

6

Crypto

Terms



Crypto Terms

Lesson 6

Digital Economy: Terms

To learn more about the digital economy, we've got to broaden our vocabulary. That isn't always easy if we're locked in a solitary cell, or if we don't have access to a classroom, a teacher, or a dictionary.

In this sixth lesson, we'll define terms that we've used in the earlier lessons.

While I served my sentence, I developed a strategy to help me learn new concepts and develop my vocabulary in business or other subjects. I'd read the Wall Street Journal or other business publications. Each time I came across a word that I didn't understand, I'd write the term on one side of an index card. I'd look the word up in a dictionary, then write the definition on the other side of the index card.

I'd carry the cards with me. Whenever I waited in lines, I'd flip through the index cards and test myself on what I've learned. This strategy improved my comprehension. By learning more, I felt more empowered to create or seize opportunities.

Of course if a person doesn't have access to the dictionary, it's harder to learn the terms. And with the digital economy, the terms are so new that older dictionaries will not include them. With this lesson, participants can broaden their vocabulary of terms in the digital economy. I encourage participants to learn them at their own pace.

51% Attack

- » A potential attack on the blockchain network. It would mean that a single entity or organization would be able to control the majority of the hash rate, potentially causing network disruption. It's unlikely to happen because it would take too much computational power, making the effort an unprofitable and an inefficient use of resources.

Altcoins

- » Alternative cryptocurrencies to Bitcoin. Examples include ethereum, litecoin, and ripple. Each altcoin operates according to its own rules and protocols.

Bitcoin Halving

- » The event where the reward for mining new blocks is halved, occurring approximately every four years. It ensures that the total supply of Bitcoin will not exceed 21 million, and that the network releases the Bitcoin into the economy gradually, over time. We don't anticipate all 21 million Bitcoin to be in circulation until 2140.

Block

- » A file that permanently records Bitcoin transactions. Each block contains a list of recent transactions, a reference to the block that came immediately before it, and an answer to a complex mathematical puzzle.

Blockchain

- » A public ledger of all Bitcoin transactions that have ever been executed. It's constantly growing as completed blocks are added to it with a new set of recordings.

Blockchain Address

- » An identifier that represents a possible destination for a Bitcoin payment. Addresses are alphanumeric strings derived from public keys and are used to receive and send cryptocurrency. It's like an account number, or an email address, which you would give to anyone from whom you want to receive information.

Block Hash

- » A unique identifier of a block in the blockchain, generated by passing the block's header through a cryptographic hash function. Think of a

block hash as a unique code for a block in the blockchain. It's like a fingerprint for a block of transactions—the recording of who sent and received Bitcoins. When a miner puts a transaction into a block, they are processed through a special formula that gets scrambled, then generates a unique string of numbers and letters, unique to the transaction.

Bitcoin Units

- » Divisions of a Bitcoin. The smallest unit is a satoshi, which is one hundred millionth of a single Bitcoin (0.00000001 BTC).

Bitcoin Wallet

- » A software program where Bitcoins are stored. Wallets facilitate the sending and receiving of Bitcoins and give ownership of the Bitcoin balance to the user. There are different kinds of wallets. Some wallets have the entire blockchain (full wallet) others record a portion of the blockchain (light wallet).

Cold Storage

- » Keeping a reserve of Bitcoin offline as a security measure to reduce the risk of theft from hackers or other online vulnerabilities. To access cold storage, a person must always know the key to a cold-storage wallet—or the Bitcoin will be nonrecoverable.

Consensus Mechanism

- » The process used to achieve agreement on a single data value among distributed processes or systems. Bitcoin uses Proof of Work as its consensus mechanism.

Decentralized Applications (dApps):

- » Applications that run on a peer-to-peer network of computers rather than a single computer.

Decentralized Finance (DeFi)

- » Financial services, such as borrowing, lending, or asset trading, that are provided without the need for a traditional financial intermediary, and are instead conducted on a blockchain.

Double Spending

- » A potential flaw in digital currency systems where the same digital token can be spent more than once. The Bitcoin blockchain prevents the possibility of double spending with cryptography and network consensus mechanisms.

Fork

- » A change to the software of the digital currency that creates two separate versions of the blockchain with a shared history. A fork is a part of the blockchain protocol, requiring consensus from the network.

Full Client Wallet

- » A Bitcoin wallet that maintains a full copy of the blockchain and independently validates transactions and blocks.

Hash Rate

- » The measuring unit of the processing power of the Bitcoin network. The hash rate directly affects the efficiency and speed it takes to discover a new block and add the block to the blockchain. A higher hash rate means the system can make more computational guesses per second, increasing the chance of solving the puzzle necessary to mine a block.

