INVITATION

Department of Information Technology

Velagapudi Ramakrishna

Siddhartha Engineering College

Request your gracious presence at the Inaugural Session of

"Faculty Training Programme on BlockChain"

In Collaboration with

"Tata Consultancy Services, Hyderabad"

10 A.M. on 13th September, 2019 @ IT Seminar Hall – Room No. 224

Distinguished Guests

Sri M. S. Subrahmanyam,
Delivery Head (SDN), TCS, Hyderabad

Sri Prasanth Sahoo,
Certified Blockchain Expert, TCS,Hyderabad,

Guests of Honor

Sri N. Venkateswarlu, President, SAGTE
Sri P. Lakshmana Rao, Secretary, SAGTE
Sri S. Venkateswara Rao, Treasurer, SAGTE
Sri M. Rajaiah, Vice President, SAGTE & Convener, VRSEC

Advisory Committee

Dr. A. V. Ratna Prasad, Principal – VRSEC

Dr. B. Panduranga Rao
Professor & Dean, Student- Affairs- VRSEC

Dr. N.N. Sastry
Professor & Dean-R&D - VRSEC

Convener

Dr. M. Suneetha,
Professor & Head, Department of IT, VRSEC

Coordinators

Dr. G. Rama Koteswara Rao, Professor ,IT
B L N Phaneendra Kumar, Asst.Prof., IT

Under

AICTE MARGDARSHAN

Inaugural Session

Faculty Training Programme
on
Blockchain

13-09-2019

Programme Schedule

10.00 AM	**Inviting Guests on to the Dias**
10.05 AM	**Lighting of Lamp**
10.15 AM	**Welcome and Introduction by:** **Dr. M. Suneetha,** Convener, Professor & Head, Department of IT
10.25 AM	**Message from:** **Sri N. Venkateswarlu**, President, SAGTE **Sri P. Lakshmana Rao**, Secretary, SAGTE **Sri S. Venkateswara Rao**, Treasurer, SAGTE **Sri M. Rajaiah,** Vice President, SAGTE & Convener, VRSEC
10.30AM	**Address by:** **Dr. A. V. Ratna Prasad, Principal, VRSEC**
10.40 AM	**Key note Address by:** **Sri M. S. Subrahmanyam,** Delivery Head (SDN), TCS, Hyderabad
10.55 AM	**Key note Address by:** **Sri Prasanth Sahoo,** Certified Blockchain Expert, TCS,Hyderabad,
11.10 AM	**Vote of Thanks by:** **Dr. S. Suhasini,** Assoc. Prof, IT

About the College

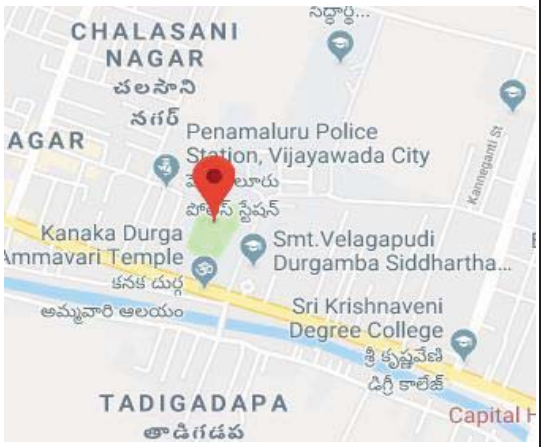
The college sponsored by Siddhartha Academy of General and Technical Education, Vijayawada was established in 1977 as the 1st Private Self Financing Engineering College in the combined state of Andhra Pradesh. The Academy cited is a registered Society consisting of 250 philanthropists hailing from various professions, namely Doctors, Charted Accountants, Engineers, etc., The college commenced its operations with an annual intake of 180 into 4 branches of engineering (Civil Engineering, Electronics & Communication Engineering, Electrical & Electronics Engineering & Mechanical Engineering) and the institution has been growing from strength to strength.

