Blockchain Architecture Training

Duration: 3 Days **Course Code: U67882G**

Overview:

This course reviews Blockchain and the architectural and technical issues that need to be considered before launching a development program. There are many decisions and issues that face the technical project team and this class will enable you to make those decisions.

Target Audience:

This course is intended for technical leaders who make technical decisions about their architecture, environments, and development platforms.

Objectives:

- What you will learn:
- What is Blockchain?
- How does Blockchain work?
- Blockchain types
- How is Blockchain different from what we use today?
- Blockchain use cases
- What does a Blockchain app look like?
- How do I design, develop, and test a Blockchain app?

Content:

What is Blockchain?

- A record of keeping systems
- Trust
- Decentralization
- Trustless environment

How does Blockchain work?

- Announcements
- Blocks
- Nodes
- Chaining
- Verification
- Consensus
- Scalability
- Privacy
- Crypto hashing
- Digital fingerprinting
- PoW versus PoS

Blockchain Types

- Public versus private
- Open versus closed
- Smart contracts
- Blockchain as history
- Tokens/coins
- Gas

How is Blockchain different from what we have today?

- Decentralization
- Peer-to-peer architecture
- Software versus firmware
- Database versus Blockchain
- Distributed database or other technology?
- Data sovereignty
- Group consensus

Blockchain Use Cases

- Use case examples
- Currency
- Banking
- Voting
- Medical records
- Supply chain/value chain
- Content distribution
- Verification of software updates
- Law enforcement
- Title and ownership records
- Social media and online credibility
- Fractional asset ownership
- Cable television billing
- High fault tolerance
- DDoS-proof
- Public or private Blockchain?
- Who are the participants?

What does a Blockchain app look like?

- DApp
- Resembles typical full stack web application
- Any internal state changes and all transactions are written to the Blockchain
- Node.js
- IDE
- Public Blockchain visibility
- Private Blockchain solutions
- Oracles

How do I design a Blockchain app?

- What does the solution need to let users do?
- Will the proposed solution reduce or remove the problems and pain points felt by users?
- What should this solution prevent users from doing?
- Do you need a solution ready for heavy use on day 1?
- Is your solution idea enhanced by the use of Blockchain?
- Does the use of Blockchain create a better end-user experience and how?
- Has your business developed custom software solutions before?
- What level of support are you going to need?
- How big is the developer community?
- Does your vision of the future align with the project or platform's vision of the future?
- Does the platform aim to make new and significant contributions to the development space, or is it an efficiency/cost play?
- Should the solution be a public or private Blockchain?
- Should the solution be an open or closed Blockchain?
- Create a plan for contract updates and changes
- Hybrid solutions
- Monetary exchanges?

How do I develop a Blockchain app?

- Agile approach pre-release
- Define guiding principles up front
- Software versus firmware
- Announcements, not transactions!
- Classes, not contracts
- Link contracts to share functions
- Use calling contracts to keep contract addresses the same
- Hyperledger versus Ethereum
- Consider the number of users and number of transactions per user
- Should a blockless solution be applied?
- Performance
- Security
- Anonymity
- Monolithic versus modular
- Sandwich complexity model

How do I test a Blockchain app?

- Recommendations
- Security
- Networks (Ethereum)

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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