

WHAT EXACTLY IS BLOCKCHAIN TECHNOLOGY?

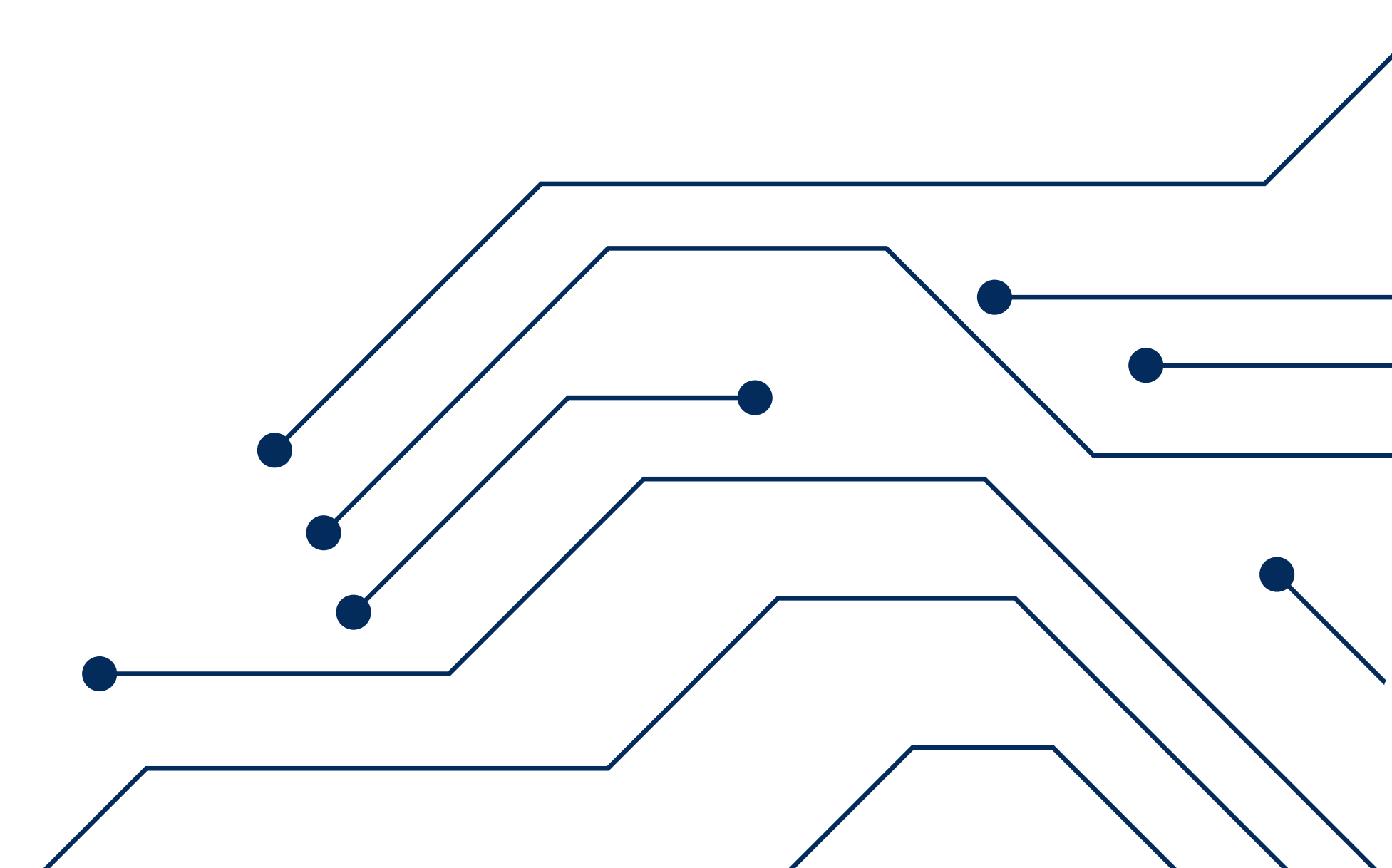