NBA Accreditation The College has been putting in its sincere efforts to maintain high quality in academics and would like to ensure conducive learning environment on the campus. The spirit of the college is understood in getting it accredited much before the state government's decision to accord additional fee from the students of the accredited departments. The college was accredited in the year 1998 for the first time, and subsequently in 2005 and 2009 & 2014. The NBA peer teams expressed their satisfaction over almost all the facilities, teaching-learning processes, student performance; motivation levels of the teachers and thereby, the potential of the college for excellence.

NAAC Accreditation Accredited by NAAC with A grade for a period of five years with a CGPA of 3.17 on four point scale effective from 25-10-2013.

About the Department The department started with an initial intake of 60 students in UG Program in Information Technology and the intake is enhanced to 120 in the year 2007. PG Programme has started in the Year 2011. From the Academic Year 2019-20, the department has started a new **M.Tech. Programme** on **"Data Science"** with an intake of 18 students.

- Faculty of the Department have published 259 Publications from the AY 2010-11 to till date which includes 181 Journals, 54 Conferences, 20 Book Chapters and 04 Books.
- The department is having Industry Collaborative Labs from IBM India Pvt. Ltd and Apple India Pvt. Ltd
- CM's Skill Excellence Centre is established in the Department in association with APSSDC
- A Total of 04 Patents are filed and published in the areas of Data Engineering and Software Engineering.
- Total Fund received through R&D Projects is Rs 42,83,000/- from different agencies NRSC and UGC.
- No. of Sponsored Projects -06
- A total amount of Rs 12,00,000/- is received from E&ICT Academy and AICTE to conduct Faculty Development Programs.
- Department has a separate R&D Cell and Student Project Room to support faculty and student research.
- **Route Map of the College:**



Venue :

IT Department Seminar Hall,
V.R.Siddhartha Engineering College,
Vijayawada

Two day
Faculty Training Programme
on

Blockchain Technology

(13th – 14th September, 2019)

Organized by

Department of Information Technology

Under

AICTE MARGDARSHAN

In Collaboration with TCS

TATA CONSULTANCY SERVICES

V.R. Siddhartha Engineering College

(Autonomous)

(Sponsored by Siddhartha Academy of General & Technical Education)

Kanuru, Vijayawada,
Ph: 0866-2582333, 2584930
Visit us: www.vrsidhartha.ac.in
e-mail: hodit@vrsiddhartha.ac.in

FTP Topics

- **Session I**
  - Introduction to Blockchain
  - Distributed P2P Network
  - How Mining Works: The Nonce, The Cryptographic Puzzle
  - Byzantine Fault Tolerance
- **Session II**
  - Cryptocurrency
  - Plan of Attack
  - Bitcoin and Monitory Policy
  - Mining Difficulty and Pools
  - Consensus Protocol: Proof-of-Work (PoW)
- **Session III**
  - Smart Contract
  - Ethereum, Decentralized Applications(Dapps), Ethereum Virtual Machine & Gas
  - The DAO Attack
  - Blockchain Startups: WhitePapers
  - Blockchain and Web 3.0
- **Session IV**
  - Solidity
  - Value Types
  - Units
  - Operators
  - Control Structures
  - Global Variables & Functions
  - Function Modifiers
  - Remix Compiler
- **Future Prospects of the Blockchain Technology**

Chief Patron

Sri **N. Venkateswarlu, President,**
Siddhartha Academy of General & Technical Education (SAGTE)

Patrons

Sri P. Lakshmana Rao, Secretary, SAGTE
Sri S. Venkateswara Rao, Treasurer, SAGTE
Sri M. Rajayya, Vice-President, SAGTE **&**
Convener, VR Siddhartha Engineering College,

FTP Advisory Committee

Dr. A. V. Ratna Prasad, Principal
Dr. N. N. Sastry, Dean R&D
Dr. B. Panduranga Rao, Dean Student-Affairs

