**HYPERLEDGER BESU (Enterprise blockchain) :-**

**What is Hyperledger BESU?**

**Ans .** Private Permissioned Blockchain ( use with a company).

**Why Hyperledger Besu use ?**

**Ans.**

1. **Public Blockchain is slow**
2. **Public Blockchain is not scalable**
3. **No confidential**

**Private Blockchain : -**

1. **Decentralize Ledger**
2. **Immutable**
3. **Smart Contract**

**Hyperledger Fabric : -**

Hyperledger is an **umbrella project of opensource blockchains and related tools,** started in December 2015 by the **Linux Foundation.**

**Modular**

**Scalable**

**Secure**

**Features of Hyperledger Fabric**

ChainCode (chaincode is hyperledger program),

MSP (Member service Provider) ,

channel

**Channel : -** A channel is a private communication pathway between two or more members of hyperledger .

**MSP(Member service provider) :** MSP is a **modular component that is used to manage identifies on the blockchain network.**  This provider is used to automatic clients who want to join the blockchain network.

**Access Control List : -**

* An access control list (ACL) is a **list of the rules that specifies which users or systems are granted or denied access to a particular object or system resource.**
* Full access of transaction can be restricted with this.

**Different Types of Nodes:**

**Committing Nodes:** Nodes that have all the copies of the ledger.

**Endorsing Nodes:** Nodes that can execute the chian code ( execute the smart contract .

**Ordering Nodes:**  Nodes that maintain the sequence of transactions.

**ChainCode :**

* Chiancode is a program, written in Go, nodeJs or Java that implements a prescribed interface.

**Hyperledger Transaction Flow : -**

1. **Client initiating a transection :**

Client is read the transaction blockchain . Blockchian is verify the the client is MSP and ACL.

1. **Validation of Transaction :** Transaction Proposal send to Endorsing node.
2. **Simulating the transaction :** After Execute the endorsing node send the output to client .