Blockchain Smart Contract

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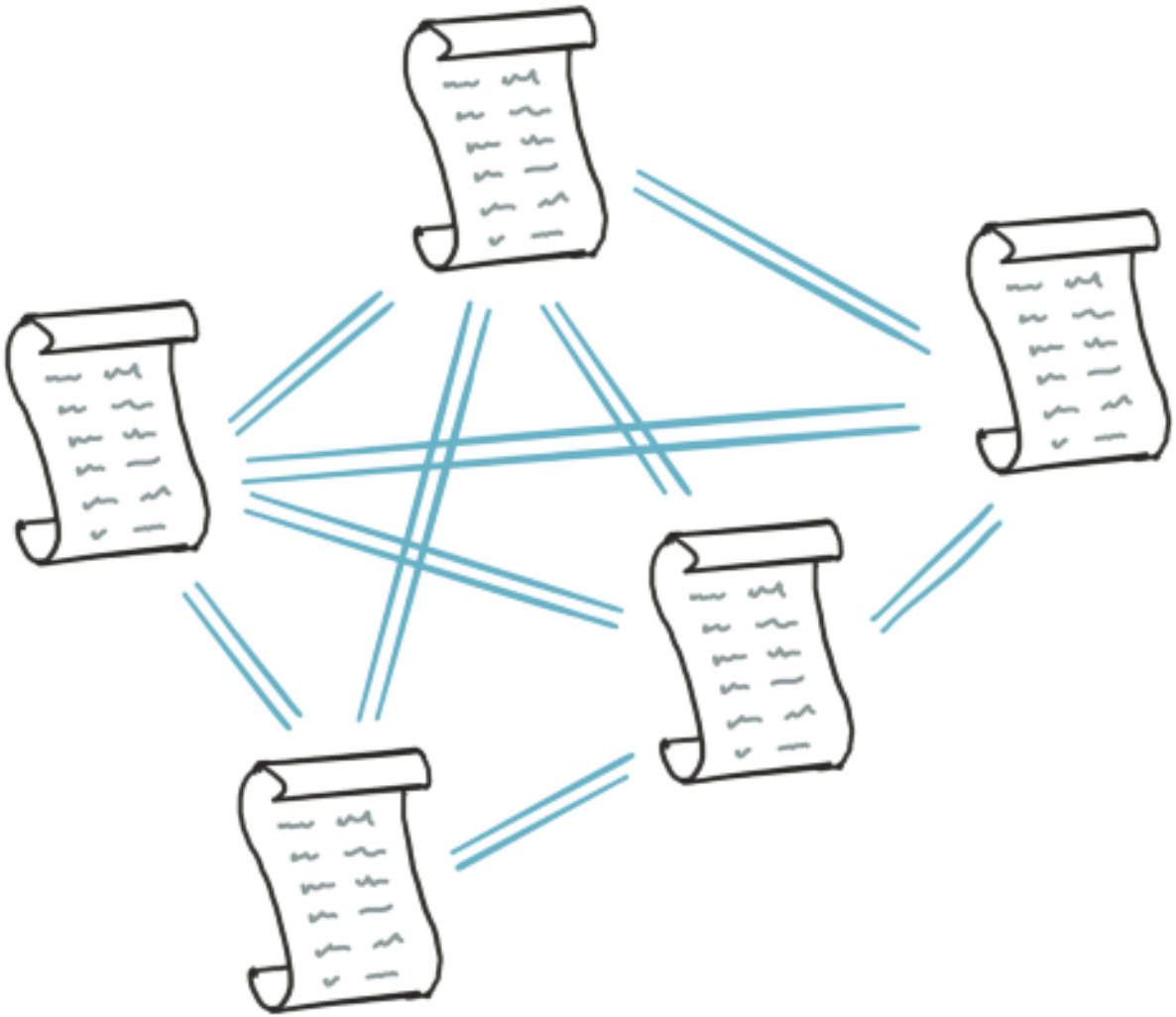
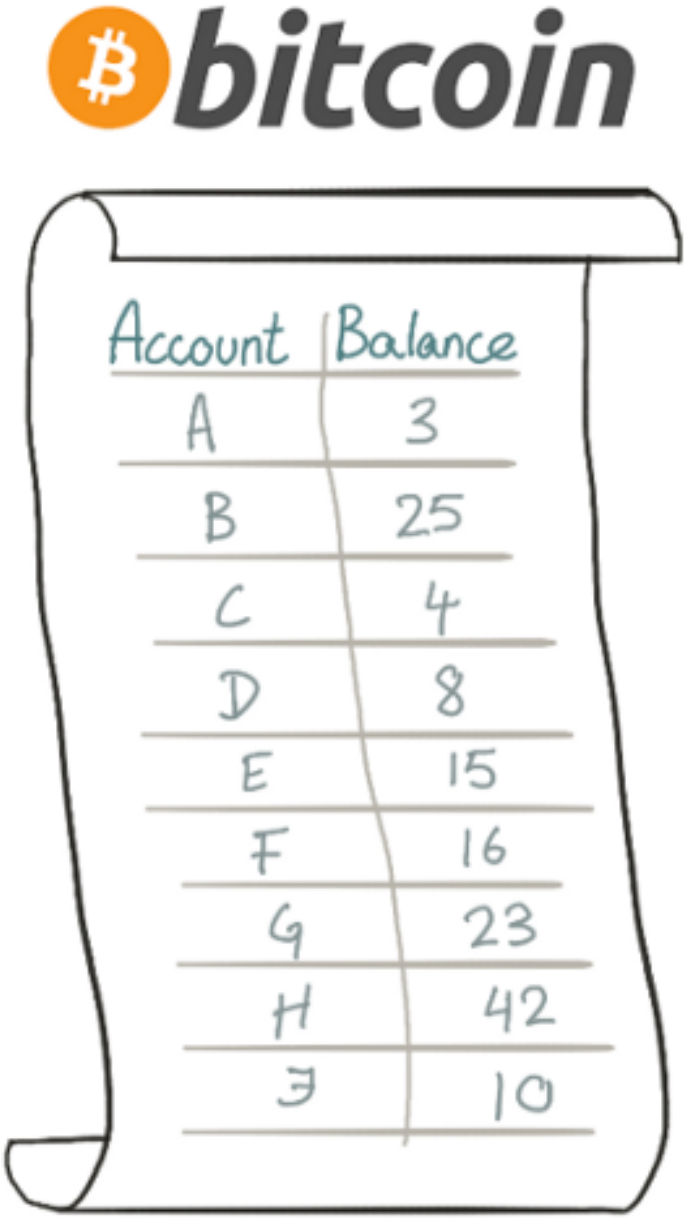
Smart Contract

