



e-Document Management

Section 1: Introduction

- a. Important Prerequisite
- b. Course Objective
- c. Development Environment

Section 2: Basic Of Hyperledger Fabric

- a. Difference between Hashing and Encryption
- b. x509 Standard Certificate
- c. General Overview - Introduction
- d. Functionalities
- e. Fabric Model
- f. Identity
- g. Membership
- h. Policies
- i. Peers
- j. Smart Contract and chaincode
- k. Ledger
- l. Ordering Service

Section 3: Contract Management : Build Network

- i. Ubuntu VM Creation
- ii. Connect VM with Local VS Code
- iii. Prerequisite
- iv. Installation
- v. Folder Structure
- vi. Services Introduction

vii. Blockchain

1. Network Topology
2. Files Walkthrough
3. Run CA
4. Create Crypto-Material Using CA
5. Create Channel Artifacts (channel.tx)
6. Running all Services with different containers
7. Create Channel and join all peer
8. Basic Chaincode walk-through
9. Chainocde Deployment
10. Ledger (Blockchain and Current State Database)
11. Invoke and Query Transaction
12. Check Invoked Transaction on Couch db GUI
13. Running network and invoking transaction

Section 4: Network Integration with blockchain Explorer

- a. Introduction to Blockchain Explorer
- b. Channel Block(What exactly contain inside)
- c. Adding Configuration file in Blockchain Explorer
- d. Run Network and Explorer and Check Explorer GUI
- e. Invoke Transaction

Section 5: Create Server and Write API

- a. Folder Structure
- b. Mongo DB Usage
- c. Register New User
- d. Login User
- e. JWT Verification
- f. Transaction Flow
- g. Invoke transaction
- h. Upload File on s3 bucket
- i. Query transaction
- j. Update Transaction
- k. Get History of Asset
- l. System Chaincodes
- m. QSCC
- n. ABAC

- o. ACL
- p. Upgrade Chaincode
- q. Data Persistency

Section 6: Front End UI: React

- a. UI Introduction
- b. Folder Structure
- c. Create Basic UI Application
- d. Register and Login Screen
- e. API Integration
- f. Home Screen
- g. Admin Section
- h. Create e-Contract
- i. Approve e-Contract
- j. Get All Contract with Specific Status
- k. Approve Contract
- l. Get Contract History
- m. Check History Of Contract

Section D: Deployment

1. Apache Configuration
2. DNS Creation
3. SSL Lets Encrypt
4. Application Deployment