

Ecclesiastes (Eccl) 12:13

Now all has been heard;
here is the conclusion of the matter :

**Have reverence for God, and obey his commands,
because this is all that man was created for.**

**Fear God and keep his commandments,
for this is the whole duty of man.**



Blockchain I

References ?

- 블록체인 구조와 이론, 아카하네요시하루, 2017
- Mastering blockchain, Bashir, 2017, Packt Publishing
- Core Ethereum Programming, 박재현, 2018
- 컴퓨터과학으로 배우는 블록체인 원리와 구현, 박상현, 2019
- 파이썬으로 배우는 블록체인 구조와 이론, 조성현, 2019
- ...

Grading

- Attendance : 20%
- Reports, Project, and Quizzes : 20%
- Examinations : 60%

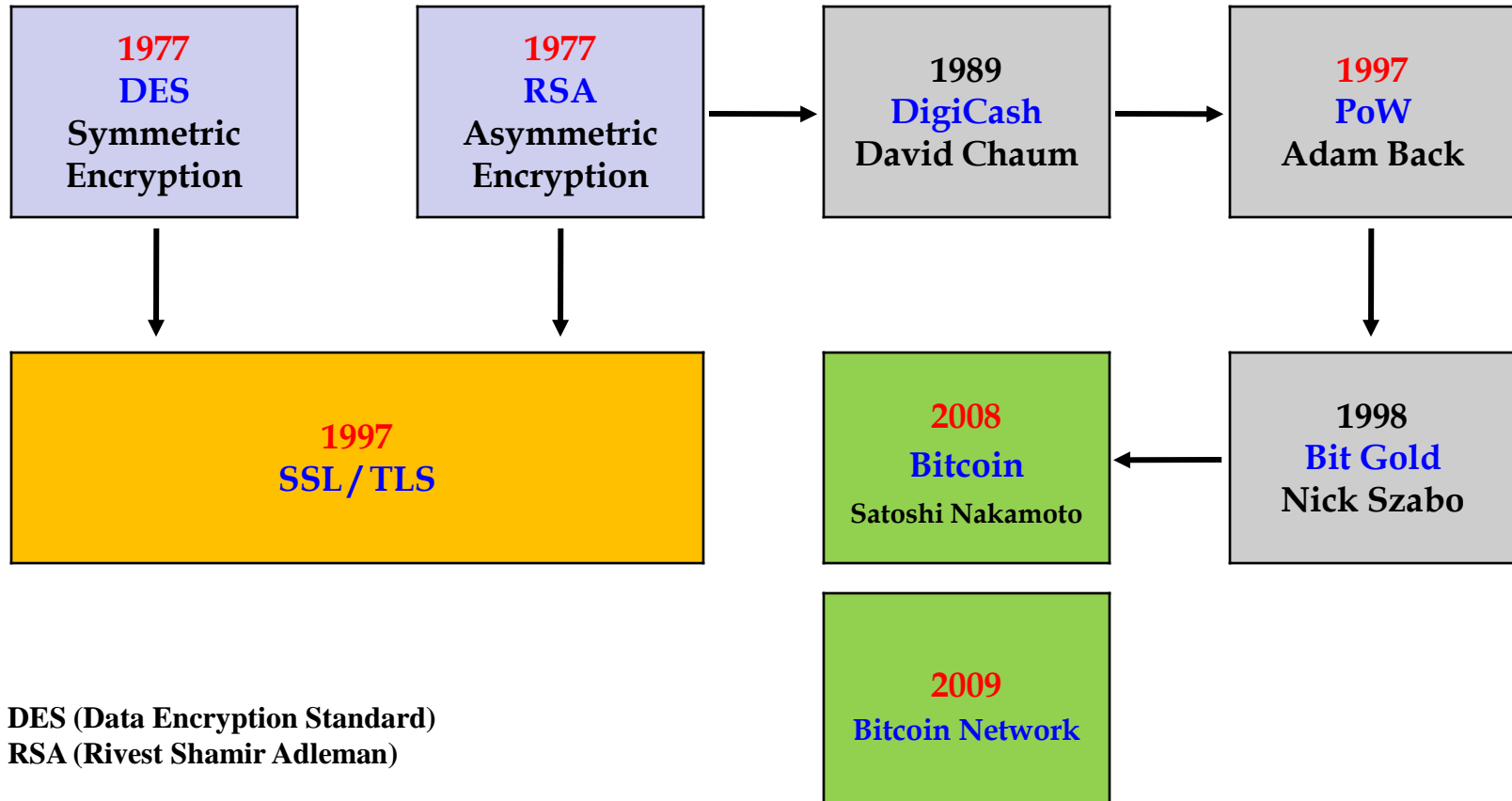
Contents

- Blockchain technology
- Bitcoin
- Ethereum
- dApp (deCentralized Application)
 - Smart contract

