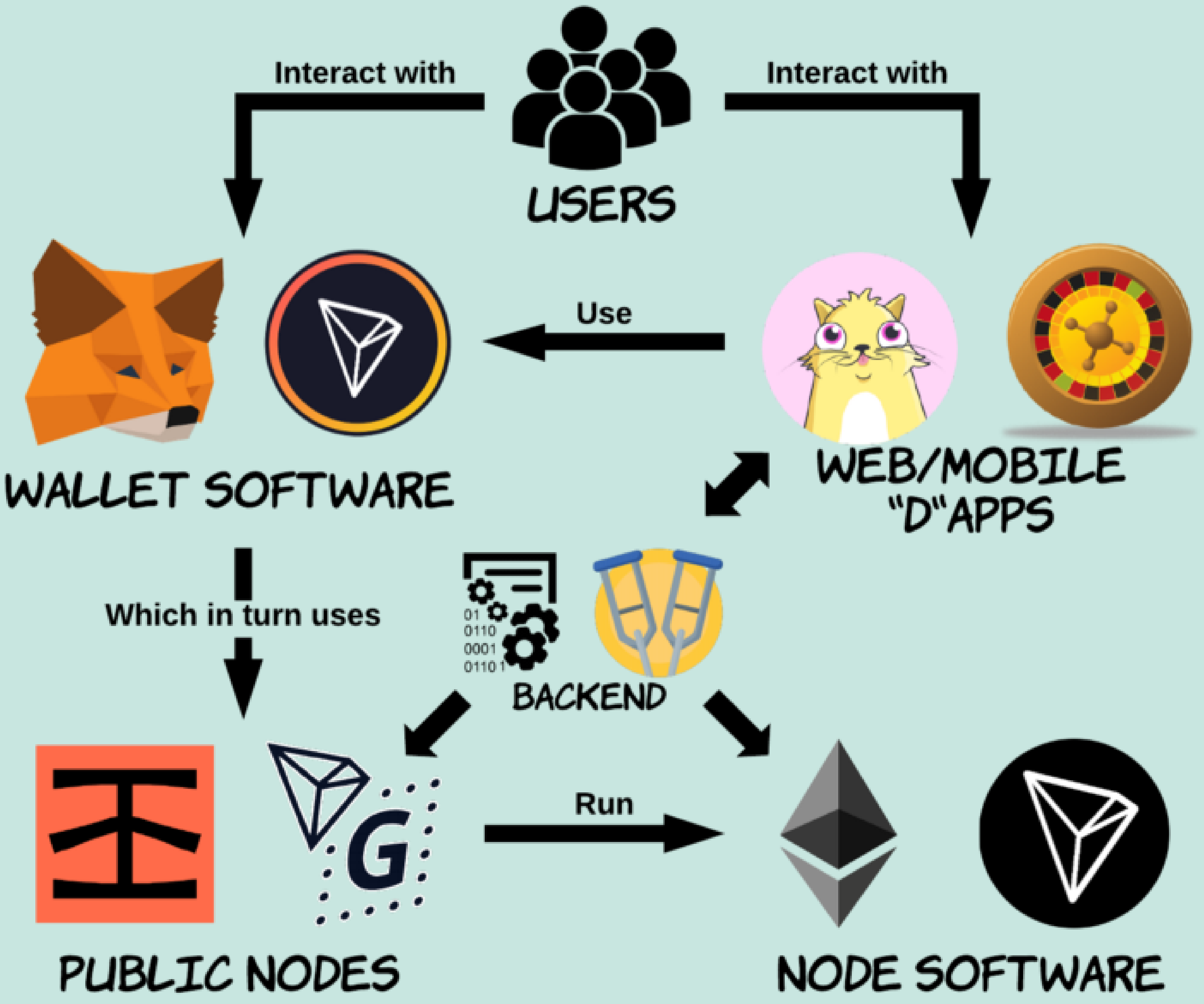
Intro to Ethereum

2 Solidity

Solidity is a programming language for implementing **smart contracts** on various blockchain platforms, most notably, Ethereum.