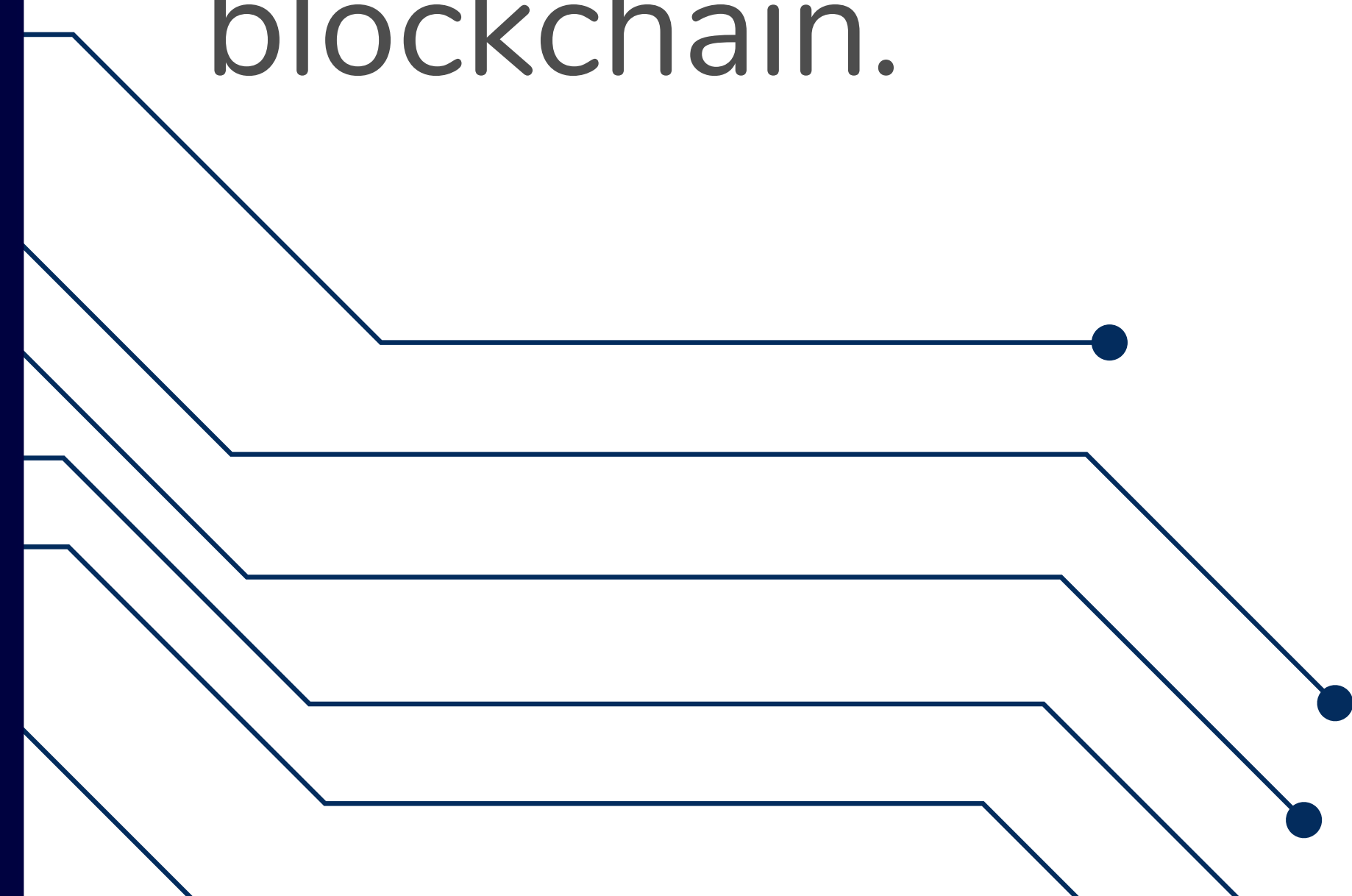


