**ARDHI UNIVERSITY**



**School of Earth Science, Real Estate Business and Informatics Department of Land Computer Systems and Mathematics**

**COURSE TITLE**: DISTRIBUTED AND MOBILE COMPUTING

**COURSE CODE**: IS 384

**COURSE INSTRUCTOR**: MR. MWAKASEGE

**DEGREE PROGRAMS**: BSc. ISM

**NATURE OF WORK**: INDIVIDUAL ASSIGNMENT.

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| **STUDENT `S FULL NAME** | **REGISTRATION NUMBER** |
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QN 3: BLOCKCHAIN AND DISTRIBUTION LEDGER TECHNOLOGIES

Blockchain is a chain of blocks that store information within a digital signature in decentralized and distributed network. Blockchain is a type of distributed ledger technology that allows for the secure recording and sharing of digital assets without centralized authority. Blockchain building block interaction and transfer.

Distributed ledgers technology is consensus of replicated, shared and synchronized digital data geographically spread across multiple sites, countries or institutions and blockchain is also known as distributed ledger technology.

Distributed ledger technology can be classified as either public or private, depending on accessibility of ledgers by any one or devices .it also categorized based on permission whether participants require permission from a certain entity to edit the ledgers.

Blockchain can be compared with distributed ledger technology in the following ways

1. Record permanence
2. Accessibility
3. Scalability
4. Regulation
5. Central authority

Key features or properties of blockchain

* Decentralized
* Transparency
* Immutability
* Security
* Trusted
* Consensus
* Time stamped

Types of blockchain technology

Private blockchain

* Permission controlled by central authority
* Access and participant are restricted
* Offen used within organization for supply chain management or financial transaction

Public blockchain

* Completely open and permissionless
* Any one can participate in the network and view transaction
* Example Bitcoin and Ethereum

Consortium blockchain

* Governed by a group of organizations
* Offer a balance between privacy and decentralization
* Used in industries like healthcare and finance for collaborative

How blockchain work

Use initiate transaction such as sending crypto currency then transaction is verified by a network of nodes or computers then the verified transaction is grouped into blocks after formation of blocks are linked together in chronological order to form chain by using cryptography in this stage chain is formed and then store the data where by each node maintains a copy of the blockchain.

Generally, distribution ledger like blockchain area unit passing helpful for monetary transactions. And can be applied in smart contract, attestation and trade of digital art

# References

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(Sunyaev, 2020)

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