Convener

Dr. M. Suneetha, Professor& HOD, IT

Co-ordinators

Dr. G.Rama Koteswara Rao, Professor
B L N Phaneendra Kumar, Asst. Professor

Organizing Committee

Dr P Vidya Sagar,Assoc. Professor
Mr. V.Radhesyam, Asst. Professor
Mr Y. Sandeep, Asst. Professor
Mr. Ch. Nanda Krishna, Asst.Professor
Mrs. K Madhavi, Asst.Professor
Mrs. P Ramya, Asst.Professor

Technical Support

Mr. S. Balaji
Mr. M Joseph

Resource Persons:

1. **Sri M. S. Subrahmanyam,**
   Delivery Head (SDN), TCS, Hyderabad
2. **Sri Prasanth Sahoo,**
   (CSM, PSM I, CBP, CBE, CSD), Certified Blockchain Expert, TCS, Hyderabad

Registration

- **Free Registration**
- **Interested Faculty are requested to register on or before 10th September, 2019 at**

https://forms.gle/V4r4NEJaVCmrRtD48

Note:

- **Registration includes participation certificate, lunch, high tea and lodging (outstation participants only).**
- **Spot Registrations are available**
- **Attendance is mandatory for all the Sessions to get the Participation Certificate**

Address for Communication:

Dr. M. Suneetha
Professor & Head, Department of IT
Mobile – 8500319748
hodit@vrsiddhartha.ac.in

A Report of

Two-day Faculty Training Programme on

BLOCKCHAIN

In association with TATA Consultancy Services, Hyderabad

under AICTE Margdarshan

At

V.R.Siddhartha Engineering College, Vijayawada

13-09-2019 to 14-09-2019

Resource Persons

M.S.Subrahmanyam

Delivery Head (SDN), TCS, Hyderabad

Prasanth Sahoo

Certified Blockchain Expert, TCS, Hyderabad

Submitted by

K.Purna Prakash, Asst. Professor

P.Ramaiah Chowdary, Asst. Professor

Dept. of Information Technology

Sir C.R.Reddy College of Engineering, Eluru

Day 1

13-09-2019

Delivery by M.S.Subrahmanyam

Digitization vs. Digitalization

Digitization is the process of converting something that is physical and analogue into something that's virtual and digital. For example, if we see in the last decade, everything from movie, books and music has been made available in the digital format.

Digitalization is the integration of digital technologies into everyday life by the digitization of everything that can be digitized.

Officeless Business or Company

The future belongs to officeless business.

Training is necessary to learn anything.

Delivery by Prasanth Sahoo

Technology evolving/advancing rapidly, then how do we know that the existence of technology?

www.gartner.com will tell us that, which technology is going to sustain for the next 10 or 20 years.

Why governments supporting startups?

Employment is most important reason why the government is encouraging start ups. Self employment reduces a lot of unemployment rate. Moreover having more manufacturing industries in the country will lead to an increase of the GDP and revenue streams keep flowing in the country rather to the foreign countries.

Andhra Pradesh to become first state to deploy Blockchain technology across administration. It was implemented by Ex. Chief Minister N. Chandrababu Naidu.

The state launched pilot projects for land records and transport.

