A blockchain is a database that is shared across a network of computers.

Blockchains are commonly associated with the underpinning of cyber-currencies like bitcoin, but in reality, a blockchain can be useful for any type of processed internet transaction.

The blockchain concept was first introduced by Stuart Haber and W. Scott Stornetta in 1991 as a cryptographically secured chain of blocks – in other words, a chain or blocks that are linked and cryptographically secured.

The blocks in a blockchain consists of three elements:

* A hash pointer to the previous block
* A timestamp
* Transaction data

As cryptographically secured blocks, blockchains are very secure and difficult to modify.

Benefits of blockchain technology include increased digital processing power, a hedge against surging cybercrimes and as a secure architecture against the backdrop of the rise of bitcoin and cryptocurrency.

Blockchain, by design, requires higher processing power than normal data computing. It is all because of redundancy of data, distributed storage and cryptography. Data encryption and decryption is a costly by nature. However, blockchain’s popularity is on the rise because today’s computers have more processing power thanks to modern processors developed by NVIDIA among other reasons.

The infrastructure of blockchain technology focuses on decentralization. By storing data across its peer-to-peer network, the blockchain eliminates a number of risks that come with data being held centrally. The decentralized blockchain may use ad hoc message passing and distributed networking.

Blockchain security methods include the use of public-key cryptography. A public key (a long, random-looking string of numbers) is an address on the blockchain. Value tokens sent across the network are recorded as belonging to that address. A private key is like a password that gives its owner access to their digital assets or the means to otherwise interact with the various capabilities that blockchains now support. Data stored on the blockchain is generally considered incorruptible.

Want to learn more about blockchain technology? Tonex offers [Blockchain Training Bootcamp](https://www.tonex.com/training-courses/blockchain-training-bootcamp/), a 3-day course where participants learn about the fundamentals of blockchain technology and tools to develop opportunities and applications.

Additionally, Tonex offers more than six dozen other [IT and Technology courses](https://www.tonex.com/it-and-technology-courses/). For more information, questions, comments, [contact us](https://www.tonex.com/contact-us/).