Blockchain Technology

- Cryptography
- Types of Blockchain
 - Public blockchain
 - Bitcoin
 - Ethereum
 - Private blockchain
 - Hyperledger fabric

History



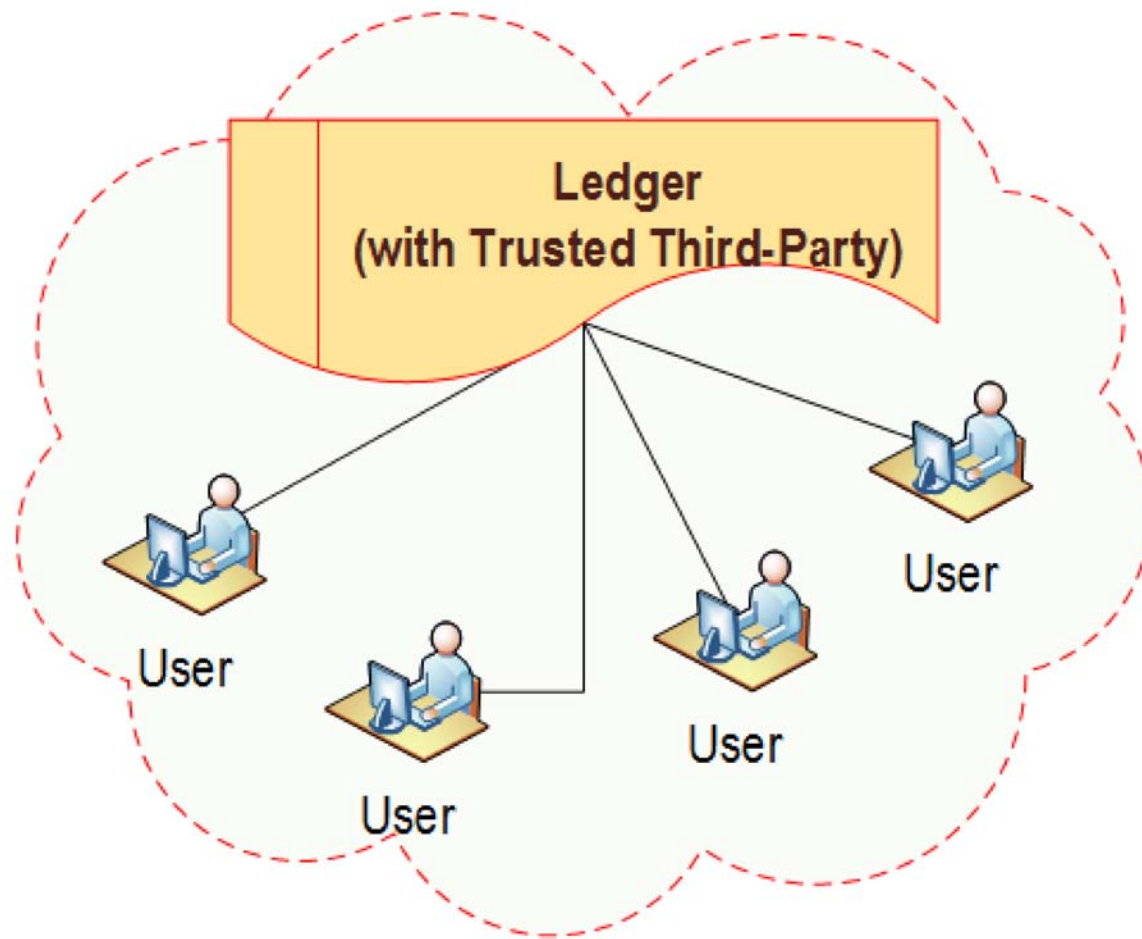
bitcoin

- 2008-08-18
 - bitcoin.org 인터넷 도메인 등록 (Satoshi Nakamoto)
- 2008-10-31
 - Publish bitcoin paper
"Bitcoin: A Peer-to-Peer Electronic Cash System"
- 2008-11-09
 - Source Forge에 bitcoin 코드 공개
- 2009-01-03
 - **Genesis** block 생성 : 비트코인 블록체인의 시작
- 2009-01-09
 - 사용자용 소프트웨어 첫 공개 (Bitcoin version 0.1)
 - github.com/bitcoin