Initial Coin Offering (ICO)

- » A fundraising mechanism that is similar to an initial public offering (IPO) in the stock market. It allows companies to raise capital by issuing digital tokens in exchange for cryptocurrency, like Bitcoin or ethereum. Sometimes, the tokens bring advantages, such as the right to share future profits of the company.

Keys

- » Strings of data used for cryptographic purposes in Bitcoin. Includes a private key and a public key. They are like passwords that people would not share, to protect accounts. Private keys include secret alphanumeric codes that enable the spending of Bitcoins from a specific wallet. Public keys can be shared openly and are used to receive funds.

Lightweight Client Wallet:

- » A Bitcoin wallet that connects to the Bitcoin network but does not download the entire blockchain. They are more convenient for people to manage crypto for everyday use.

Mining

- » The process by which new Bitcoins are released into circulation through compiling recent transactions into blocks and solving complex mathematical puzzles.

Non-Fungible Tokens (NFTs)

- » A type of cryptographic token on a blockchain that represents a unique asset. They can be used to prove ownership of digital items like artworks or collectibles. They do not have their own blockchain, like Bitcoin. Instead, they are built on top of existing blockchain platforms that

support smart contracts. The most popular blockchain for creating and trading NFTs is Ethereum. Others include Solana and Flow.

Proof of Work (PoW)

- » A consensus algorithm used by Bitcoin and other cryptocurrencies to secure the network, validate transactions, and create new blocks on the blockchain. It differs from other consensus algorithms, such as a Proof of Stake (PoS).

Satoshi Nakamoto

- » The pseudonymous person or group of people who created Bitcoin and wrote the original white paper.

Smart Contracts

- » Self-executing contracts with the terms of the agreement directly written into code. We will have specific lessons on Smart Contracts in the future to show their use in various applications, including finance, supply chain, real estate, and voting.

Tokenization

- » The process of converting rights to an asset into a digital token on a blockchain.

Transaction

- » A transfer of value between Bitcoin wallets. Each transaction is recorded on the blockchain.

Whitepaper

- » The original document that Satoshi Nakamoto published to introduce the concept of Bitcoin and lay out how it worked. Typically, other cryptocurrencies begin with the company publishing a similar whitepaper, which would provide investors with detailed information about the project and the problem it set out to solve.

I will develop individual lessons that offer more details and explanations of the terms above.

Investment:

As in the previous lesson, I'll continue to show how I'm using my growing knowledge of cryptocurrency to make it a part of my long-term investment strategy.

After making my first two purchases, I continued to dollar-cost average my way into the next purchase. I set a goal of putting between 5 and 10 percent

of my total net worth into Bitcoin or other cryptocurrencies, but I intended to make the buys gradually.

After a steady decline, down to below \$39,000 per Bitcoin, the tide began to turn. On February 9, 2024, at 6:49 pm, the price per Bitcoin rose to \$47,812.72. I chose to add to my holdings, purchasing a half of a Bitcoin for a total cost of \$24,444.25, inclusive of the higher Coinbase fee of \$537.89 (2.25% of the Bitcoin price).

- » Total investment in BTC at end of day, February 2, 2024: \$113,604.27
- » Total holdings: 2.5 BTC
- » Total value: \$119,538.80
- » Gain or Loss: \$5,934.53

The value of my holdings now surpassed the total amount that I had paid by \$5,934.53.

Disclaimer:

For full transparency, I am not an investment advisor. Our nonprofit, Prison Professors, offers these lessons for the singular purpose of helping people learn more about the digital economy. I provide information on my personal investments to show that even a person who served 26 years can participate in the digital economy. I am an investor and a speculator, understanding the risks. No one should invest in any asset class without a strategy and a plan, as shown through our introductory course: Preparing for Success after Prison. Always develop an understanding of investment risks—especially with cryptocurrency.

Critical Thinking Questions:

If you're willing to participate in our advocacy efforts for reforms that will allow people to work toward earning freedom, please provide your responses to the following questions:

In what ways does decentralized finance (DeFi) differ from centralized finance?

How would you differentiate Bitcoin from a token?

In what ways would building your vocabulary on the digital economy influence income opportunities for you?

Advocacy Initiative:

Please share your story and responses through the manner that works best for you:

1. Send through email to Interns@PrisonProfessorsTalent.com
Subject line: Digital Economy Course
2. Send through regular mail:
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% Digital Economy Course
32565 Golden Lantern, Suite B-1026
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Three most recent lessons sequences:

- » Lesson 5: Digital Economy: Bitcoin History
- » Lesson 6: Digital Economy: Terms
- » Lesson 7: Decentralized Finance