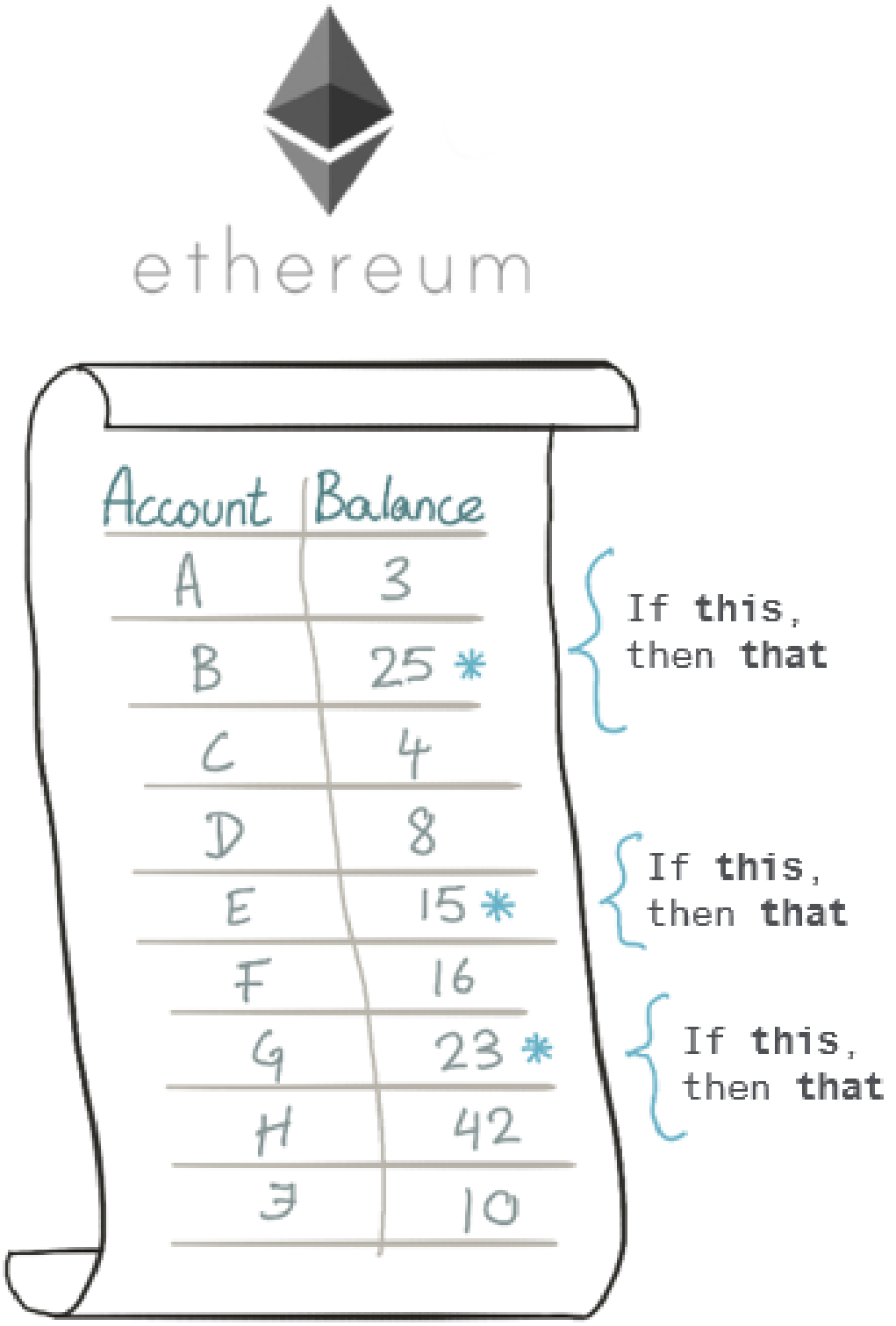
- An identical agreement is written on a set of enchanted documents.
- Anyone can take part in maintaining this agreement by owning one of these documents.
- Rules describe the changes you are allowed to make to a document.
- Any valid change to one document is automatically made to all the other documents.