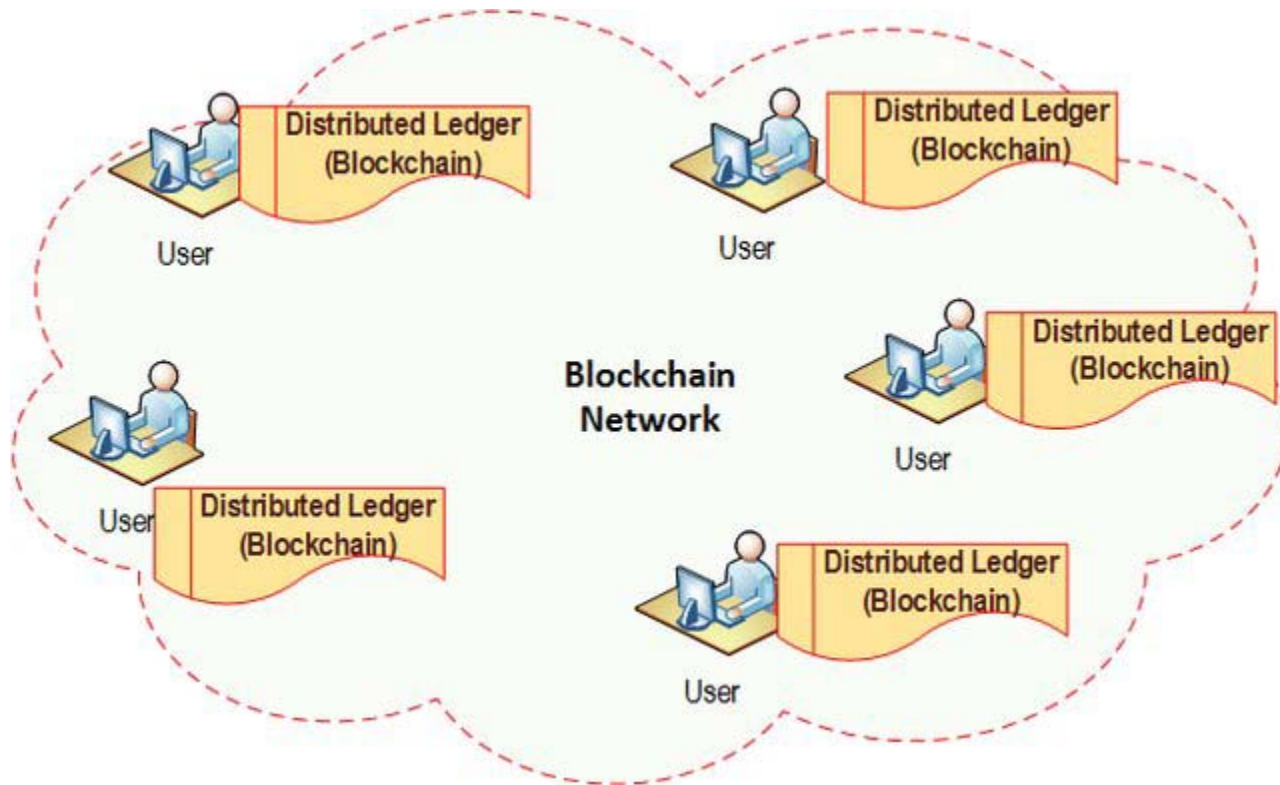
Centralized Ledger



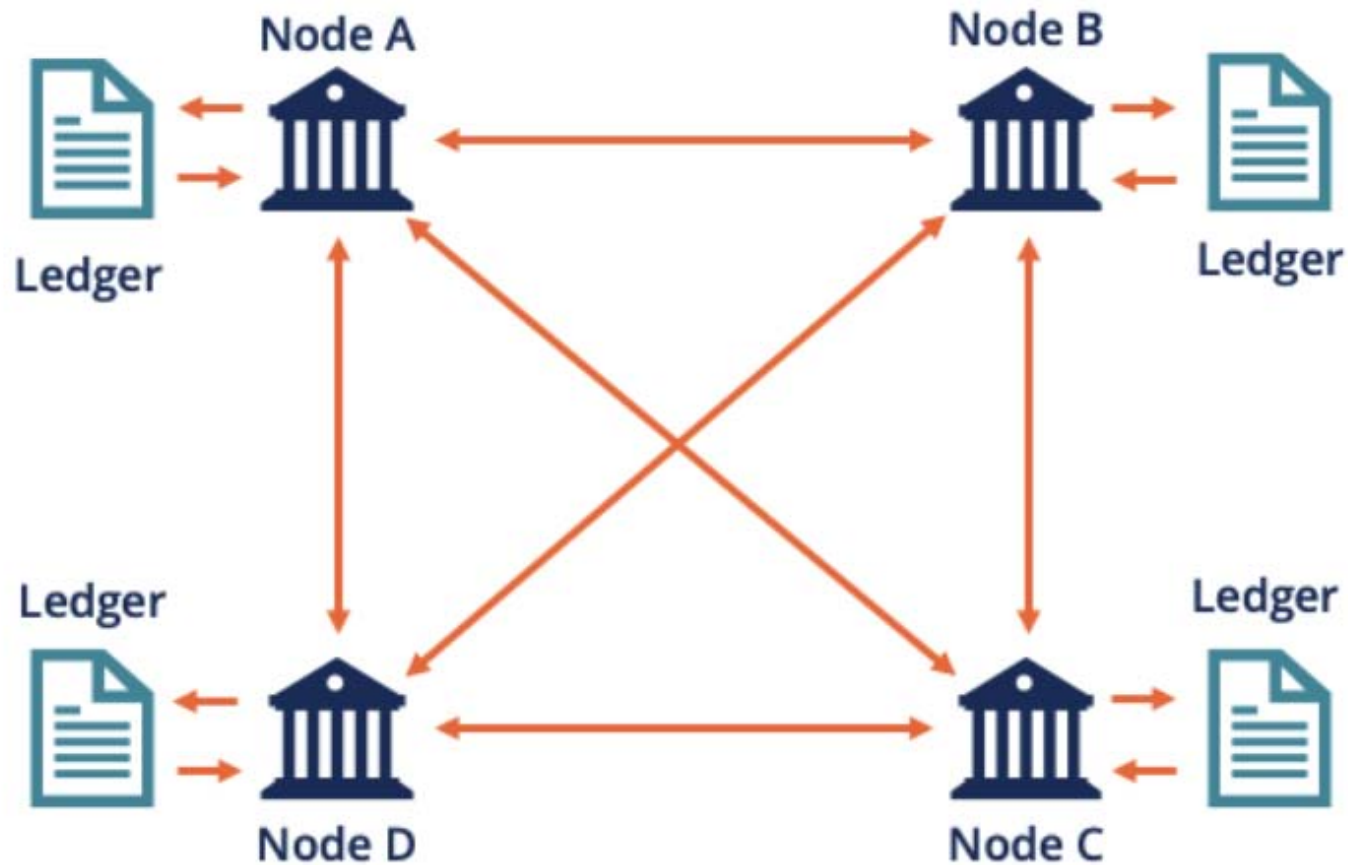
Centralized Ledger in TTP



