SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A'Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY

COURSE NAME: 19CS622-Blockchain Technology

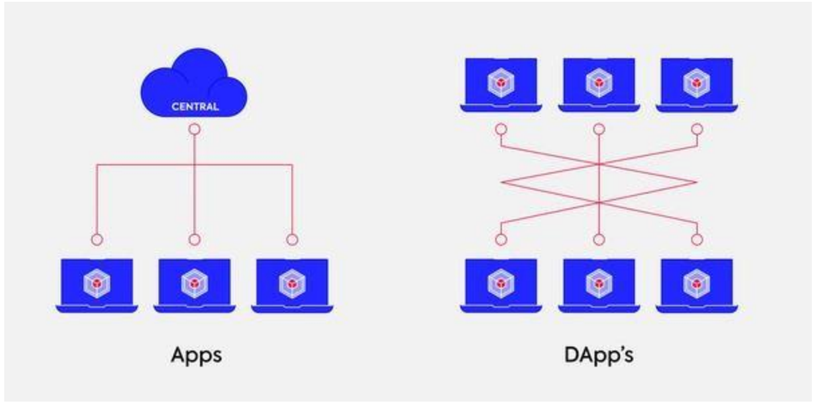
III YEAR /VI SEMESTER

Unit 3- ETHEREUM

Topic : Ethereum – DAPPs

DAPPs

- A decentralized application – or dapp – is like a digital app found on any smartphone or laptop, with the additional feature of employing blockchain technology to keep users' data out of the hands of the organizations behind it..
- Dapps are also commonly open source, meaning that anyone can view and use the underlying code.
- Decentralized autonomous organizations, or DAOs, can be seen as a kind of dapp.



DAPPs

- A Dapp consists of a backing code that runs on a distributed peer-to-peer network.
- It is a software designed to work in the Ethereum network without being controlled by a centralized system,
- it provides direct interaction between the end-users and the decentralized application providers.
- An application qualifies as a Dapp when it is open-source (its code is on Github), and it uses a public blockchain-based token to run its applications.
- A token acts as fuel for the decentralized application to run.
- Dapp allows the backend code and data to be decentralized, and that is the primary architecture of any Dapp.

Features of DAPPs

Decentralized control

- DApps are controlled collectively by the users of the network, rather than by a single authority.

Blockchain technology

- DApps often use blockchain technology to support their core features, or to decentralize control.

Trustless and transparent

- DApps operate in a trustless and transparent manner, unlike conventional applications that rely on centralized servers.

Eliminates single points of failure

- The distribution of data and transactions across multiple nodes eliminates single points of failure.

The different types of dApps

Type 1

- The first type is an application with its own blockchain.
- This is the case with Ethereum or Bitcoin, for example.

Type 2

- The second type is an application based on a different blockchain.
- An example of this is GNOSIS, an application for decentralized prediction markets.

Type 3

- Applications of this type are based on a type 2 protocol.
- An example of this is the SAFE network, which is based on the Omni protocol, which in turn is built on the Bitcoin blockchain.

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.
3. https://101blockchains.com/blockchain-vs-database-the-difference/

REFERENCES

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

Thank You