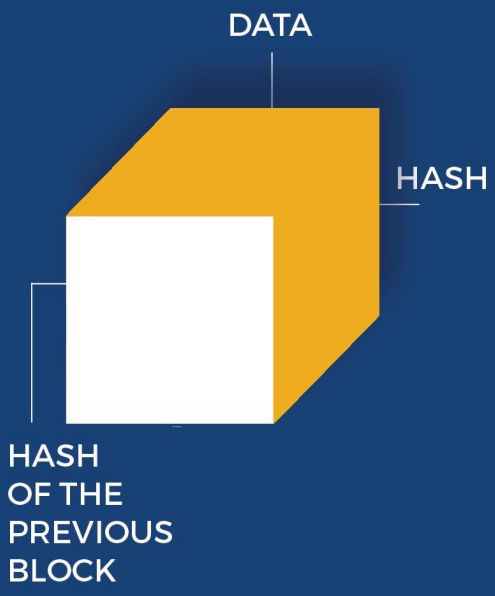
HOW DOES **BLOCKCHAIN WORK?**



EACH BLOCK CONTAINS 3 PARTS

DATA
Data that is stored in a block depends on the type of Blockchain. For example each block of a Cryptocurrency Blockchain stores the data of a transaction, such as the sender, receiver and the amount of coins transacted

HASH
A unique code that identifies a block and all of its contents. Any changes made to the data in that block will change this unique code

HASH OF THE PREVIOUS BLOCK
The previous block's unique code. This technique of storing the earlier block's hash code creates the link to the earlier block and an effective blockchain. So tampering with the data in any single block in the chain will make all following blocks in that chain invalid since the hash validity gets broken

ENHANCED SECURITY IN MANAGING BLOCKCHAINS

PROOF OF WORK MECHANISM
The blockchain system is secure. However very fast computers can tamper with data, recalculate and change millions of hash in the chain in seconds. To mitigate this problem blockchains have a mechanism called the proof of work that slows down the creation of new blocks. In bitcoin's case it takes 10 minutes to calculate the required proof-of-work and add a new block to the chain. This mechanism makes it very hard to tamper with the blocks, because if you tamper with one block, you'll need to re-calculate the proof of work for all the following blocks

DISTRIBUTING BLOCKS THROUGH PEER-TO-PEER NETWORK
Instead of using a central entity to manage the chain, a Peer-to-Peer network is used. When someone joins this network he gets a full copy of the blockchain. He then uses this copy to verify that everything is still in order and the blocks haven't been tampered with. This network group then creates a consensus of valid blocks

So the security in a blockchain comes from its creative use of hashing, the Proof Of Work mechanism & the P2P Network