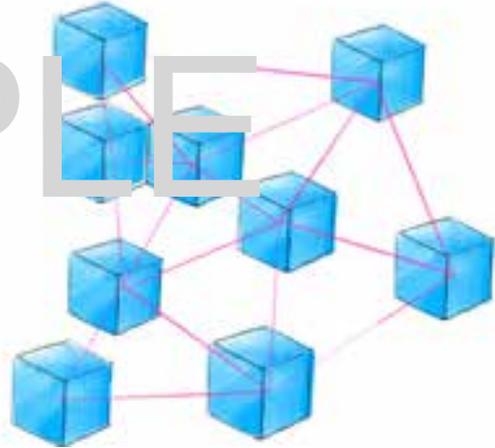


WHAT IS A BLOCKCHAIN ?

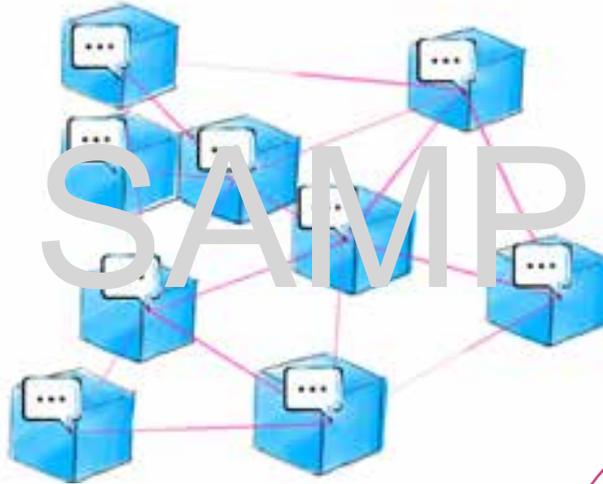
SAMPLE

Image a network of computers..

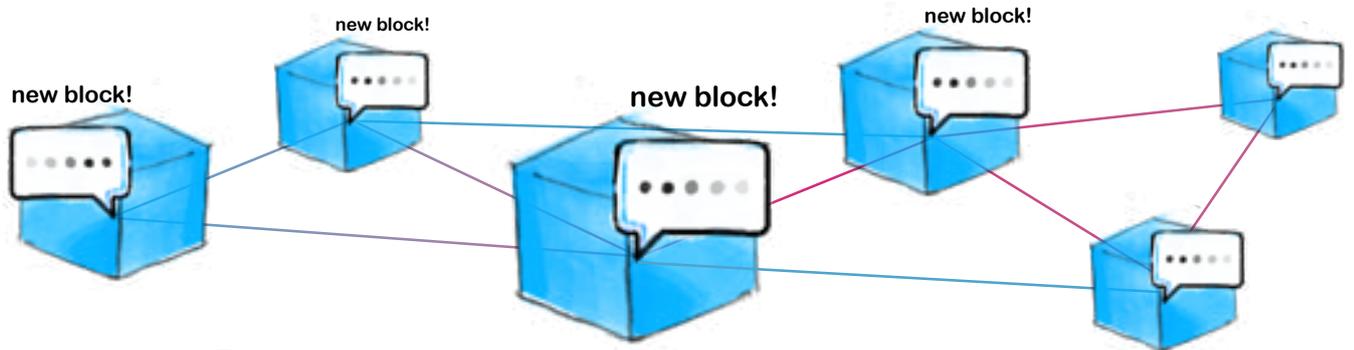


sharing the same database.