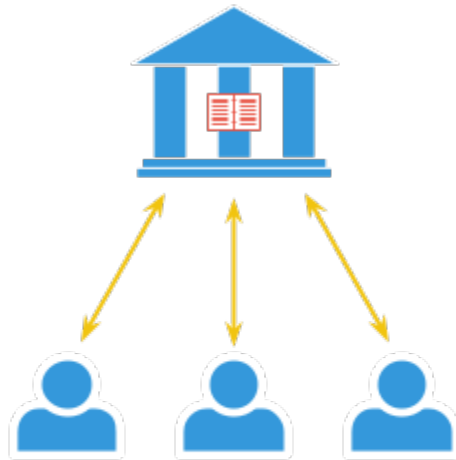
Distributed Ledgers



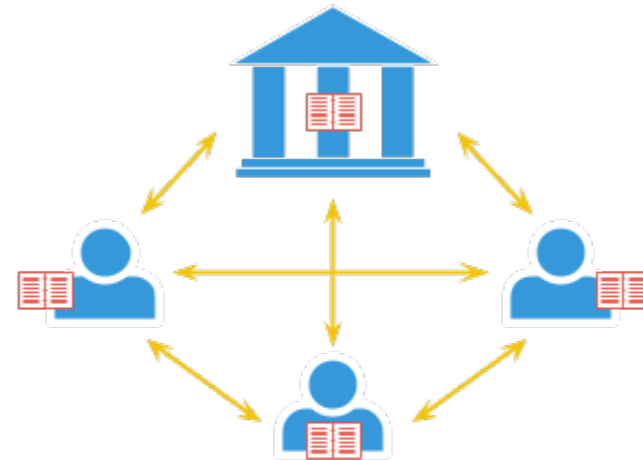
Distributed Ledgers



Create Bank Account ?