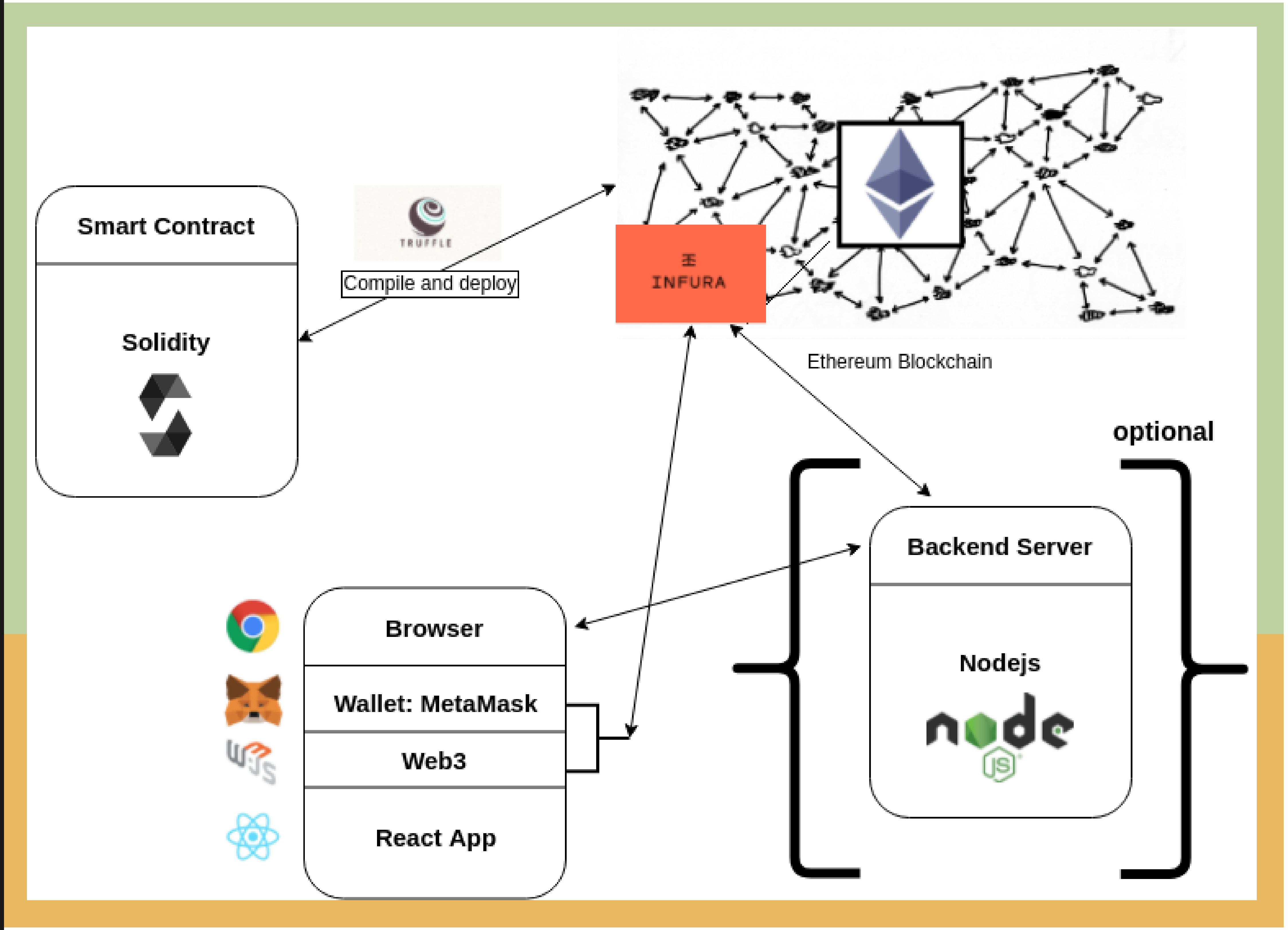
FreeCodeCamp Crash Course

DAPP - ARCHITECTURE



Source: https://www.freecodecamp.org/news/how-to-design-a-secure-backend-for-your-decentralized-application-9541b5d8bddb/

1. Users interact with the frontend of web/mobile dapps.
2. These apps have wallets integrated. Users can (kind of) signup by using these wallets. They provide a unique identity to the user (private key) through which a concept of decentralization is achieved.
3. These wallets use public nodes to interact with our blockchain network.
4. We build backend with solidity smart contracts, also nodeJS can be used to make APIs.



