



# 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 4- HYPERLEDGER

**Hyperledger Frameworks & Tools**



# Hyperledger Frameworks

## Hyperledger Fabric:

- Fabric is a versatile framework that allows businesses to create robust and scalable blockchain networks.
- Its modular architecture enables organizations to customize their networks, define access control policies, and incorporate smart contracts written in languages like Go or Java.
- Fabric's private channels and permissioned consensus ensure confidentiality and integrity, making it suitable for consortia or private applications.



# Hyperledger Frameworks

## Hyperledger Sawtooth:

- Sawtooth provides a flexible platform for building and deploying distributed ledger applications.
- It emphasizes modularity, enabling developers to experiment with consensus algorithms and smart contract languages.
- Sawtooth simplifies the development process with its intuitive transaction execution model, making it a powerful framework for complex business scenarios.



# Hyperledger Frameworks

## Hyperledger Besu:

- Besu, built on Ethereum standards, is an Ethereum-compatible framework that supports both private and public networks.
- With its Java-based client, Besu offers enhanced privacy features and enterprise-grade performance.
- It seamlessly integrates with existing systems, enabling organizations to leverage their Ethereum expertise while benefiting from additional Hyperledger capabilities.



# Hyperledger Tools

## Hyperledger Composer:

- Composer is a collaborative tool that simplifies the creation, testing, and deployment of blockchain applications.
- It provides a user-friendly interface, abstraction layer, and a domain-specific language to define business networks.



# Hyperledger Tools

## Hyperledger Caliper:

- Caliper is a benchmarking tool designed to measure the performance and scalability of blockchain networks.
- It enables organizations to simulate various workloads, evaluate network efficiency, and identify potential bottlenecks.



# Hyperledger Tools

## Hyperledger Explorer:

- Explorer is a powerful blockchain explorer and visualization tool that provides a comprehensive view of network activity and transaction history.
- It offers real-time monitoring, analytics, and rich visualization, empowering users to understand and analyze their blockchain networks efficiently.



# Hyperledger Tools

## Hyperledger Explorer:

- Explorer is a powerful blockchain explorer and visualization tool that provides a comprehensive view of network activity and transaction history.
- It offers real-time monitoring, analytics, and rich visualization, empowering users to understand and analyze their blockchain networks efficiently.