SAMPLE



and this database constantly grows



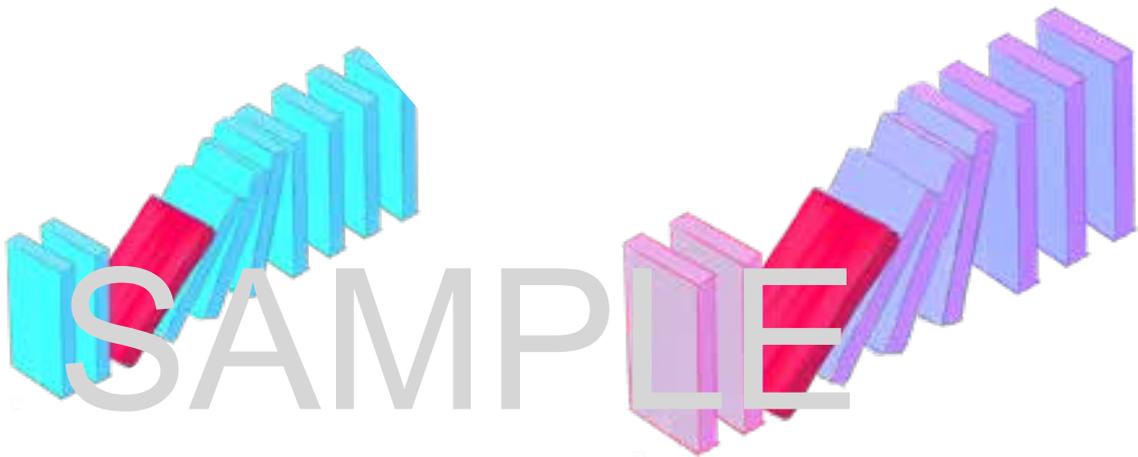
SAMPLE

The latest block is made with all the ingredients of all the previous blocks

The database is made out of blocks , linearly added one by one, one after the other, all together they form a chain made of blocks.



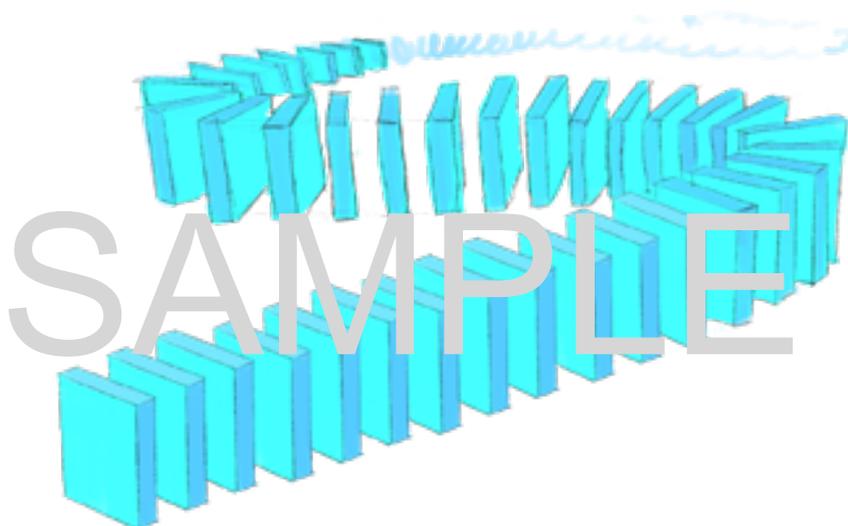
The chain cannot be modified because is protected by a secret language



Since all the blocks are connected

If a block will be modified all the blocks will be affected.

The network will reconise the problem and repretinate the chain.



SAMPLE

SAMPLE

What is the Difference Between a Blockchain and a Database?

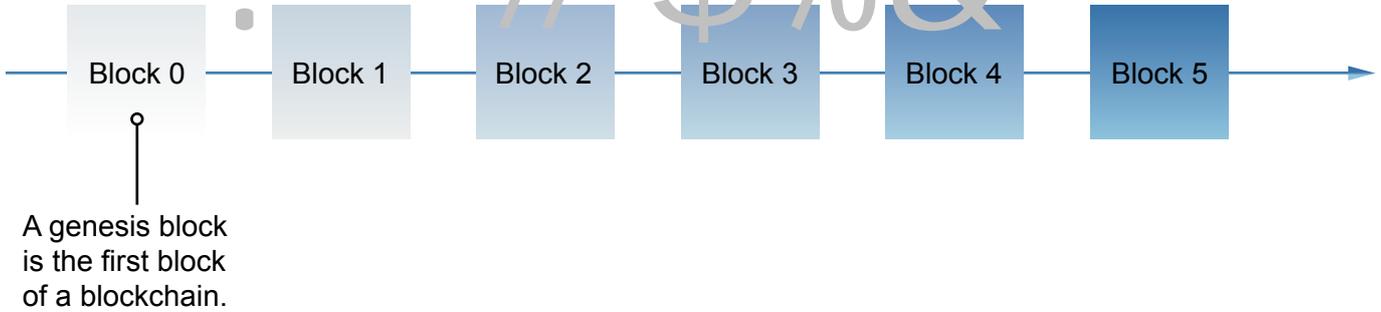
<https://www.chinacsi.com/year/2018/blockchain-101/>

