



# Certificate in Blockchain

**Vskills Certifications**

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Skills for a secure future

## Certificate in Blockchain

Blockchain is a database technology that acts as a public ledger for Bitcoin and contains every Bitcoin transaction. Bitcoin is a digital currency that allows users to transfer money over the Internet without the need for banks or credit cards.

Blockchain is a distributed database that enables permanent, transparent, and secure storage of data. Blockchain technology uses cryptography to keep data secure.

The online course covers the essentials of Blockchain, including money and ledger economics, basic cryptography, Bitcoin Basics, mining, wallets, clients and key management, and Bitcoin commerce.

### Why should one take this certification?

The blockchain technology is the backbone of cryptocurrency. This video course will take you on a journey of the blockchain database, followed by advanced implementations of blockchain concept. This video course is aimed at anyone who is interested in learning about bitcoin basics, the technical operation of bitcoin. This video course would give you a full insight of this leading technology and its implementation in the real world. We would begin with the technical foundations of the blockchain, teaching you the fundamentals of cryptography and how it keeps data secure. Along the way, you would also learn about the mechanisms behind cryptocurrencies. In this video course, you will learn everything you need to know about decentralized digital money, advanced Blockchain concepts and, Bitcoin and Blockchain security.

### Who will benefit from taking this certification?

This course is for anyone who wants to quickly understand and expand their knowledge of how Blockchain and Bitcoin work, how they are applied commercially.

### Test Details

- **Duration:** 60 minutes
- **No. of questions:** 50
- **Maximum marks:** 50, Passing marks: 25 (50%)

There is no negative marking in this module.

### Fee Structure

Rs. 3,999/- (Excludes taxes)\*

\*Fees may change without prior notice, please refer <http://www.vskills.in> for updated fees

# Table of Contents

## **1. START AT THE END**

- 1.1 The Course Overview
- 1.2 Posting an Item for Sale
- 1.3 Buying an Item for Sale
- 1.4 Concluding the Transaction and Releasing the Funds
- 1.5 Setting Up Our Development Environment

## **2. CREATE YOUR FIRST SMART CONTRACT IN ETHEREUM**

- 2.1 Creating a Contract with Solidity
- 2.2 Add Datatypes and Functions to a Contract
- 2.3 Change Function Behaviors with Modifiers
- 2.4 Emitting Events
- 2.5 Create a kill() Function for Your Smart Contract

## **3. TESTING YOUR SMART CONTRACT**

- 3.1 Why Tests Are Necessary?
- 3.2 Write Unit Tests in Solidity
- 3.3 Write Integration Tests in JavaScript Using Mocha
- 3.4 Use Ganache to Run Your Tests
- 3.5 Debugging Your Smart Contract When Tests Fail

## **4. BUILD A USER INTERFACE FOR YOUR SMART CONTRACT USING REACT**

- 4.1 Retrieve the Data from the Smart Contract on Page Load
- 4.2 Implement the Contract Purchases in the UI
- 4.3 Persist the Contract State and Refresh the UI on State Change
- 4.4 Configure a MetaMask Wallet for Purchases
- 4.5 Instrument User Feedback and Logging for Successful Transactions and Errors

## **5. DEPLOYING YOUR SMART CONTRACT**

- 5.1 Deploy Your Contract Locally Using Ganache
- 5.2 Deploy Your Contract to Testnet
- 5.3 Deploy Your UI to AWS
- 5.4 Interacting with Your Application on Testnet
- 5.5 Troubleshooting Deployments

## Sample Questions

**1. What type of architecture will describe blockchain**

- A. Single centralized authority
- B. Distributed peer to peer only
- C. Distributed with centralized
- D. None of the above

**2. What does a block in blockchain consists of**

- A. a hash pointer which acts as a link to the block which is prior to it
- B. transaction data
- C. a timestamp
- D. All of these

**3. What was the initial application, for which Blockchain was designed**

- A. Research project
- B. Peer-to-peer finance application
- C. Open source finance software to connect banks
- D. None of the above

**4. Who is regarded as creator of Blockchain technology**

- A. Tim Berners-Lee
- B. Leonard Kleinrock
- C. Satoshi Nakamoto
- D. Charles Babbage

**5. Which statement is true about anonymity and Bitcoin?**

- A. The Bitcoin ledger contains user information
- B. It's difficult to find addresses
- C. It's impossible to determine a user's identity
- D. The Bitcoin ledger isn't public

**Answers: 1 (B), 2 (D), 3 (D), 4 (C), 5 (A)**

### Certifications

- ▶ **Accounting, Banking & Finance**
  - Certified GST Professional
  - Certified AML-KYC Compliance Officer
  - Certified Business Accountant
  - Certified BASEL III Professional
  - Certified GAAP Accounting Standards Professional
  - Certified Treasury Markets Professional
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  - Certified Hadoop and Mapreduce Professional
- ▶ **Cloud Computing**
  - Certified Cloud Computing Professional
- ▶ **Design**
  - Certified Interior Designer
- ▶ **Digital Media**
  - Certified Social Media Marketing Professional
  - Certified Inbound Marketing Professional
  - Certified Digital Marketing Professional
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  - Certified Export Import (Foreign Trade) Professional
- ▶ **Health, Nutrition and Well Being**
  - Certified Fitness Instructor
- ▶ **Hospitality**
  - Certified Restaurant Team Member (Hospitality)
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  - Certified Human Resources Manager
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  - Certified Scrum Specialist
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  - Certified Corporate Law Analyst
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  - Certified Business Intelligence Professional
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  - Certified E-commerce Professional
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  - Certified PHP Professional
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  - Certified Public Relations Officer
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  - Certified Advertising Sales Professional
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& many more job related certifications

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