Source: https://soliditydeveloper.com/solidity-overview-2020

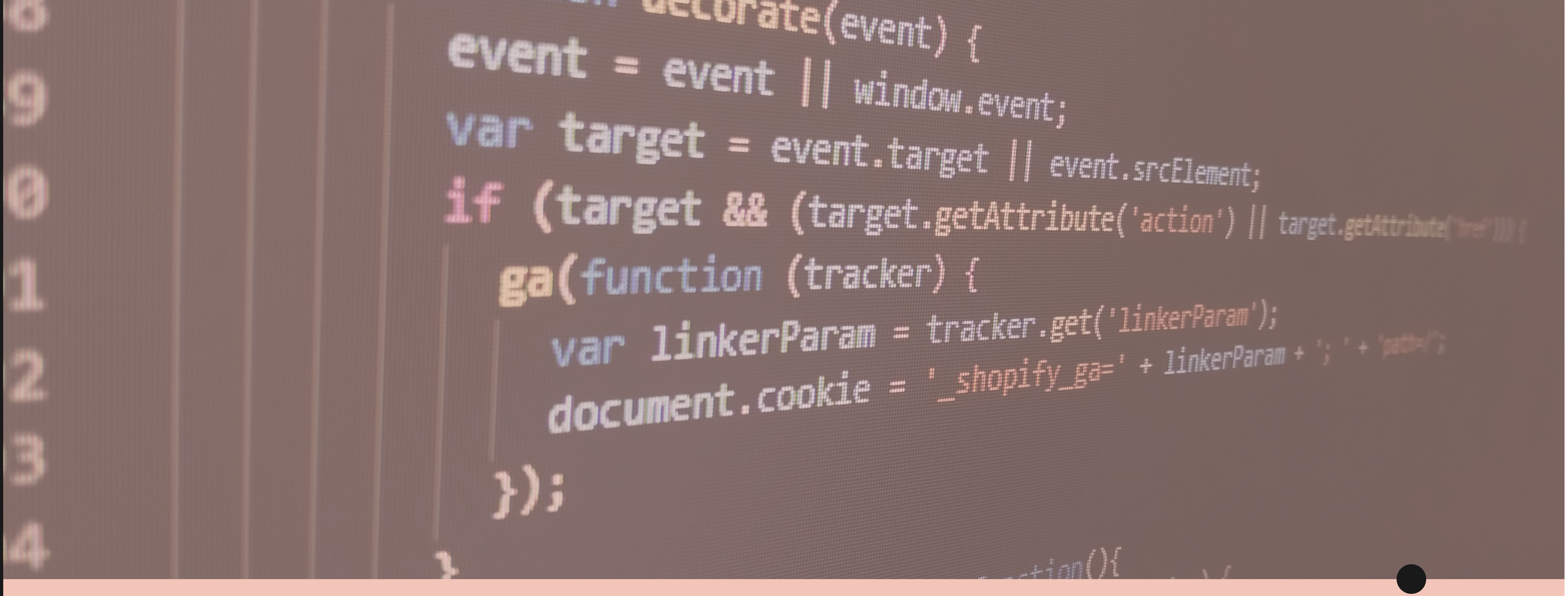
Technologies

1. Frontend:
   a. HTML, CSS, JS
   b. ReactJS, NextJS
   c. Web3
2. Backend:
   a. Solidity
   b. NodeJS, ExpressJS
   c. Databases

Tools

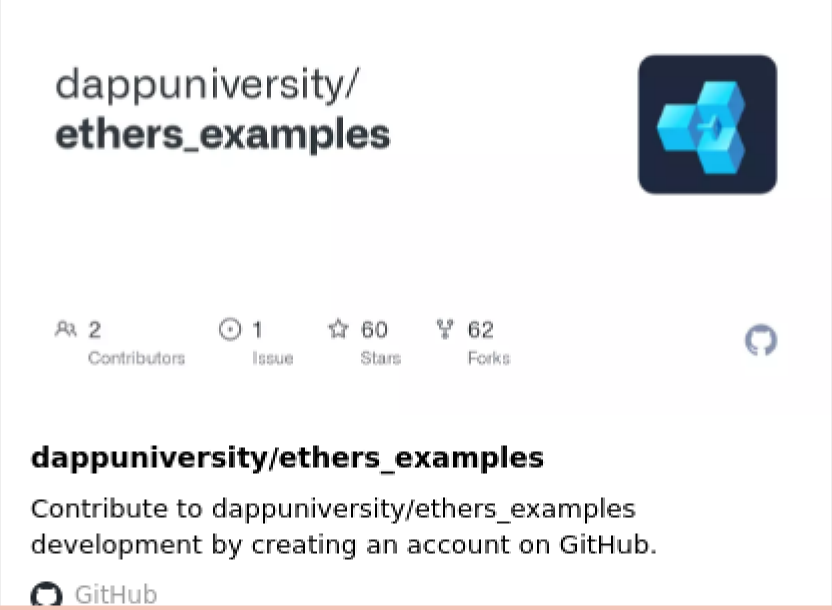
1. Truffle/Hardhat
2. Ganache
3. Remix
4. OpenZeppelin

etc.



```
decorate(event) {
event = event || window.event;
var target = event.target || event.srcElement;
if (target && (target.getAttribute('action') || target.getAttribute('href'))) {
  ga(function (tracker) {
    var linkerParam = tracker.get('linkerParam');
    document.cookie = '_shopify_ga=' + linkerParam + '; ' + 'path=/';
  });
}
function(){
```

