# Blockchain and cryptocurrencies

Blockchain origins start with one of the most well-known cryptocurrencies *Bitcoin*. To understand blockchain technology and cryptocurrencies and what impact this has to daily life and where it could lead to in the future, a basic understanding of architecture and purpose of blockchain technology.

In summary *Bitcoin* is a *“a peer-to-peer electronic cash system”.* A peer-to-peer network means that it is completely transparent, no information can be removed and is timestamped in a decentralized system. Originating from *Satoshi Nakamoto (pen name);* it was released to the open source community in 2009. It is a modern and relatively new technology addition to the e-commerce world.

This allows transactions within the system on a public space between people on the network without having to have transactions processed in a singular centralized system (third party). As generally most transactions currently happen that a third party must approve authenticity and accuracy of information before a payment is processed and approved. Commonly in e-commerce websites such as *eBay* or *Amazon,* payments can take up to two business days for the seller to receive your payment before being able to process your transaction. Blockchain eliminates this buffer as tampering becomes near impossible as the structure of blockchain and transparency that it demands. Once a transaction is made, it generates a hash code that becomes a new node to the branch and becomes a permanent piece of information that is immutable. Any changes would have to add generate a new hash code, and this allows for history checks of transactions and major changes. Enforcing transparency and giving an ease to safety and authenticity of every single transaction made. As *Don and Alex Tapscott state, “[blockchain is] incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value.”* Due to the strength of its immutability, it eliminates vulnerabilities of DDoS attacks and if something disturbs the system, everything will cease immediately, and all information access would cease till the disturbance is removed.

Currently the SHA-256 is used for creating hash codes and requires a high-level core processor due to the complexity of the algorithms. Together with the growing advancement of core processing power in technology this allows the algorithms to be solved and generated faster. Increasing the general accessibility to the e-commerce sector and for even more *miners* to be involved to increase total transaction authentications in cryptocurrencies such as *Bitcoin.* Within a few years, cryptocurrencies and the blockchain structure can be implemented in large institutions or companies for commercial use.

Currently there is talk about implementing the blockchain structure to banks where money is needed to be dealt with, such as loans, deposits and withdrawals. With the characteristics of blockchain and the transparency of every single transaction made to an account, there would be an inability to commit fraudulent or illegal acts such as money laundering and would hold every customer accountable for every transaction made through their account. This would make the fraud sector of banks obsolete as every single transaction would be recorded. It may also make those within the banks whose roles are more analog and manual to become obsolete or reduced to minimal numbers as well because technology is advanced enough to handle their roles with little to no human interference. As for cryptocurrencies their market value is still very volatile, and fluctuations are still extreme in their value as they are establishing their base within the commerce sector. Gradually over the years from their origination from 2009 it is showing more stability each year, within a few years it will be predicted more people will start buying cryptocurrencies as a form of investment as many people do with gold, due to the advancing nature of our society with more of our daily lives and transactions holding place through technology compared to the olden times of analog and manual transaction.

For the rest of society our future with blockchain technology and cryptocurrencies will only increase, as we slowly process all our monetary possessions and assets into an online database for ease of recording. This is already showing personally for me and those around me as many of us do not even see a need for cash withdrawal as we can process all transaction through our phones alone and manage everything through internet banking. All my transactions and summary of account are visible within a few minutes and tracked so I can always know what is happening with my money. But with the increase of people adopting the technological ease, there comes paranoia that our accounts aren’t full secure from hackers or fraudulent activity. On a personal note, I think when blockchain becomes more normalized in society as will cryptocurrencies and we would be seeing whole database and software updates to the way we handle monetary assets or anything of official significance.