bitcoin
Account
Balance
A
3
B
25
C
4
D
8
E
15
F
16
G
23
H
42
I
10

Bitcoin

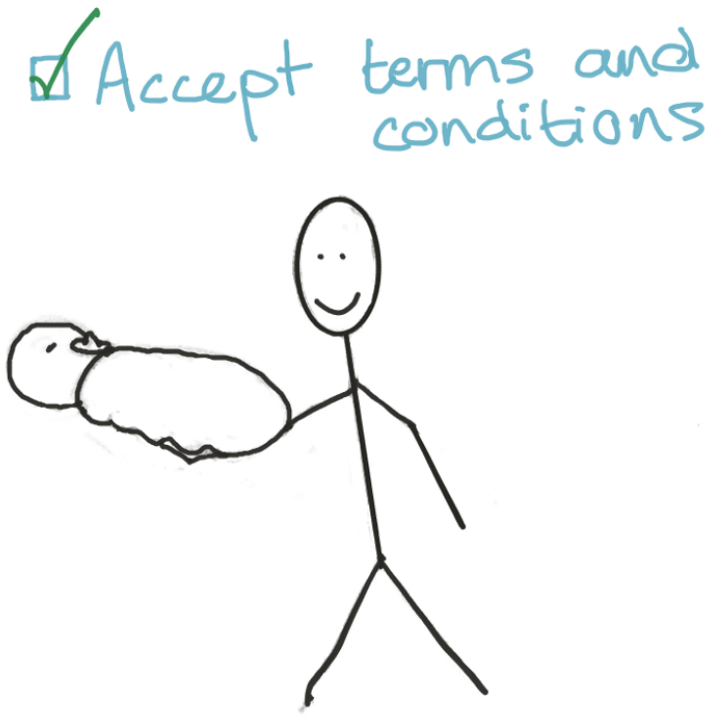
- Each enchanted document contains a list of all accounts and balances.
- Owners of accounts can send transactions to other accounts.


ethereum
Account
Balance
A
3
B
25 *
C
4
D
8
E
15 *
F
16
G
23 *
H
42
I
10
If this, then that
If this, then that
If this, then that

Ethereum Smart Contract

- Perform calculations
- Store information
- Send transactions to other accounts

Code is Law



Smart Contract

- The code and how this is interpreted
- The immutability of the blockchain

Smart Contract

```
function payOut(address _recipient, uint _amount) returns (bool) {
    if (msg.sender != owner || msg.value > 0 || (payOwnerOnly && _recipient != owner))
    throw;
    if (_recipient.call.value(_amount)()) {
        PayOut(_recipient, _amount);
        return true;
    } else {
        return false;
        }
    }
```