The world has witnessed the rise in blockchain technology over the past decade with Bitcoin being front and center. In the world of finance, blockchain has become extremely useful for recording transactions, transferring value, and being a distributed database that holds mass amounts of information.

But what is it really?

It is essentially a network of computers that have ledgers on them that record data and update data simultaneously. One could think of it like the cloud on the internet. When you upload something to the cloud it is accessible to others and sometimes even editable by others. This is similar to blockchain technology where transactions and value are updated and transferred throughout the particular blockchain at the same time.

The difference is, if I upload something to the cloud, it is only accessible to certain people. With blockchain technology, the information is not updated or changed by people but by the computers connected to the blockchain.



Not only are all the ledgers updated automatically and at the same time, they are done so by the distributed blockchain, so all the changes are agreed upon by decentralized parts of the blockchain. This means that none of the data can be corrupted by an individual actor or by a central part of the system. This has proven as one of blockchain technology's most attractive features. Because the data is stored and updated in a decentralized fashion, it is more secure and almost unable to be tampered with.

Blockchain is basically distributed ledger technology which means that transactions are recorded and distributed over all the blocks in the chain. Transactions cannot be reversed and are updated across the entire network. All the network participants have a ledger of the transactions.

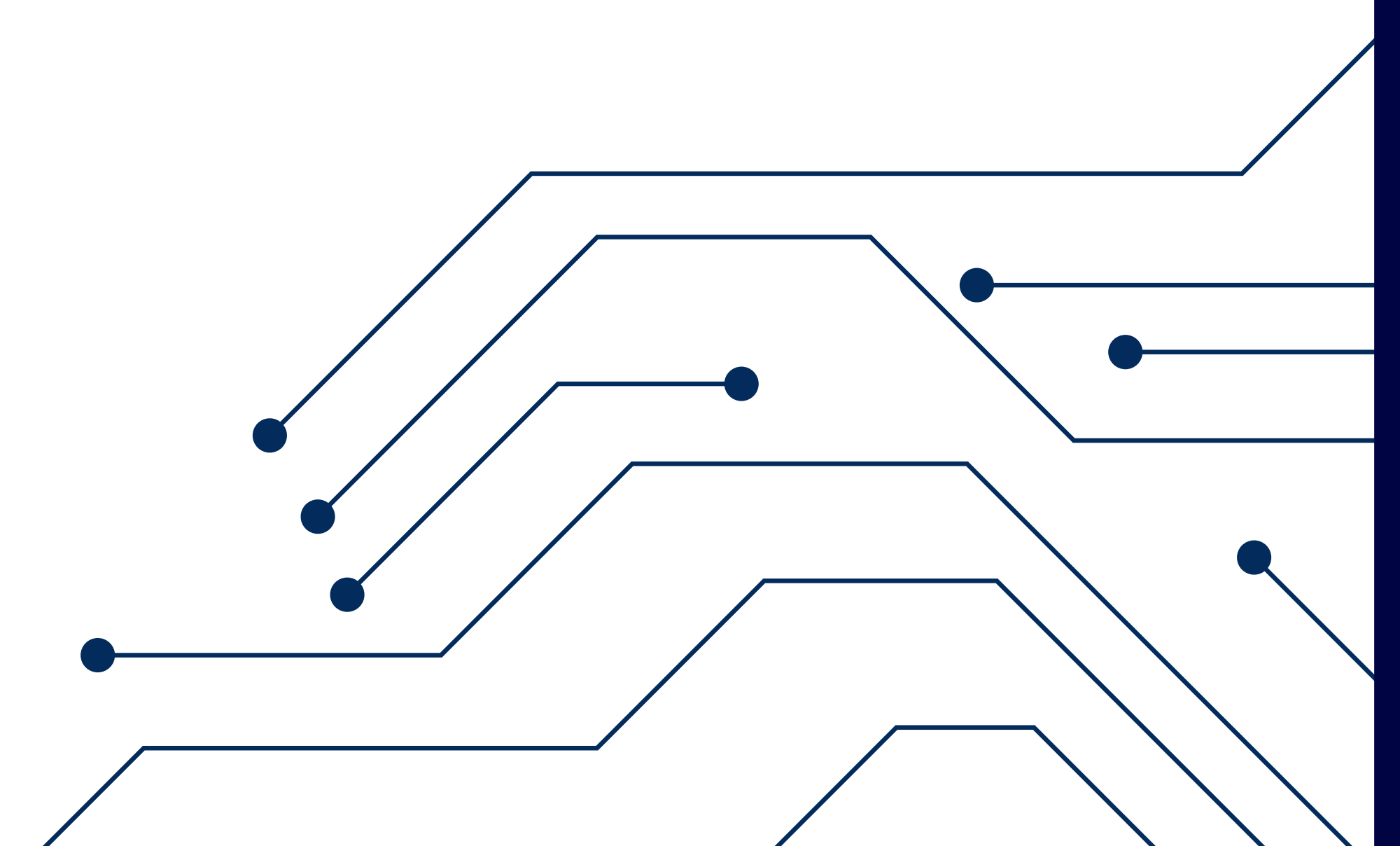
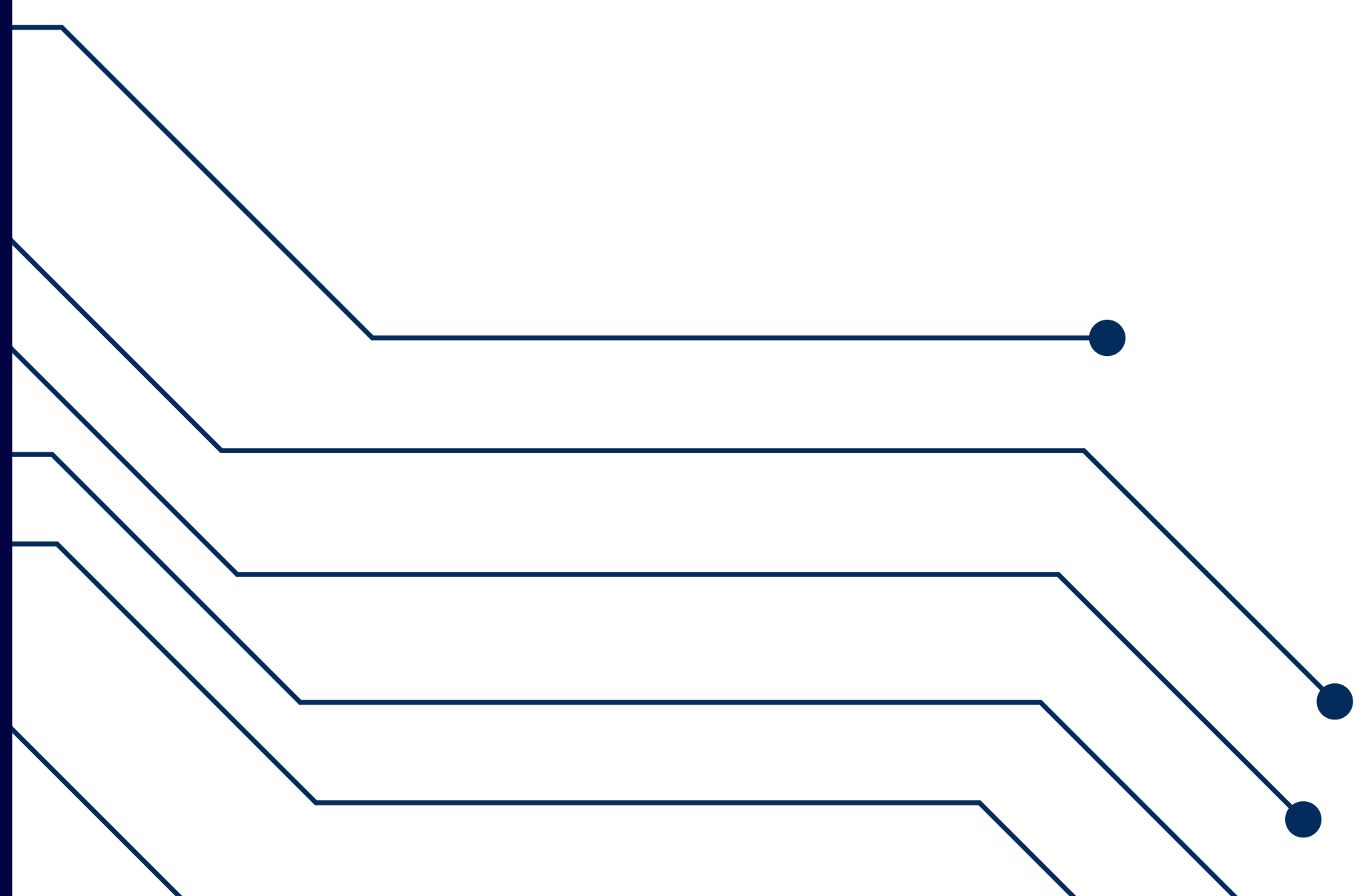
