



HYPERLEDGER



BLOCKCHAIN FOR BUSINESS - AN INTRODUCTION TO HYPERLEDGER TECHNOLOGIES

Overview

This introductory course examines blockchains for the enterprise and a number of pertinent use cases from Hyperledger, a global cross-industry community of communities hosted by The Linux Foundation and advancing business blockchain technologies. Hyperledger is incubating and promoting enterprise grade, open source business blockchain software, on top of which anyone can set up apps to meet cross-industry needs.

The course covers key features of blockchain technologies and the differentiators between various types of Hyperledger projects. We'll start with 'what is blockchain' and open the discussion to identifying suitable blockchain use cases for your business requirements. We will then take a deep dive into the enterprise-ready Hyperledger blockchain frameworks by guiding students through implementation of various blockchains.

Industries today are using blockchain technologies to increase efficiency and solve business problems associated with data privacy, security, information sharing, and inclusion. Be on the cutting edge; learn about these innovative technologies and bring unique value to your business.

Audience

This course is carefully curated for both nontechnical and technical audiences.

Prerequisites

No prior experience with Hyperledger technologies is assumed in this course. To make the most of this course, you should have basic understanding of technology and computer terminology, networking and databases, be comfortable with terminal and command line, and have a basic understanding of programming languages (Go, Node.js, Java, Python).

Course Outline

Welcome & Introduction

Chapter 1: Discovering Blockchain Technologies

- Introduction & Learning Objectives
- Distributed Ledger Technology (DLT)
- Bitcoin and Ethereum Blockchains
- Exploring Permissionless Blockchains
- Consensus Algorithms
- Other Open Source Distributed Ledgers
- Hyperledger
- Challenges in the Adoption/Deployment of Distributed Ledger Technologies
- Conclusions & Learning Objectives (Review)

Chapter 2. Introduction to Hyperledger

- Introduction & Learning Objectives
- Hyperledger
- Hyperledger Frameworks
- Hyperledger Modules
- Q/A with Brian Behlendorf, Executive Director of Hyperledger
- Conclusions & Learning Objectives (Review)

Chapter 3. The Promise of Business Blockchain Technologies

- Introduction & Learning Objectives
- Existing Blockchain Use Cases
- When to Use or Not to Use Blockchain Technologies
- Learning Objectives (Review)

Chapter 4. Technical Requirements

- Introduction & Learning Objectives
- Installation Instructions for Linux
- Installation Instructions for MacOS
- Installation instructions for Windows
- Learning Objectives (Review)

Chapter 5. Introduction to Hyperledger Iroha

- Introduction & Learning Objectives
- Key Components
- Joining the Hyperledger Iroha Community
- Conclusions & Learning Objectives (Review)

Chapter 6. Introduction to Hyperledger Sawtooth

- Introduction & Learning Objectives
- Addressing Illegal, Unregulated, and Unreported Tuna Fishing (Demonstrated Scenario)
- Key Components and Transaction Flow
- Installing Hyperledger Sawtooth
- Writing an Application
- Joining the Hyperledger Sawtooth Community
- Conclusions & Learning Objectives (Review)

Chapter 7. Introduction to Hyperledger Fabric

Introduction & Learning Objectives

Addressing Illegal, Unregulated, and Unreported Tuna Fishing (Demonstrated Scenario)

Key Components and Transaction Flow

Installing Hyperledger Fabric

Understanding Chaincode

Writing an Application

Joining the Hyperledger Fabric Community

Conclusions & Learning Objectives (Review)

Chapter 8. What's Next?

Introduction & Learning Objectives

What's Next?

Conclusions & Learning Objectives (Review)

Final Exam