BlockChain Course Content

Course Description:

Blockchain is the most cutting-edge technology the reinforces digital currency like Bitcoin, Ethereum, Litecoin, etc. Blockchain is similar to a digital ledger that has a distributed database to store any transaction data using the cryptographic techniques. The blockchain concept is decentralized, that allows fast and secure transactions without any third party.

Blockchain is an evolving concept than the internet. The chasmic fusing of the internet and virtual economic change is a new window in the future field of Blockchain. Scope of tremendous Blockchain not only limited to the cryptocurrency and finance domain but extended its applications in forecasting, chain management, cybersecurity, network, digital advertising, and IoT.

Blockchain technology adds extra security to businesses over the internet. Candidates who are interested to learn Blockchain technology and want to apply in real life may take Blockchain course training at Hachion by the great professional specialists. Our online tutorial is well structured with up to date concepts.

Course Content:

Blockchain
- What is Blockchain?
- Blockchain Technology Mechanisms & Networks
- Blockchain Users and Adoption
- Transactions and Blocks
- P2P Systems
- Hash Pointers and Data Structures
- Blockchain Block Structure

Bitcoin
- The Bitcoin Mining Process
- Bitcoin Wallets
- Alternative Blockchains/ Altchains

Ethereum
- Introduction
- Interfacing with Ethereum Networks
- Ethereum Accounts
- Smart Contracts
- Contract Structure
- Function Declarations
- Wei vs. Ether

- Mnemonic Phrases
- Getting More Ether

Solidity Programming for Ethereum
- Solidity - Language of Smart Contracts
- Installing Solidity & Ethereum Wallet
- Basics of Solidity by Example: Subcoin Smart Contract
- The layout of a Solidity Source File & Structure of Smart Contracts
- General Value Types (Int, Real, String, Bytes, Arrays, Mapping, Enum, address)
- Ether Units, Time Units

Ethereum coding for Blockchain environment
- Globally Available Variables & Functions
- Operators: Arithmetic, Logical & Bitwise Operators
- Control Structure (if-else, for, while, Do-While)
- Scoping and Declarations
- Input Parameters and Output Parameters
- Function Calls & Return Types

Contract Deployment for Blockchain Environment
- Boilerplate Requirements
- Project File Walkthrough
- Syntax Highlighters
- Compiling Solidity
- The Compile Script
- Testing Architecture

Advanced Smart Contracts
- The Lottery Contract
- Lottery Design
- Basic Solidity Types
- Starting the Lottery Contract
- The Message Global Variable
- Overview of Mappings and Structs/li>
- Big Solidity Gotcha
- Entering the Lottery

Ethereum Test Environment Setup
- Test Project Updates
- Test Helper Review
- Asserting Deployment
- Entering the Lottery

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- Asserting Multiple Players
- Try-Catch Assertion

Ethereum Application Architecture
- Application Overview
- Getting Started with Create-React-App
- Multiple Web3 Instances
- Web3 Setup

Real World Ethereum Projects
- Solving Real Problems with Contracts
- Fixing Kickstarter's Issues
- Campaign Contract Design
- Campaign Constructor
- Contributing to the Campaign
- The Request Struct

Creating Project Infrastructure for Ethereum
- Project Setup
- Directory Structure
- Accessing Mappings
- Testing Warmup
- Requiring Minimum Contributions
- Array Getters

Introduction to Hyperledger Fabric using Composer
- Hyperledger Fabric & Composer Concepts
- Hyperledger Fabric: A DLT for Business Applications
- Hyperledger Fabric: DLT for Business
- Assets, Chaincode& Ledger

Setting up the Hyperledger Fabric Developer Environment Tools
- Linux/Ubuntu & AWS: Setup of Fabric Development on Local & Cloud VM
- Mac OS: Setup of Fabric Development Environment
- Windows: Fabric development environment setup