



SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE NAME: 19CS622-Blockchain Technology

III YEAR /VI SEMESTER

Unit 1- INTRODUCTION TO BLOCKCHAIN

Topic 1: History of Bitcoin and Blockchain, Types of Blockchain



Brain Storming



1. What is a blockchain?
2. What is all the excitement about?



The history of Bitcoin



2008	2009	2010	2011	2013	2014	2017
Idea was published under the pseudonym Satoshi Nakamoto	Start of the Bitcoin Network	First cryptocurrency stock exchange is launched	One Bitcoin equals one USD	1 Bitcoin equals 100 USD	Microsoft accepts Bitcoin	1 Bitcoin equals 10,000 USD



Bitcoin \neq blockchain

Is an application of blockchain technology

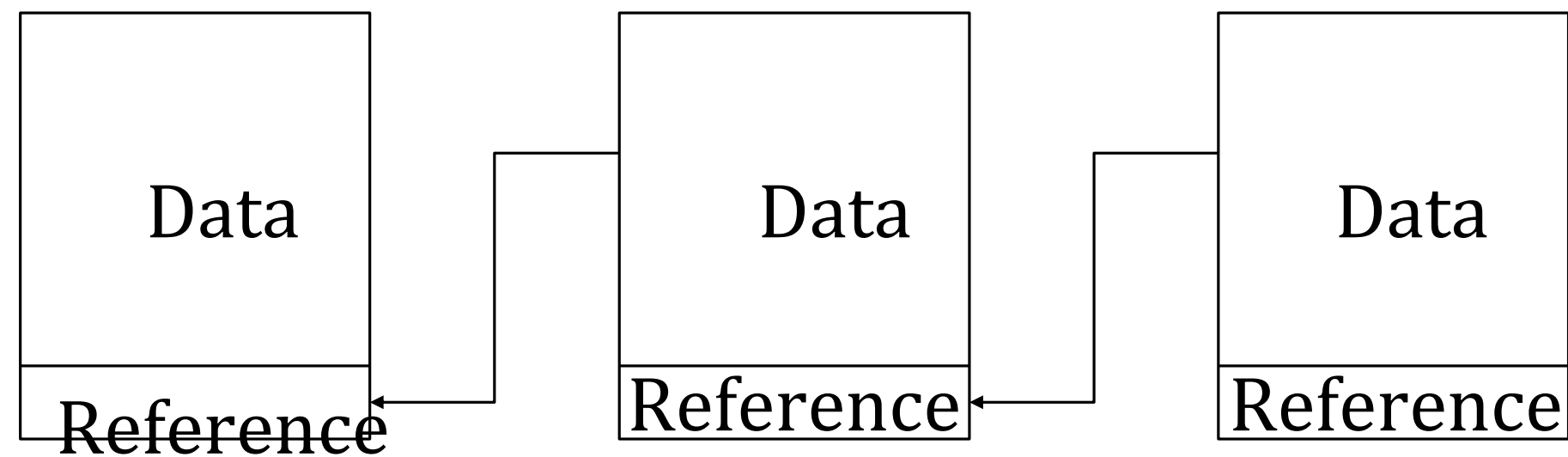
Is the underlying data structure, which can be used for many things, including cryptocurrencies



What is A Blockchain?



A blockchain is a growing list of data blocks that are linked together.



