"MaDeIT invites participants for a two-day hands-on workshop on"

Smart Contracts using
Blockchain
Course Outline

MaDeIT
Believe. Design. Leap

Date : **2nd & 3rd Feb 2019**

Venue: H05, IIITDM Kancheepuram

Eligiblity: Students / Working Profesionals

Registration Fees: Rs. 1500/-

Prerequisites:

1. Beginner hands-on knowledge of web technologies like JavaScript, HTML and CSS.
2. Basic understanding of public/private key cryptography
3. PC / Laptop with
a) Code editor (Atom/Sublime/Notepad++/Visual Studio Code etc)
b) Internet connectivity
c) Modern browser like Chrome or Firefox (note: IE will not be sufficient)
4. Github account (sign up details are given at https://github.com)

Short Description

A Blockchain is a distributed computing architecture where every network node executes and records the same set of transactions. Bitcoin cryptocurrency is the first platform which used blockchain to facilitate the transfer of value. Ethereum generalizes the Bitcoin concepts to a general purpose computer capable of solving multiple business problems using smart contracts.

This course covers the foundational concepts of blockchains and smart contracts. It also explains the usage of smart contracts in building cryptocurrency and other applications.

Contact & Registration Details:

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Click here to apply: https://goo.gl/forms/JsDLCR9BWe2X2ri52
Visit our Website : www.madeit.iiitdm.ac.in for more details

Course Contents

Blockchain

- Introduction to Blockchain
- History of Bitcoin the first blockchain
- Double spend problem
- Mining and Consensus
- Hashing and Blockchains
- Merkel Trees
- Crypto to Blockchain – the industry transition

Decentralised apps

- Introduction to Ethereum
- Scripting and Smart contracts
- A simple Dapp and its components
- Comparison to traditional applications
- How Ethereum is powering innovation by raising funds through ICO / Token sale

Ethereum

- Ethereum Accounts
- Messages and Transactions
- Messages
- Ethereum State Transition Function
- Code Execution
- Getting started on Solidity

Solidity - Part 1

- Structure of a contract
- Types
- Units
- Expressions
- Functions

Solidity - Part 2

- Payable Functions
- Mappings
- Events
- Blockchain commands

Decentralized Apps – Connecting to the smart contracts

- Contract Metadata
- Application Binary Interface
- Single Page Applications
- Importance of call backs
- Design Considerations

Decentralized Apps – Example

- Metamask
- Web3.js
- Read Functions
- Write Functions
- Payable Functions
- Events

Future Directions

- Distributed Autonomous Organizations
- Multiplicity of blockchains
- Benefits of blockchain
- Current industry Overview

Course Instructor

Madduri Srikant
https://www.linkedin.com/in/maddurisrikant/

Madduri Srikant has extensive experience in dealing with systems for financial services organizations. He has worked on the design and deployment of core banking, payment, regulatory compliance and capital market systems.
Over the last couple of years he has been working on disintermediation platforms such as blockchain which are disrupting many business verticals and allowing them to self-organize.

He is currently involved with the roll out of a blockchain based regulatory reporting solution for the tokenized asset funds. He has conducted multiple workshops on regulations and payments with clients in North America and South East Asia. He has done his graduation in Electrical Engineering from the Indian Institute of Technology, Kanpur anda his post-graduation in Management from the Indian Institute of Management, Bangalore.