

Developer perspective series: What is blockchain? 07/26/16

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Anya Derbakova: First of all, it's a network of machines, of computers that all are interconnected. Dale here is representing the machines as circles with different numbers -- so, here we have six, but it could be any number really. So, it's a network of interconnected computers and each one of them has the same copy of some data, the same copy of this what we call ledger. It's like a record of something. So, Dale is representing that as the same blocks over there underneath 4, 5 and 6. Inside you've one of those chain of blocks is basically Dale is drawing some big blocks; and inside each block, we have what we call transactions. So, would you like to explain what a transaction is?

Sheehan Anderson: A transaction is the way you essentially interact with a blockchain from the outside world. So, you submit a transaction into the network and you submit it to just one peer. So, generally, you as a client will own a peer in the network and from there, your peer will forward it to the other peers so they can help add your transaction into a block. And then in addition to the transactions, each block also contains a hash of the previous block and this is where the blockchain concept comes from. So, as the chain gets longer and longer, the chain becomes stronger you know, for older blocks because they're hashed into each subsequent block. So, when you submit a transaction into the network, generally there's one peer who's seen as the leader in some consensus models. So, the transaction will be forwarded to that peer and the leader at this point can organize all the transactions that it receives from all the nodes in the network. And once it organizes those transactions, it will send out a block to the other nodes in the network. And the nodes will then vote, essentially. They'll kind of double check the work of the peer who created the block and vote whether this is a valid block or not. And if they all decide it's valid, they will go ahead and add the block to their blockchain and then the process will restart.

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