Centralised: every party is dependent on one central party who hold the **ledger** (e.g. a technology company contracted by the Home Office). The central party has power over the data and can could tamper with it without other parties knowing.

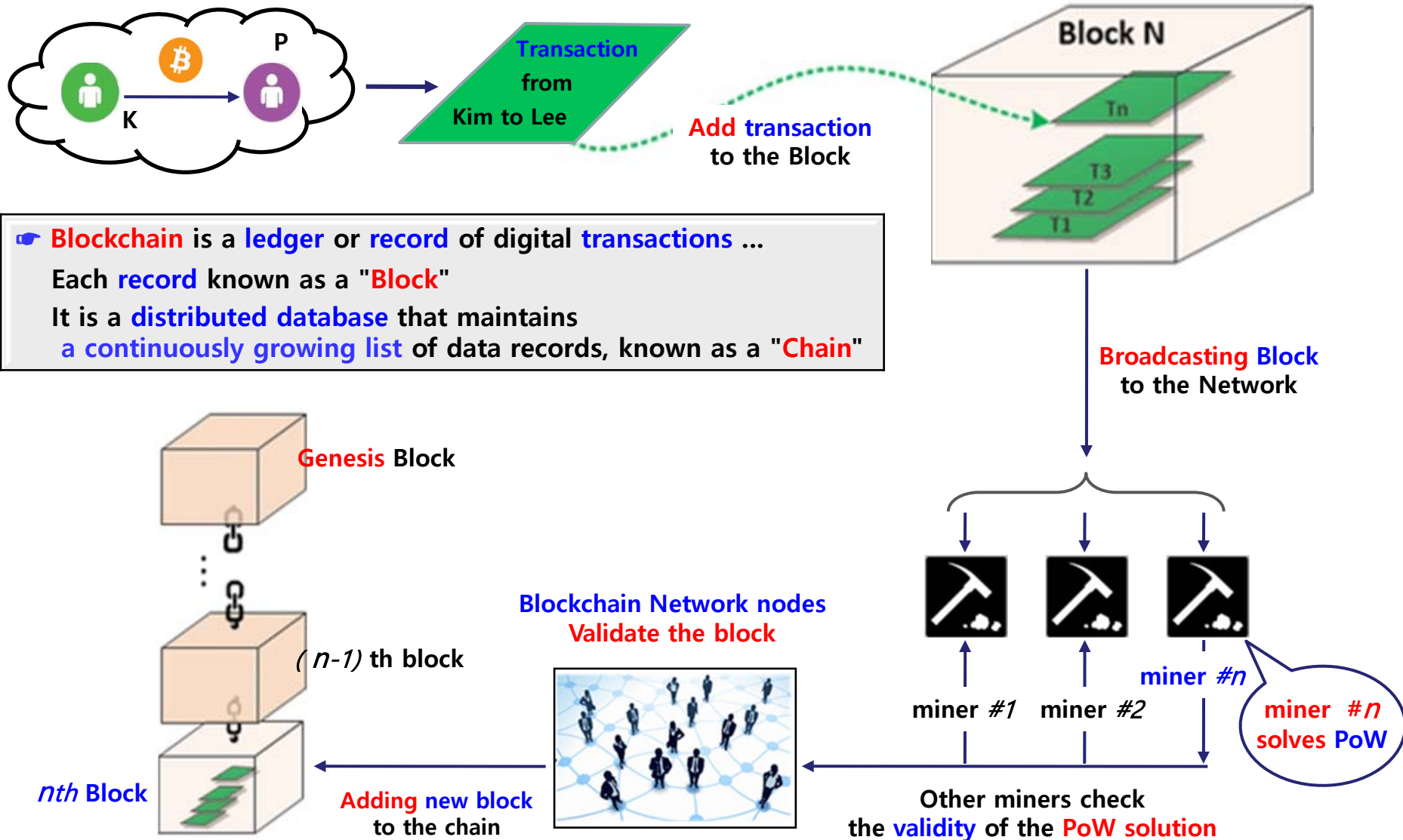


Decentralised: every party holds the **ledger**, reducing the power of any one party over the data and providing accountability over who has altered the data and when.