what is blockchain technology

SAMPLE

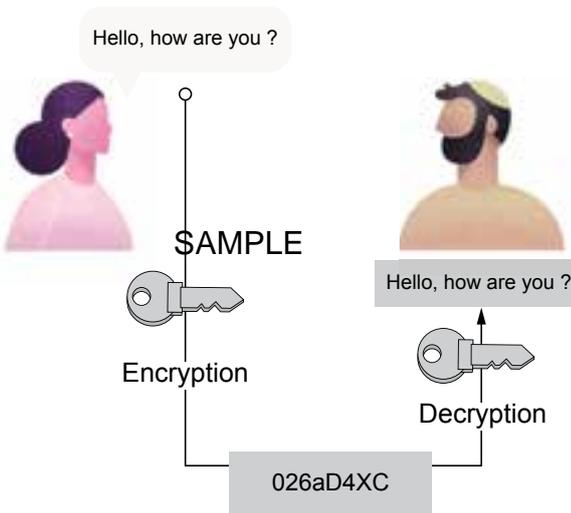
WHAT IS A BLOCKCHAIN ?

A blockchain is a continuously growing list of recorded data, called blocks, that are linked and secured using **cryptographic** technologies (e.g Keccak, SHA3). Each block cannot be altered retroactively since the last block of the chain contains the information (cryptographic hash) of the previous ones. If you change something in one of the block in the past it would result in an invalidation of all of the links.

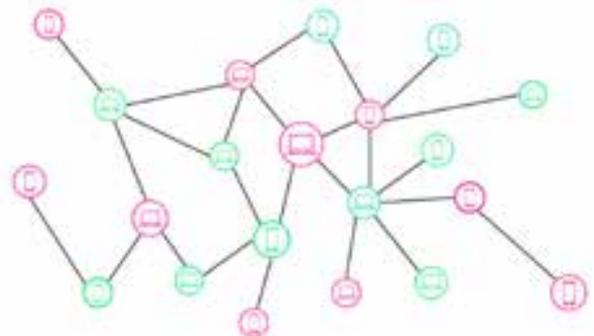


The term blockchain was most probably first defined in 1991. Intending to create a digital timestamp, a group of researchers wanted to create a tool to timestamp digital documents that cannot be changed or backdated. The blockchain was invented by an unknown person (or a team of people) under the name - most probably a pseudonymous - of Satoshi Nakamoto. In October 2008, Satoshi published a white paper called "Bitcoin : A **Peer-To-Peer** Electronic Cash System" on a mailing list. The bitcoin software was implemented and released as open-source software in January 2009. The invention of the blockchain for bitcoin made it the first digital currency that works without the need for a trusted authority or central server (trustless).

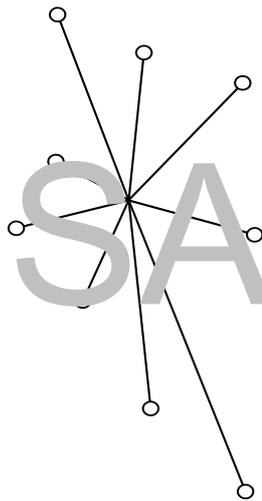
Cryptography is about building and analyzing protocols that prevent third parties or the public from reading private messages.