Certification in Blockchain

Certification in Blockchain can be provided by **Blockchain Council, New Delhi**

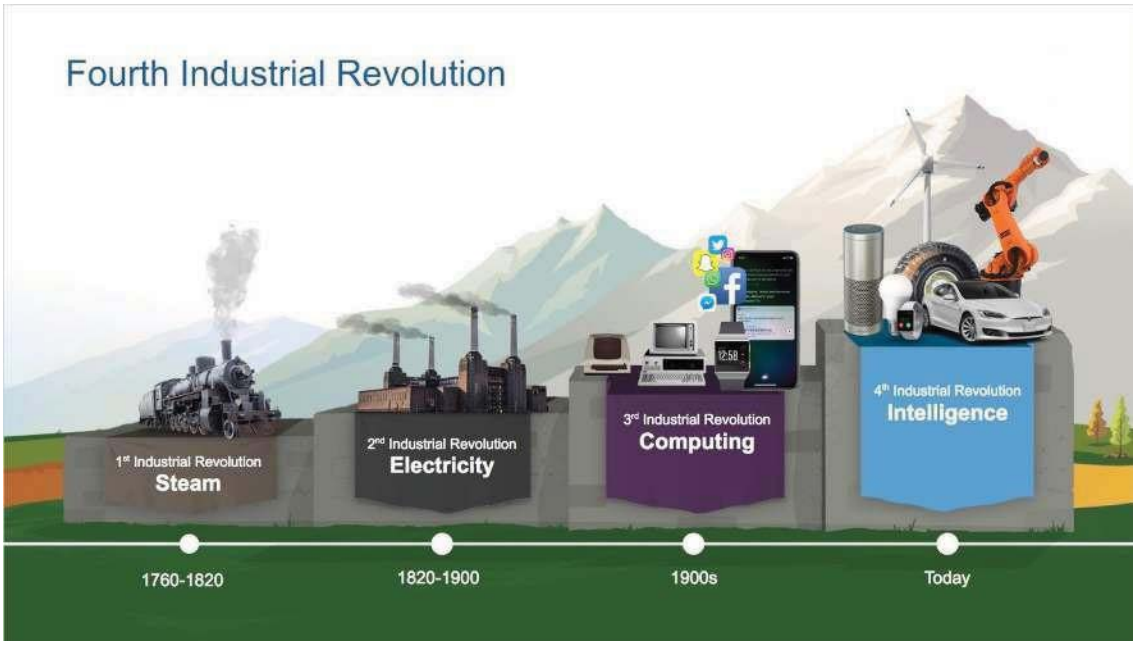
https://www.blockchain-council.org/

Toshendra Sharma is the founder & CEO of RecordsKeeper, a Blockchain-based data security company & also the founder of Toshblocks, A Blockchain Consulting, Development & Training Company.

The value of rupee going down, it representing the recession, in recession the cryptocurrency will help us.

4th Industrial Revolution

We are in the fourth industrial revolution. The **fourth industrial revolution** is the current and developing environment in which disruptive technologies and trends such as the Internet of Things (IoT), robotics, virtual reality (VR) and artificial intelligence (AI) are changing the way we live and work.



Coding is not a big deal.

Unlike the United States, where some of the most powerful companies are concentrated within the 1,854 square miles (4,801.8 square kilometers) Silicon Valley, with some spilling into nearby San Francisco, **in China, tech hubs are scattered across numerous cities** with mega cities – Beijing, Shanghai and Shenzhen – taking the lead.

Session – I: Blockchain

Study the following book,

Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies is Changing the World

by Don Tapscott (Author), Alex Tapscott (Author)

The concept of Blockchain was existing earlier but it was not coined as Blockchain.

In the year 1991, two authors Stuart Haber and W.Scott Stornetta published a paper "How to Time-Stamp a digital document",

https://www.anf.es/pdf/Haber_Stornetta.pdf

Blockchain is a continuously growing list of records, called blocks, and they are linked and secured using cryptography. – Wikipedia

Blockchain Distributed ledger:

A distributed ledger is a type of database that is consensually **shared**, **replicated**, and **synchronized among** the members of a decentralized network. All the information on this ledger is securely and accurately stored using **cryptography**. This information can be accessed by using keys and cryptographic signatures.

The distributed ledger allows transactions to have public **witnesses**, which makes cyber attack more difficult. It records the transactions such as the exchange of assets or data, among the participants in the network.

Keywords in Blockchain

Immutable ledger

Consensus protocol

Distributed P2P (Peer-to-Peer) network

Hash cryptography

Mining

Blockchain architecture:

There are mainly three types of architectures

Public Blockchain architecture - Users are anonymous

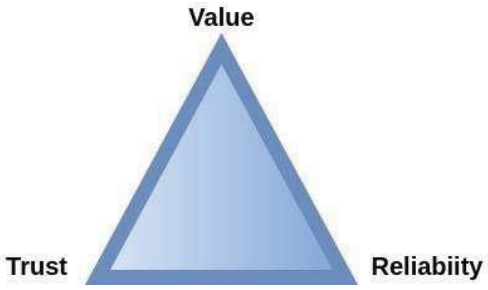
Private Blockchain architecture – Users are not anonymous

Consortium Blockchain architecture – Between two organizations

Why Blockchain?

