
venolearn
EXPERIENCE BEYOND IT TRAINING

What is BlockChain?

Blockchain is a revolutionary technology. It is simply a data structure where each block is linked to another block in a time-stamped,chronological order. It is the underlying infrastructure for bitcoin, a popular cryptocurrency.

In near future, many companies will be adopting blockchain technologies for various purposes. Apart from bitcoin, it can be used for a wide variety of applications such as tracking ownership, digital assets, physical assets, or voting rights. It can also store and run computer code called 'smart contracts'.

However, blockchain is still new and the communities are still exploring the best ways in which it can be used.

What are the benefits of BlockChain?

Blockchain Training can be a benefial for with below mentioned profiles:-

- Banking/Finance professionals
- Software developers

You'll also master the concepts like Cryptography & Cryptocurrency, Blockchain Networks, Bitcoin Mining & Security, Multichain, developing smart contract on Ethereum & Hyperledger Platform.

However, anyone having zeal to learn new technology can take up the course. Students and professionals aspiring to make a career in the Blockchain Technology should opt for the course.

What are the Pre-requisites?

- Development Experience with an Object – Oriented Language is required.
- Fundamentals of Networking and basic Knowledge of Command line & Linux would be advantageous.
- Experience with JavaScript ,will be beneficial
- Linux Fundamentals
- NodeJs Fundamentals
- JavaScript

Course Duration

- 40 Hours

BlockChain Curriculum

1) CryptoCurrency & BlockChain

- Transformation in trading units
- Cryptography and Crypto-currency
- Anonymity and Pseudonymity in cryptocurrencies
- Digital Signatures
- Cryptocurrency Hash codes
- Distributed networks

2) Delving into BlockChain

- Introduction to Blockchain
- Why Blockchain is crucial?
- Key vocabulary while discussing Blockchain
- Distinction between databases and blockchain
- Explaining Distributed Ledger
- Blockchain ecosystem
- Blockchain structure
- Working of blockchain technology
- Permissioned and permission-less blockchain

3) Bitcoin & Blockchain

- Bitcoin and its History
- Why use bitcoins?
- Where and how to buy bitcoins
- How to store bitcoins?
- How and where to spend bitcoins?
- Selling bitcoins
- Bitcoin transactions
- How bitcoin transactions work
- What happens in case of invalid transactions
- Parameters that invalidate the transactions
- Scripting language in bitcoin
- Applications of bitcoin script
- Nodes and network of bitcoin
- Various roles you can play in bitcoin ecosystem

4) Bitcoin Mining

- Purpose of Mining
- Algorithm used in mining
- Mining hardware
- How bitcoin mining works?
- Bitcoin mining pools
- How cloud mining of bitcoin works?
- Mining Incentives
- Security and Centralizations

5) Ethereum

- What is Ethereum?
- What is Ether?
- How to use Ethereum?
- The Ethereum ecosystem, DApps and DAOs
- How Ethereum mining works
- Learning Solidity
    - ✓ Contract classes, Functions and conditionals
    - ✓ Inheritance & abstract contracts
    - ✓ Libraries
    - ✓ Types & Optimization
    - ✓ Global Variables
    - ✓ Debugging
- Future of Ethereum

6) Setting Up Private Blockchain Environment Using Ethereum Platform

- Private and public blockchain
- Various blockchain setup platforms
- Using Ethereum to setup private blockchain
- Steps to build a blockchain solution
- Smart contract on Ethereum
- Compile, deploy and instantiate contracts
- Configuring, running and working with the go-Ethereum client
- Account management and mining
- Understand the different stages of a contract deployment
- How to interact with a contract once deployed?

7) Hyperledger

- Introduction to Hyperledger
- Hyperledger architecture
- Membership
- Blockchain
- Chaincode
- Consensus
- Consensus & its interaction with architectural layers
- Application programming interface
- Application model
- Network topology
- Exploring Hyperledger frameworks
- Hyperledger Fabric
- Hyperledger Indy
- Hyperledger Iroha
- Hyperledger

8)Setting Up Development Environment Using Hyperledger Composer

- Setting up development environment using Composer
- Developing business networks
- Testing business networks
- Introduction to Hyperledger Fabric
- Hyperledger Fabric Model
- Various ways to create Hyperledger Fabric Blockchain network

9)Create & Deploy your Private Blockchain on MultiChain

- Introducing MultiChain
- Privacy & Permissions in MultiChain
- Mining in MultiChain
- Multiple configurable blockchains using MultiChain
- Setting up a private blockchain
- Creating a blockchain
- Connecting to a blockchain
- Some commands in interactive mode
- Using native assets

- Transaction metadata
- Streams
- Round robin Mining

10) Prospects Of Blockchain

- Blockchain prospering our world
- Blockchain transforming business and professionalism
- Discussing practical use-cases of blockchain
- How can we take Aadhaar Card on blockchain?
- How blockchain can be used to remove corruption
- Real case scenarios of Blockchain
- Blockchain in Banking System
- Blockchain in Land Registry
- Blockchain in Capital Market
- Use cases for government
- Summary Of Course