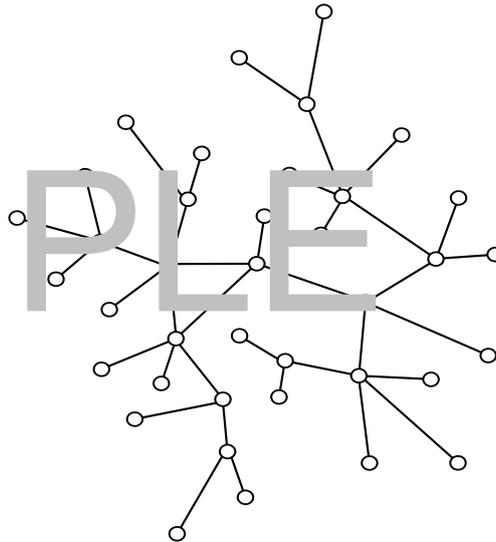
Peer-to-peer (P2P) computing or networking is a distributed application architecture that breaks up tasks between peers. Peers are equally privileged, equipotent participants in the application and form a peer-to-peer network of nodes.



Centralised



DeCentralised



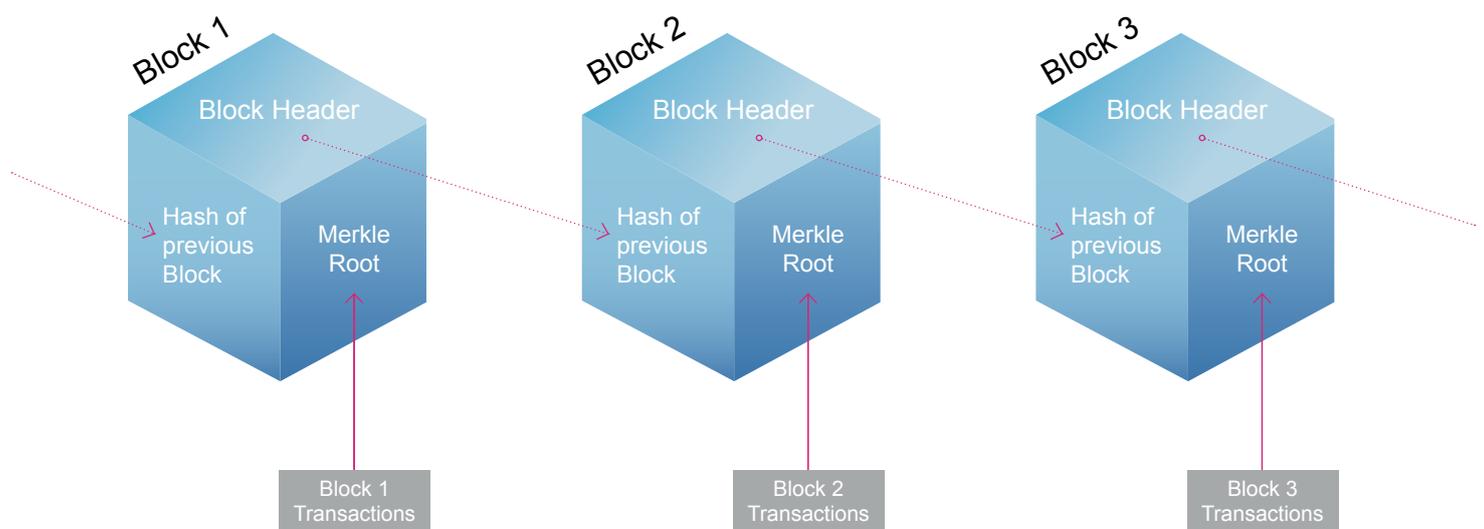
To sum, a blockchain is a decentralized and distributed ledger (journal) that can be **public** or **private**, where all parties hold a local copy.

The ledger can contain different kinds of transactions that happen in a P2P network system.

This network consist of many computers - NODES - connected together with equal permissions and authority for processing data.

These data cannot be altered (e.g. the addition of a new block to the chain) without the consensus of the whole network, each separate computer have to allow it.

Each block is directly connected and shaped by the previous one, in this fashion, it is impossible to back-change the data included in a block without compromising the entire blockchain



Some of the most popular blockchain are Bitcoin, Ethereum, IBM Blockchain, Hyperledger, etc.. In general, in Bitcoin new block is created /mined evry 10 minutes (block time) in Ethereum every 17 seconds