The blockchain technology fixes **three** things that the Internet was not designed to do. These three things are:

1. Value
2. Trust
3. Reliability



1. Value

With blockchain, you can actually create value on a digital asset. The value can be controlled by that person who owns it. It enables a unique asset to be transferred over the internet without a middle centralized agent.

2. Trust

Blockchain creates a permanent, secure, unalterable record of who owns what. It uses advanced hash cryptography to preserve the integrity of the information.

3. Reliability

Blockchain distributes their workload among thousands of different computers worldwide. It provides reliability because if you have everything localized in one location, it becomes a single point of failure. But, its decentralized network structure ensures that there is no single point of failure which could bring the entire system down.

Immutable ledger:

An Immutable Ledger simply means a record that cannot be changed.

Consensus protocol:

As a term, 'consensus' means that the nodes on the network agree on the same state of a blockchain, in a sense making it a self-auditing ecosystem. This is an absolutely crucial aspect of the technology, carrying out two key functions.

Firstly, consensus protocols allow a blockchain to be updated, while ensuring that every block in the chain is true as well as keeping participants incentivized.

Secondly, it prevents any single entity from controlling or derailing the whole blockchain system. The aim of consensus rules is to guarantee a single chain is used and followed.

Distributed P2P Network:

Peer to Peer networks completely differ from the traditional client-server models that are common today as there is no central point of storage, such as a server. Instead, information is being constantly recorded and interchanged between all of the participants on the network. This is also different to a centralized server model that slows down when more users join it, as a P2P network can actually improve its power with more devices or nodes joining the network.

Hash cryptography:

Hashing is the process of taking an input of any length and turning it into a cryptographic fixed output through a mathematical algorithm (Bitcoin uses SHA-256, for example). Examples of such inputs can include a short piece of information such as a message or a huge cache of varying pieces of information such as a block of transactions or even all of the information contained on the internet.

Hexadecimal format, which uses 0-9 and A-F (64-digit hexadecimal number)

Five requirements for hash algorithm

One-way

Deterministic

Fast computation

The avalanche effect (if an input is changed slightly, the output changes significantly)

Must withstand collisions

Mining:

Nonce = Number used once

Nonce is interrelated to hash

The first block in Blockchain is called genesis block. The genesis block's previous hash is always zero

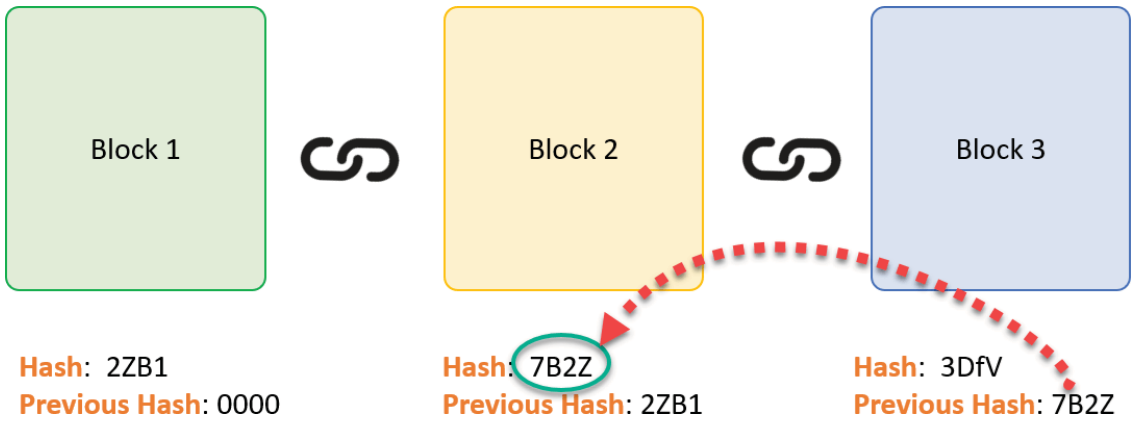
Hash acts as unique fingerprint of the block

Target('0000') i.e. hash that containing four zeros

In real eighteen zeros are there

Example of block:

Example of Blocks in Blockchain:



Computing speed is very important factor (hash rate)

At the same time if the miners try to get block, *the miner with largest chain will win.*

Mempool:

The **mempool** is the node's holding area for all the pending transactions. It is the node's collection of all the unconfirmed transactions it has already seen enabling it to decide whether or not to relay a new transaction.

