Blockchain Training Course Content

- **Basics of Blockchain**
  - Decentralization
  - Blockchain Definition
  - Properties Of Blockchain
  - Types of Blockchain
  - Generations of Blockchain
  - Public and Private Blockchain Introduction
  - Immutability and Transaction Linkage
  - Consensus Algorithms Introduction
  - Cryptographic Techniques used: Hashing and Digital Signature
  - Blockchain Use-cases

- **Bitcoin**
  - What is Bitcoin
  - History of Bitcoin
  - How Bitcoin Blockchain works
  - Different components of Bitcoin network : Wallets, Miners, Network.
  - Bitcoin transactions, Wallets and Exchanges
  - How Blockchain is implemented in Bitcoin
  - Transaction flow
  - What is consensus
  - POW Mining algorithm
  - Forks

- **Ethereum**
  - Ethereum Introduction
  - Architecture of Ethereum
  - How blockchain is implemented in Ethereum
  - Different components of Ethereum
    - Accounts, State, Gas and Fees, Block structure.
  - Ethereum Proof of Work Algorithm.
  - Introduction to Proof of Stake and Casper.
  - Forks and Ghost Protocol
  - Different Ethereum Networks
  - Setting up our own Ethereum Node : public and private.
  - Remix IDE
  - Ethereum Smart Contract Language : Solidity
    - Introduction, compilers and IDE’s
    - Tools available for solidity
    - Contract structure
    - Data types, function types and other solidity features
    - Libraries, Abstract Contracts etc..
    - Sample solidity programs
  - ERC Standards: ERC20, ERC223, ERC721
Blockchain Training Course Content

- Creating our own ERC20 token and How can we do ICO.
- Web 3 introduction & Infura services
- Truffle Framework
- How to develop unit test cases using Truffle
- End to end POC/project using Ethereum.

- Hyperledger
  - Private Blockchain Introduction
  - Private vs Public Blockchains
  - Hyperledger and flavours of Hyperledger
  - Hyperledger fabric 1.0 Architecture
  - Transaction workflow
  - Chain code Introduction
  - Golang basics required for Writing Chiancode
  - How to setup your own network using IBM cloud or on Local Machine
  - How to write chian code
  - How to develop apps using Hyperledger fabric Node SDK
  - Hyperledger Composer
  - Designing business networks using Hyperledger composer

- Miscellaneous
  - Crypto currencies
  - Crypto Exchanges and types
  - DAO hack
  - Limitations of Blockchain
  - Future scope of Blockchain
  - What Blockchain is not for (Limitations of Blockchain)
  - Common Interview questions in Blockchain

- Advanced Topics Introduction
  - Atomic swaps
  - Decentralized Exchanges
  - State Channels
  - Payment Channels
  - ICO (Initial Coin Offering)
  - ILP (Interledger Protocol)