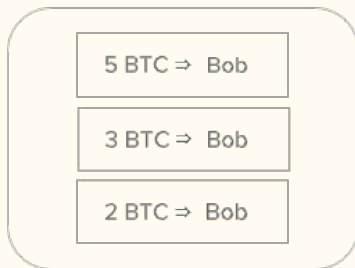


# Account vs. UTXO

- A Bitcoin users available balance in the sum of Unspent Transaction Outputs (UTXO) for which they own the private keys to the output addresses
- Instead Ethereum uses a different concept, called Accounts
- Account consists of:
  - Address
  - Balance
  - Code (optional)

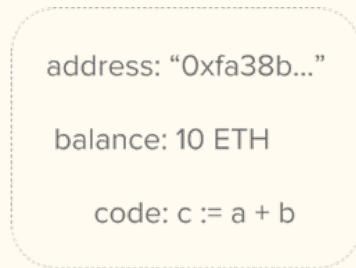
## Bitcoin:

Bob owns private keys  
to set of UTXOs



## Ethereum:

Evan owns private keys  
to an account



# Ethereum Accounts

## Externally Owned Accounts

- Owned by some external entity (person, corporation)
- Address
- Balance
- Can send transactions
  - Trigger contract code

## Contract Accounts

- Address
- Ether balance
- Has contract code
- Code execution is triggered by transactions or messages (func calls) received from other contracts
- Contracts have persistent storage

# Ethereum World State

State of all accounts is the state of Ethereum network

- Entire Ethereum network comes to consensus on the current balance, storage state, contract code of every single account !

Ethereum network state is updated with every block

- Think of the block as a state transition function
- A block takes the previous state and produces a new network state
  - Every node has to agree upon a new network state

Accounts interact with network, other accounts, other contracts and contract state through transactions