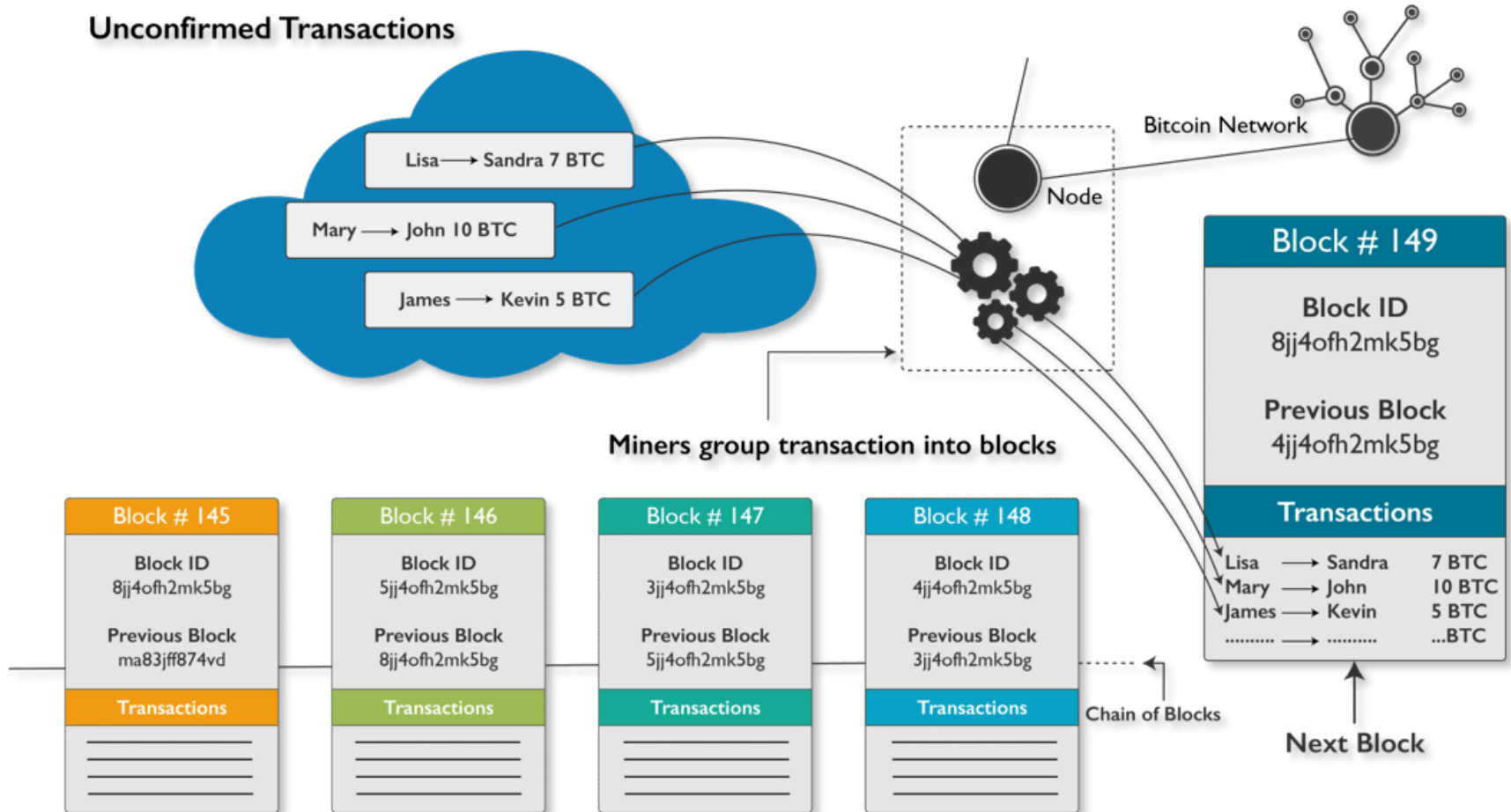
deCentralization

- <https://en.wikipedia.org/wiki/Decentralization>
- DeCentralization is the Process
by which the activities of an organization,
particularly those regarding planning and decision making,
are distributed or delegated away from a central, authoritative location or group
- Account in Bank
- Bitcoin address
- Ethereum account

What is **Blockchain** technology and How does it work ?



Blockchain



Websites

- andersbrownworth.com/blockchain
- bitcoin.org
- ethereum.org
- blockchain.com
- bitnodes.io
- mempool.space
- etherscan.io
- blockexplorer.one
- coin360.com
- coinmarketcap.com
- bithumb.com

Development dApp (deCentralized Application)