Mempool store all the transactions.

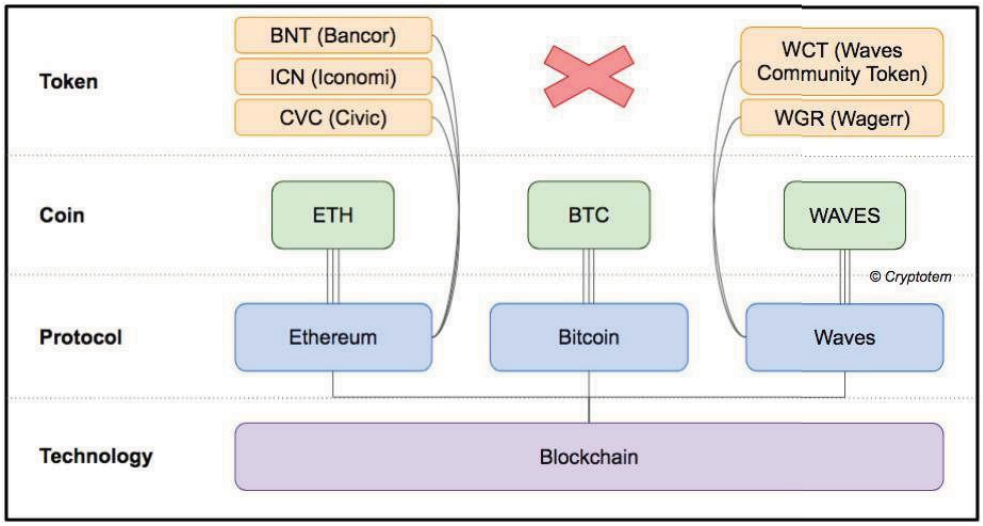
Our target for blockchain technology is data.

tools.superdatascience.com/blockchain/

Session – II: Cryptocurrency

Cryptocurrency is a type of digital currency that uses cryptography for security and anti-counterfeiting measures. Public and private keys are often used to transfer cryptocurrency between individuals.

Understanding the world of cryptocurrency:



Some other protocols are Neo, Ripple

Bitcoin and Ripple don't have tokens

In bitcoin we cannot write code, so, there are no tokens

In Ethereum we can write code, so number of tokens available. And, also we can create our own tokens

Tokens are built on protocol

What is Bitcoin?

Bitcoin (□) is a cryptocurrency. It is a decentralized digital currency without a central bank or single administrator that can be sent from user to user on the peer-to-peer bitcoin network without the need for intermediaries.

- **Wikipedia**

Inventor of Bitcoin – Satoshi Nakamoto

We can consider it as pseudonymous

https://bitcoin.org/bitcoin.pdf

coinmarketcap.com

The end of bitcoin is in the year 2140.