Blockchain technology collects data in groups together as blocks, and each block contains a certain amount of data. When the data capacity of one block is filled, it is chained to the other blocks on the blockchain. This way, all the data is permanently recorded and viewable to every other block on the chain.



Another way to think of it is like an SQL database on a web server. The web developer that designed the SQL database could change anything in the database to his wishes. Blockchain solves this issue by being distributed and making sure that every transaction on the blockchain is agreed upon by all the participants in the chain.

Essentially, if one block is changed on the blockchain, it would be immediately become apparent that it was hacked. Since all the blocks must be congruent at all times with the same information, it would require a hacker to infiltrate every single block on the chain to do any kind of damage.

It uses an immutable cryptographic signature called a hash to record transactions. This is basically a very secure signature that is not vulnerable to attacks. This is the reason for the term cryptocurrencies and also why most all transactions are anonymous over most blockchains. Now the word cryptocurrency is a common term and there are thousands of different cryptocurrencies built on different blockchains all with different use cases and attributes.



Many attempts have been made to create a digital currency in the past, but before blockchain there were always hang-ups about the technology. Because there was always a centralized actor who could manipulate the data to his needs, digital currency was a hard feat to achieve. But, because of distributed ledger technology and blockchain, a very secure digital money seems to be here to stay. Bitcoin was able to solve this problem with its secure and distributed nature.

Though it is the dominant leader still in the world of cryptocurrencies, Bitcoin may be outshined in the future by other cryptocurrencies that are more efficient and have more use cases than the later.

