Blockchain Glossary

A
Address: A unique string of characters used to send and receive cryptocurrency or tokens on a blockchain.
Altcoin: Any cryptocurrency other than Bitcoin.
ASIC (Application-Specific Integrated Circuit): Specialized hardware designed to mine cryptocurrencies efficiently.

B
Block: A collection of data or transactions that are permanently recorded on a blockchain.
Blockchain: A decentralized, immutable ledger of transactions maintained by a network of nodes.
Burning: The process of permanently removing a cryptocurrency from circulation.

C
Consensus Mechanism: The method by which blockchain participants agree on the validity of transactions (e.g., Proof of Work, Proof of Stake).
Cryptography: Techniques used to secure data and ensure its authenticity.
Cryptocurrency: Digital or virtual currency secured by cryptography.

D
Decentralization: The process of distributing control away from a central authority to a network of participants.
DApp (Decentralized Application): An application built on a blockchain that operates without a central authority.
DAO (Decentralized Autonomous Organization): An organization governed by smart contracts and controlled by token holders.

E
ERC-20: A standard for fungible tokens on the Ethereum blockchain.
Ethereum: A blockchain platform that enables developers to build decentralized applications using smart contracts.

F
Fork: A change to a blockchain's protocol, which can result in two separate versions of the chain (e.g., soft fork, hard fork).
Fungible Token: A token that is interchangeable with another token of the same type and value.

G
Gas: A fee paid to execute transactions or smart contracts on a blockchain network, typically measured in small units like gwei.
Genesis Block: The first block ever created on a blockchain.

H
Hash: A unique string of characters generated by a cryptographic algorithm to represent data.
Halving: A process where the reward for mining new blocks is reduced by half, often affecting Bitcoin's supply.

I
Immutable: Data that cannot be altered once recorded on the blockchain.
Interoperability: The ability of different blockchains to communicate and interact with each other.

K
Key Pair: A public and private key used for encryption and signing in blockchain systems.

L
Layer 1 Blockchain: The base layer of a blockchain (e.g., Ethereum, Bitcoin) where transactions are processed.
Layer 2 Solution: Technologies built on top of Layer 1 blockchains to improve scalability and speed (e.g., Polygon).

M
Mainnet: The live blockchain network where real transactions take place.
Mining: The process of validating transactions and adding them to the blockchain by solving complex mathematical problems.

N
Node: A computer or server that maintains and validates a copy of the blockchain.
NFT (Non-Fungible Token): A unique digital asset that represents ownership of a specific item or content, such as art or collectibles.

O
Oracle: A service that provides external data to smart contracts, enabling them to interact with real-world information.

P
Peer-to-Peer (P2P): A decentralized network where participants interact directly with one another without intermediaries.
Private Key: A secret key used to access and manage blockchain assets securely.
Public Key: A cryptographic key shared publicly to receive funds.

R
Reward: Incentives given to miners or validators for confirming transactions on the blockchain.
Rollups: A Layer 2 scaling solution that bundles transactions and processes them off-chain.

S
Scalability: The ability of a blockchain network to handle an increasing number of transactions.
Smart Contract: Self-executing code that runs on a blockchain and enforces agreements automatically.
Staking: The process of locking cryptocurrency in a wallet to support the operations of a blockchain network and earn rewards.

T
Token: A digital asset issued on a blockchain, representing value or utility.
TPS (Transactions Per Second): A measure of how many transactions a blockchain can process per second.

U
Utility Token: A token designed to provide access to a specific product or service within a blockchain ecosystem.

V
Validator: A participant in a Proof of Stake blockchain that verifies transactions and maintains the network.
Volatility: The degree of variation in the price of a cryptocurrency.

W
Wallet: A digital tool for storing and managing cryptocurrencies and tokens.
Whitepaper: A detailed document explaining the technical and financial aspects of a blockchain project.

Z
Zero-Knowledge Proof: A cryptographic technique that allows one party to prove something to another without revealing underlying data.