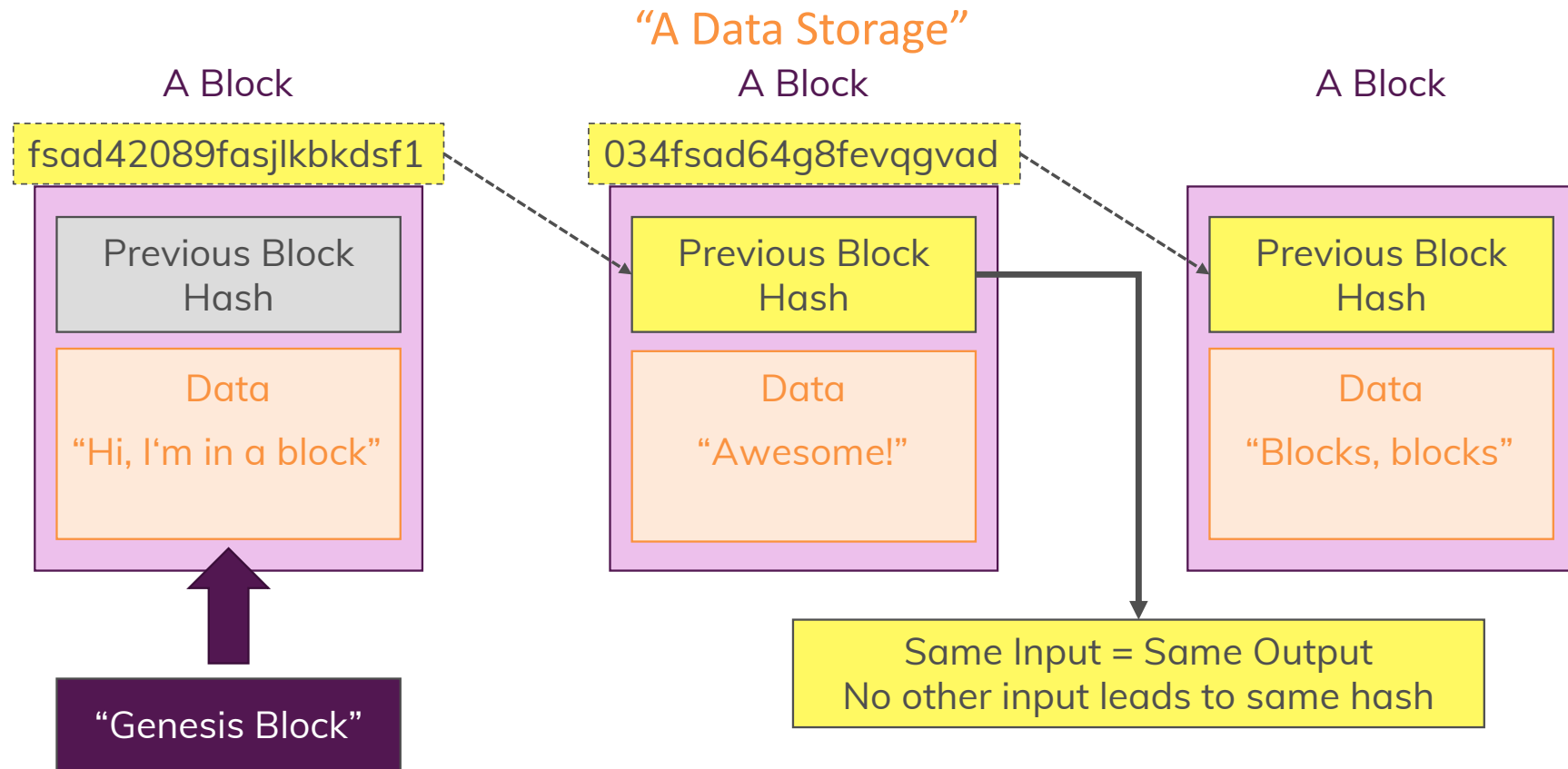


What's a Blockchain?

A distributed data storage consisting of containers (blocks) which are connected.

What is a Blockchain?



Security mechanism:

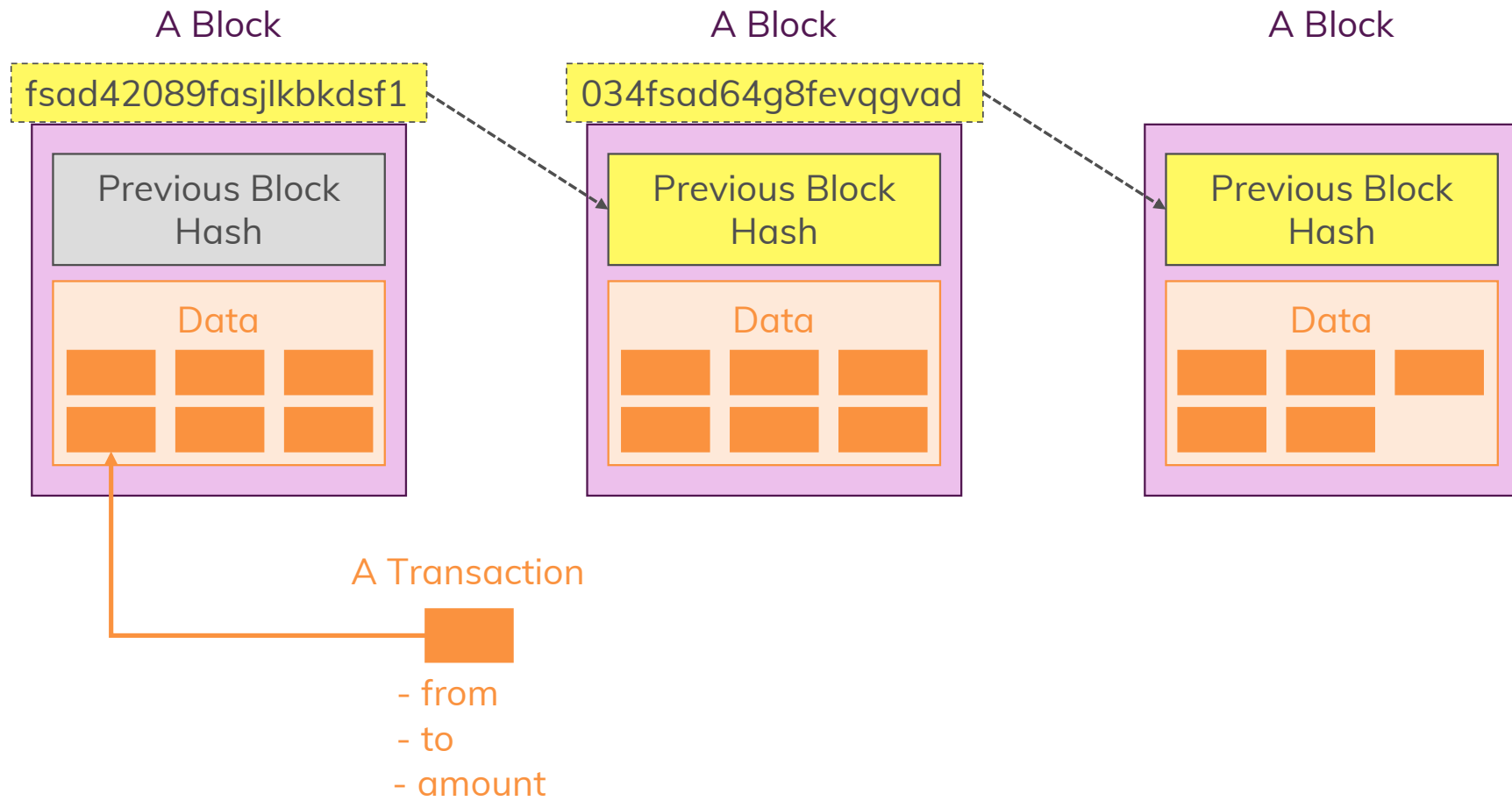
Each block knows the hashes before it.

If we change one block, the block behind will find that the recalculated hash doesn't match with what was already stored.

What's a Cryptocurrency?

If the data you store in a block is a list of transactions, the coins transferred in the transactions form your cryptocurrency.

Storing Transactions

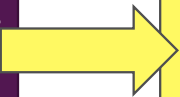


Where are the Coins?

