Digital Bank

Catalysts Coding Contest

International October 2017

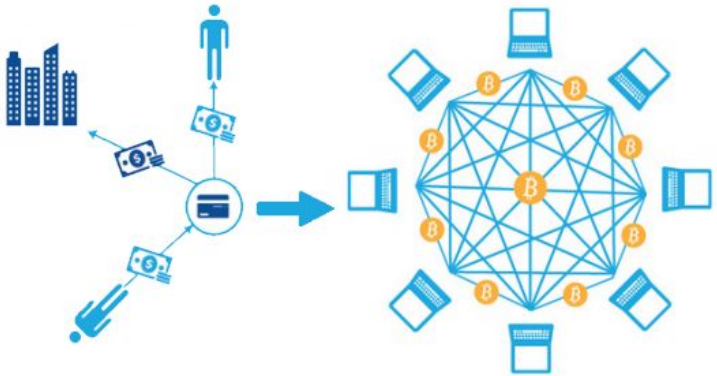
Image source: LEGAL EXECUTIVE INSTITUTE

Blockchain - Eliminate the man in the middle

CODING CONTEST

Blockchain technology is the underlying foundation that can create shared digital databases of entries that are unchangeable.
Initially, the tech's developers conceived it as a way to centralize record-keeping (particularly of financial transactions) without the need for authorization by a third party. Instead, multiple users with access to the data confirm the records.
Before blockchain, buying and selling required an intermediary, a bank or broker who housed your financial data at their computers. When you transfer funds or make a purchase, a banker connects to the bank's system to record the change.

No more. Blockchain replaces this central system with a decentralized ledger of chained records. Each record is connected to the one before and the one after it, yielding a traceable history of every transaction. No record can be deleted and no existing records can be altered.



Text source: Medium
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Level 1

Level 1 - Banking 101

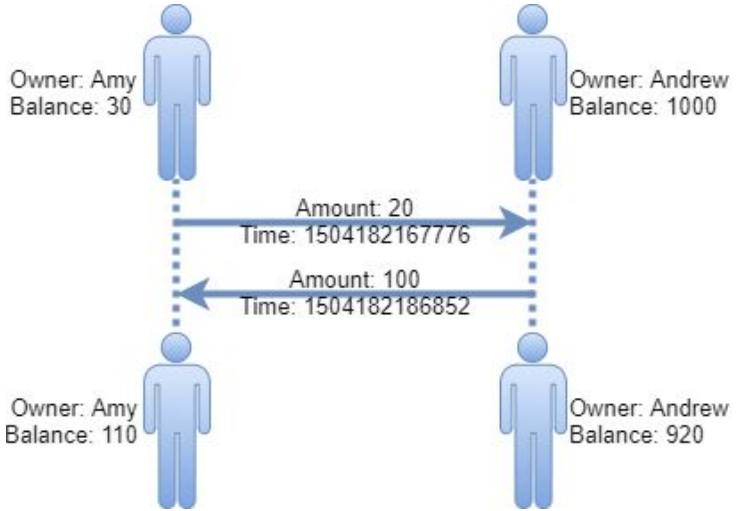
CODING CONTEST

Definitions

- Accounts have owners and balances
- Transactions are executed in order of submission time
- Unlimited overdrafting

Task

- Execute the transactions
- Report the final account balances (see Example slide).



Data format

CODING CONTEST

Input

`<NumberOfAccounts>` the number of accounts in the banking system
NumberOfAccounts lines: `<PersonName> <ActualAccountBalance>`
`<NumberOfTransactions>` the number transactions
NumberOfTransactions lines: `<PersonNameFrom> <PersonNameTo> <Amount> <TransactionSubmitTime>`

Output

`<NumberOfAccounts>`
NumberOfAccounts lines: `<PersonName> <AccountBalanceAfterTransactions>`

Level 1

Example

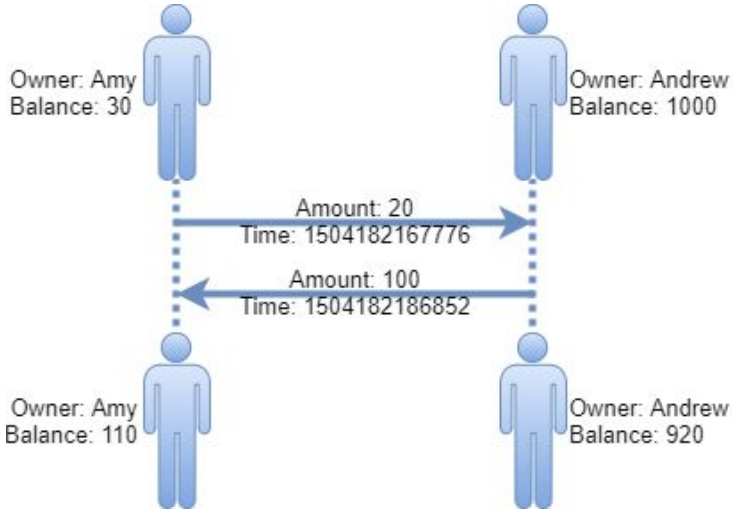
CODING CONTEST

Input

```
2
Amy 30
Andrew 1000
2
Amy Andrew 20 1504182167776
Andrew Amy 100 1504182186852
```

Output

```
2
Amy 110
Andrew 920
```



Level 1