Bitcoin ecosystem

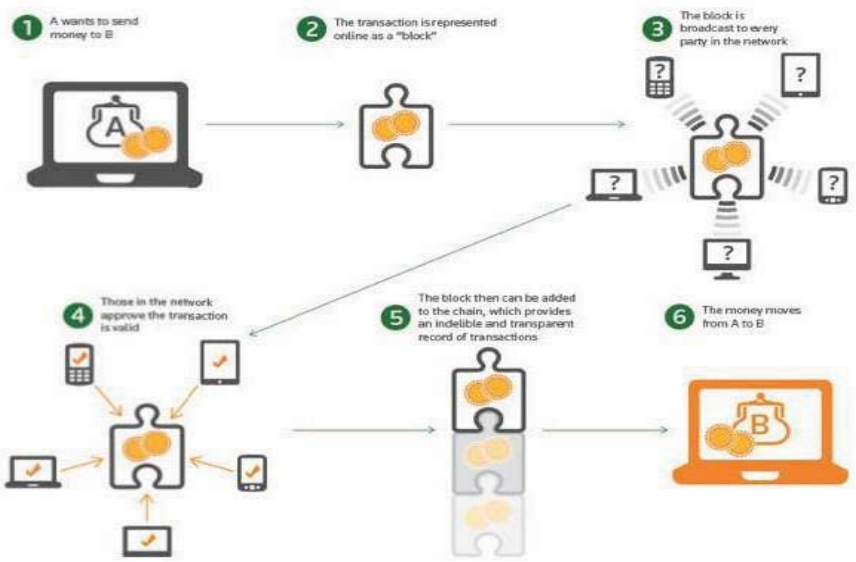
Nodes

Miners

Large Mines

Mine pools

Overview of how payments are processed in the bitcoin ecosystem,



Bitcoin's Monetary Policy

The halving

Bitcoin mining

https://www.investopedia.com/terms/b/bitcoin-mining.asp

Block frequen y (

Mining Difficulty

Current target

Difficulty = current target/max target

Difficulty is adjusted for every 2016 blocks (2 weeks)

To mine the following coins, the required time is

BTC - 10 Min.

ETH - 15 Sec.

Ripple - 3.5 Sec.

Litecoin – 2.5 Min.

Block size is 1 MB

Only transactions that suits 1MB will be considered from mempool

Mining equipment

CPU (general)	< 10 MHz/sec
GPU (specialized)	< 1GHz/sec
ASIC (totally specialized)	> 1000 GHz/sec

ASIC stands for Application Specific Integrated Circuit

Bitcoin cryptocurrency mining farm

Mempools visible to all

A miner can see the mempools

Miners who win can pick the transactions

As the number of zeros increases in hash, difficulty of mining also increases

Signatures: Public, Private Keys

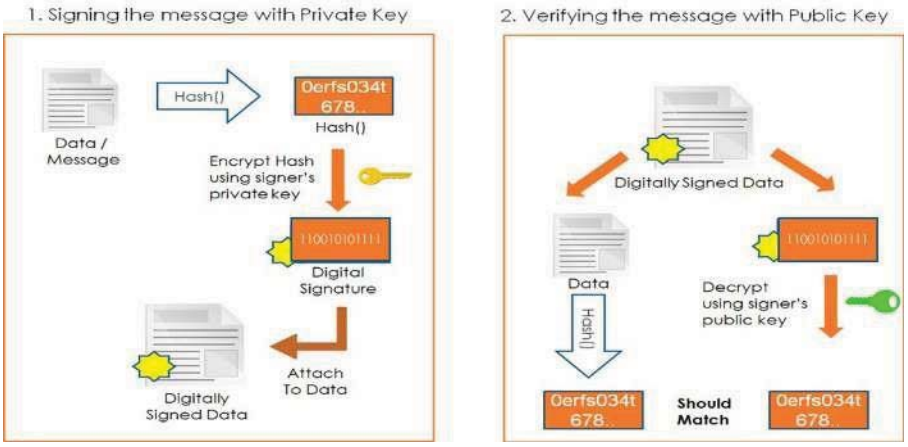
Public key – e.g. Bank account number

Private key – e.g. Password

Numbers in between 0-9.

First derive the private key and then private key to public key.

Example (blockchain perspective):



Day 2

14-09-2019

Session – III: Smart Contract

A smart contract is a code

Programming language is Solidity

Turing complete

No → Bitcoin script

Yes → Solidity

Smart contract runs only on if condition

Ethereum inventor – Vitalik Buterin

Dapp – Decentralized application

Back-end – smart contract

e.g. steemit – app for tweet

EVM – Ethereum Virtual Machine

The Ethereum Virtual Machine can be thought of as quasi-Turing complete machine. Turing completeness refers to a system of data manipulation rules, and is named after Alan Turing, creator of the Turing machine.