Sample Code



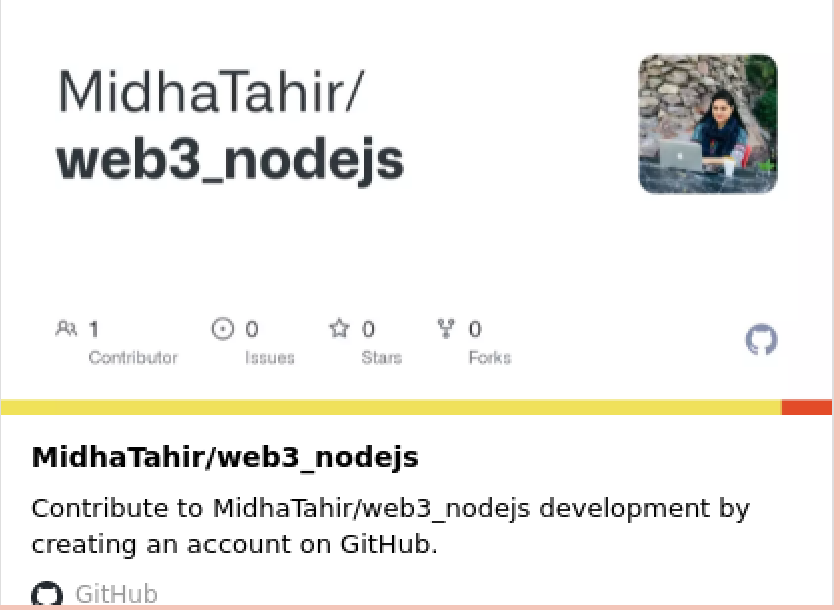
dappuniversity/
ethers_examples

2 Contributors · 1 Issue · 60 Stars · 62 Forks

dappuniversity/ethers_examples

Contribute to dappuniversity/ethers_examples development by creating an account on GitHub.

GitHub



MidhaTahir/
web3_nodejs

1 Contributor · 0 Issues · 0 Stars · 0 Forks

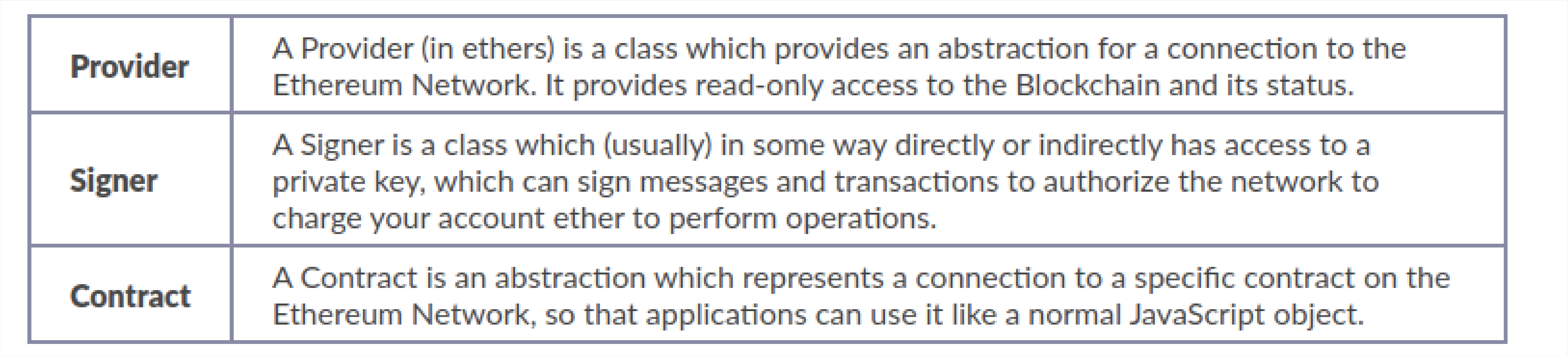
MidhaTahir/web3_nodejs

Contribute to MidhaTahir/web3_nodejs development by creating an account on GitHub.

GitHub

REMOTE PROCEDURE CALL

In distributed computing, a remote procedure call is when a computer program causes a procedure to execute in a **different address space,** which is coded as if it were a normal procedure call, without the programmer explicitly coding the details for the remote interaction



Provider	A Provider (in ethers) is a class which provides an abstraction for a connection to the Ethereum Network. It provides read-only access to the Blockchain and its status.
Signer	A Signer is a class which (usually) in some way directly or indirectly has access to a private key, which can sign messages and transactions to authorize the network to charge your account ether to perform operations.
Contract	A Contract is an abstraction which represents a connection to a specific contract on the Ethereum Network, so that applications can use it like a normal JavaScript object.

CODING TIME

INFURA

Infura provides layer between you and blockchain. Infura is a Web3 backend and I**nfrastructure-as-a-Service (IaaS)** provider that offers a range of services and tools for blockchain developers.

ABI

Contract ABI is an interface to **interact** with EVM bytecode. For example, if you want to call a function in a smart contract with your JavaScript code, ABI plays a role as an **intermediary** between your JavaScript code and EVM bytecode to interact with each other.

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Quick Survey

Link of Survey