Coins are transferred with **Transactions**

Changing them into other currencies is not possible inside the Blockchain

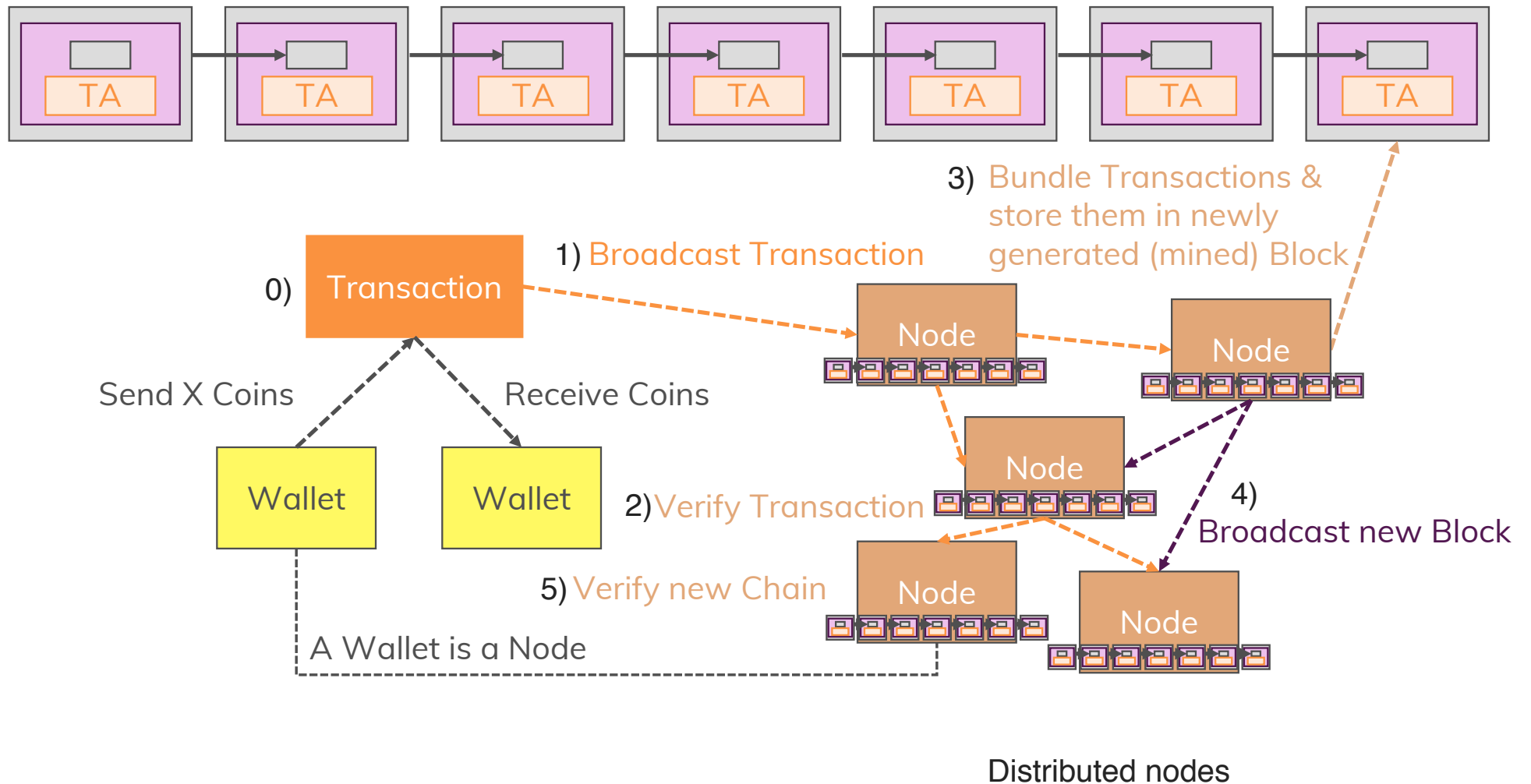
Coins are created via **Mining** (as a reward for the effort)



The value of a coin is determined by the value the participants of the blockchain network assign to it (i.e. what you're willing to pay in "real" currencies).

distributed, secured data storage

Blockchain Big Picture



anders demo

https://anders.com/blockchain/block.html

https://anders.com/blockchain/

Blockchain Demo

Hash

Block

Blockchain

D

Block

Block:

1

Nonce:

59396

Data:

付款方: 张澎
收款方: Mike
金额: ¥ 100.00
日期: 20190316|

Hash:

6e197600cda40a36fad4281902882646b0f8d5b5cffc7b37721c4b4582cf6a38

Mine

Block

Block:

#	1
---	---

Nonce:

29645

Data:

付款方: 张澎
收款方: Mike
金额: ¥ 100.00
日期: 20190316

Hash:

0000c60b16016ab0cd00caf5566734ee87d457fd65837f356f1823a0396764b6

Mine

Blockchain

Block: # 1

Nonce: 114433

Data: 付款方: 张澎
收款方: Mike
金额: ¥ 100.00
日期: 20190316

付款方: 张澎
收款方: Mike
金额: ¥ 300.00
日期: 20190317

Prev: 00

Hash: 0000d03d00d789ae7e7c527b075869884f5b52286818aebfb3

Mine

Block: # 2

Nonce: 57649

Data: 付款方: Mike
收款方: 张澎
金额: ¥ 100.00
日期: 20190318

付款方: Mike
收款方: 张澎
金额: ¥ 300.00
日期: 20190317

Prev: 0000d03d00d789ae7e7c527b075869884f5b52286818aebfb3

Hash: 0000613b98f1ec386a2a37b25aa0240d2ac9b8d94a1028425f

Mine

Block: # 3

Nonce: 12937

Data:

Prev: 0000613b98f1ec386a2a37b25aa0240d2ac9b8d94a1028425f

Hash: f444f653d543a9900c00ce20a6a0e0d1028425f

Mine

notes:

- hash: same input -> same output
- hash: same length
- 0000... hash: this block is signed
- mining the nonce: try numbers to make hash start with 0000
- tokens
- coinbase