**Assignment Day 1**

TYPES OF BLOCKCHAIN

**PUBLIC BOLCKCHAIN:**

* Anyone is allowed to join and participate in the consensus
* Fully decentralised, secure and immutable ledge system
* Transactions are anonymous but transparent to everyone.

**PRIVATE BLOCKCHAIN:**

* A single organisation will have authority over the network.
* Faster output, power efficient, and offers privacy
* Simplified data handling process but not open to everyone

**FEDERATED BOLCKCHAIN:**

* Multiple organisations influences the blockchain network
* decentralised, extremely fast and scalable system
* Network regulations preserve security and privacy

**HYBRID BLOCKCHAIN:**

* Authoritative access, only certain elements are private
* Flexible control over what data is kept public and private
* Decentralized, regulated and highly scalable system

Types of Consensus Algorithm

**Proof of Work**

PoW is a consensus algorithm protocol used in blockchain as well as many cryptocurrencies. For example- [Litecoin](https://www.analyticssteps.com/blogs/litecoin-meaning-how-it-works-litecoin-vs-bitcoin), [Ethereum](https://www.analyticssteps.com/blogs/what-ethereum-all-you-need-know), bitcoin cash, Zcash and others. This mechanism is one of the oldest ones that was implemented in cryptocurrency. It has sorted many issues like security, reliability etc.

**Proof of Stake**

This mechanism is one of the most energy efficient ones. In this a random block selection method is used and selection is done through a combination of hash value and stake. The combination is such that the block with lowest hash value and highest stake is chosen.

**Proof of Burn**

It is a unique mechanism as in this the validators burn the coins instead of buying expensive hardware and applications. Burning means sending the coins on such an address that they cannot be retrieved.

**Proof of Capacity**

In this the validators, miners have to invest their drive spaces instead of investing in hardware. Here you do not have to burn the coins. The logic of PoC is pretty simple. The more hard drive space you have the better.

**Proof of Elapsed Time**

Proof of Elapsed Time in short PoEM is one of the most fair consensus algorithms that chooses the next block. In this every user gets a fair chance to get their own block i.e. create their own block.

PRIVACY COINS AND STABLE COINS

**Privacy coins**

Privacy coins are a class of cryptocurrencies that power private and anonymous blockchain [transactions](https://coinmarketcap.com/alexandria/glossary/transaction-tx) by [obscuring](https://medium.com/shapeshift-stories/what-are-privacy-coins-6df8622ebf76) their origin and destination. Some of the techniques used in these anonymous cryptocurrencies include hiding a user’s real wallet balance and address, and mixing multiple transactions with each other to elude chain analysis.

**Stable coins**

 A stable coin is a digital currency that is pegged to a “stable” reserve asset like the U.S. dollar or gold. Stablecoins are designed to reduce volatility relative to unpegged cryptocurrencies like Bitcoin.