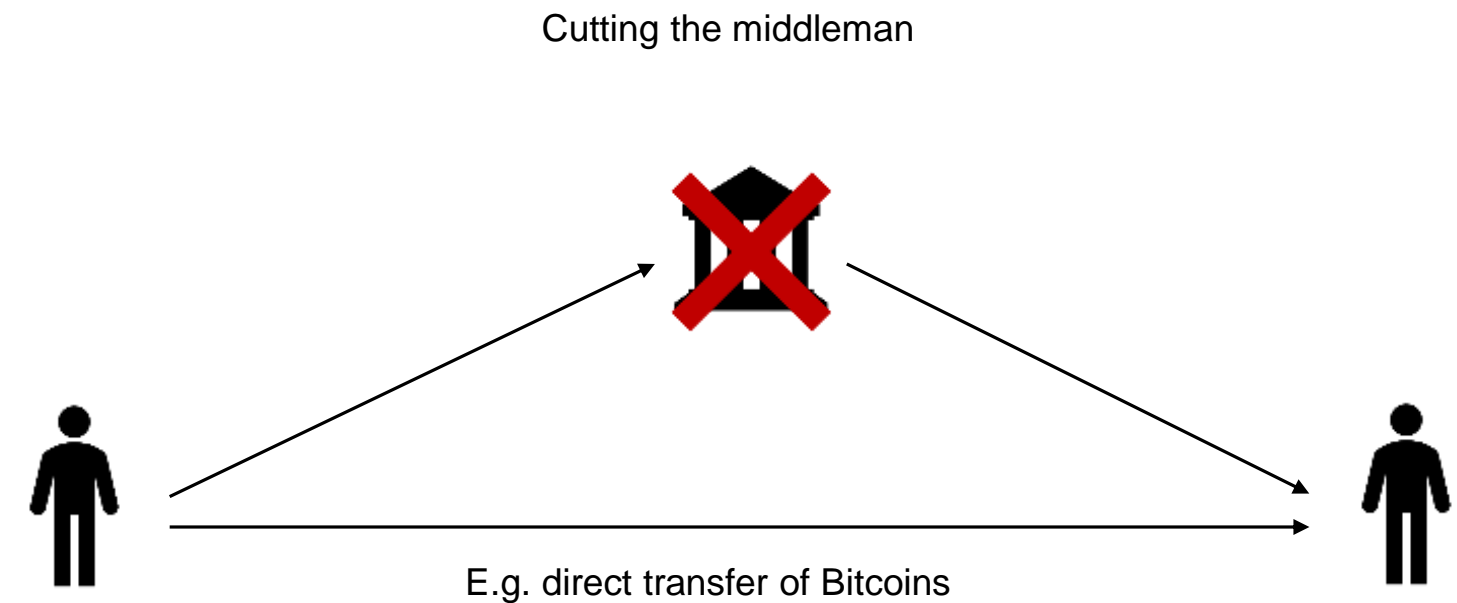
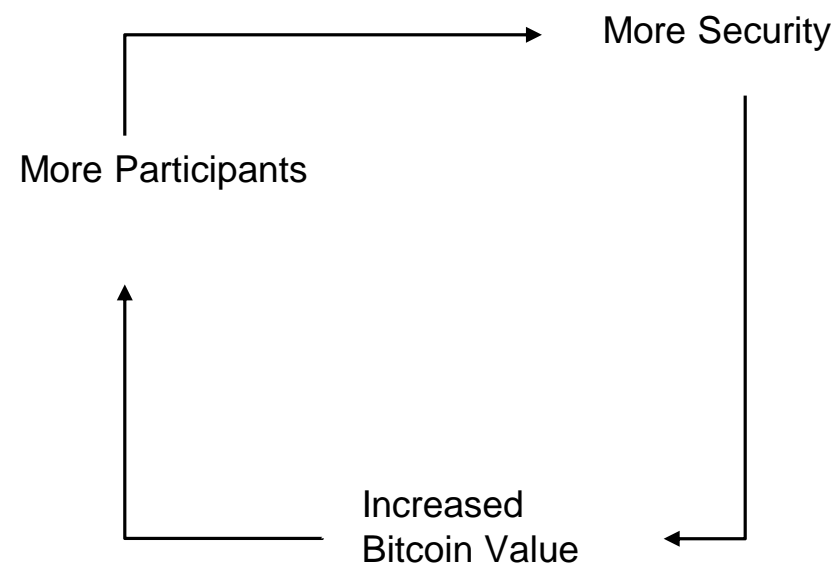


Bitcoin ecosystem



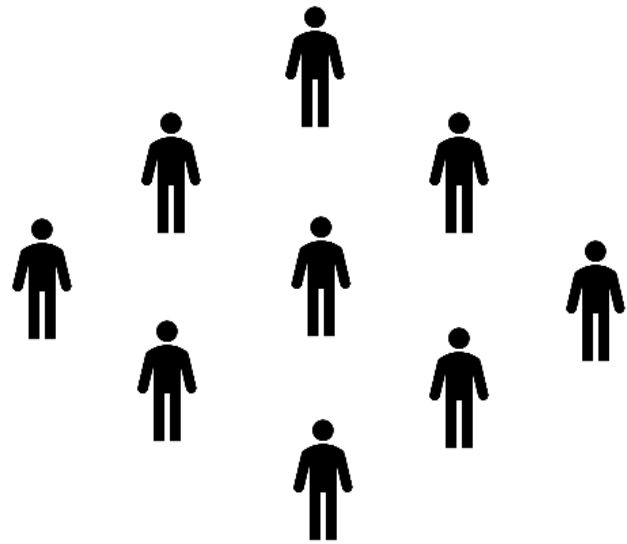
A public network in which anyone, including a malicious participant, can participate without restriction.

Even though it is not organized by a central authority, it works!





Building Consensus



After a finite time, all participants agree on a single state.

E.g. on who owns how many Bitcoin.

If something is published on a public blockchain, all participants become witnesses.

This is used, for example, by OriginStamp to create a secure timestamp for documents.



Key Features & challenges

Write-only,
immutable,
transparent
data storage

Decentralized,
no need for
intermediaries

Consistent
state across all
participants

Resistant
against
malicious
participants

Open to
everyone

Energy consumption

Scalability

Money laundering

Personal responsibility



Assessment 1



1. A blockchain provides

Ans : _____

2. Basic application:

Current largest:

Ans : _____





References



TEXT BOOKS

1. Mastering Bitcoin: Unlocking Digital Cryptocurrencies, by Andreas M Antonopoulos 2018
2. Imran Bashir, “Mastering Blockchain: Distributed Ledger Technology, Decentralization and Smart Contracts Explained”, Second Edition, Packt Publishing, 2018.

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1. William Mougayar, “Business Blockchain Promise, Practice and Application of the Next Internet Technology, John Wiley & Sons 2016.
2. Josh Thompson, ‘Blockchain: The Blockchain for Beginnings, Guild to Blockchain Technology and Blockchain Programming’, Create Space Independent Publishing Platform, 2017.
3. Arvind Narayanan, “Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction”, Princeton University Press, July 19, 2016.
4. Henning Diedrich, Ethereum: Block chains, Digital Assets, Smart Contracts, Decentralized Autonomous Organizations- 2016