Programming languages and central processing units (CPUs) are good examples of systems that access and modify data. If these rules can be used to simulate Turing's hypothetical computing machine, the rules are regarded as being 'Turing complete'.

A Turing complete system can be mathematically proven to have the capability of performing any possible calculation or computer program. In other words, a Turing complete machine is mathematically able to solve any problem that you feed to it.

The Ethereum Virtual Machine is only quasi-Turing complete because computations performed by the machine are bound by gas, which serves as a limitation to the number of computations that can be done.

Gas and EVM Bytecode

On Ethereum, gas can be thought of as being equivalent to a fee. Every single transaction that is performed on the Ethereum network requires that a fee be attached to it, which is paid in the form of gas. The concept of Ethereum's gas can be subdivide into two: gas and gas price

- **Gas** – Serves as a tool by which we measure the fees that will be required for a particular computation to be executed.
- **Gas Price** – This is the amount of Ether that an individual is willing to spend on every unit of gas. Gas price is often measured in 'Wei', and Wei is the smallest unit of Ether, where 10^18 Wei represents one Ether.

Infinite loops cannot be used when gas is used

Soft and hard forks

Soft fork

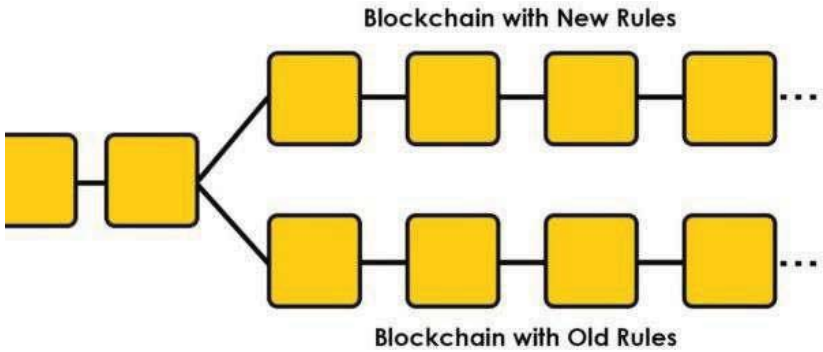
When the community of nodes reaches consensus on updates to the rules, a soft fork occurs. A soft fork is a fork where new versions of the protocol are backwards compatible with previous versions. This means older versions of the blockchain will recognize new blocks. This is achieved when the community and network of nodes reach consensus. With a soft fork, all nodes will continue to recognize new blocks on the blockchain.

Hard fork

Hard forks are when the community of nodes fails to reach consensus and a miner or group of miners decide to validate blocks with new rules. A hard fork is not backwards compatible with older versions and any participant running a node and mining on the blockchain choosing to validate transactions with the new rules will need to update software to recognize these new blocks.

A hard fork results in a split, or 'forks' in the blockchain, creating a second blockchain.

In this fork, the community could not reach consensus on block size, so a group of miners decided to go off and fork into Bitcoin Cash with 8mb block sizes instead.



Bitcoin cash size is 8MB

Bitcoin (BTC) size is 1MB

Whenever there is a fork money gets doubled

BTC-mining with ASIC

Bitcoin Gold – mining with GPU

Decentralized Autonomous Organization (DAO)

A decentralized autonomous organization, or just DAO, is a business or organization whose decisions are made electronically by a written computer code or through the vote of its members. In essence it is a system of hard coded rules that define which actions an organization will take.

Initial Public Offerings (IPO)

The Initial Public Offering (IPO) is a well-established process leaded by a private company in order to expand and become publicly traded. It involves some formalities in the duration of the process. IPO refers to the public sale of the shares of a company, with the goal of collecting funds for development.

Initial Coin Offerings (ICO)

The Initial Coin Offering (ICO) is a process brought to life by the cryptocurrency innovation. It is a way of crowdfunding for the startup companies, which includes creating and selling tokens to fund the start and the development of a project. ICOs are related to the blockchain technology.

Solidity Programming Essentials (textbook) by Ritesh Modi

Web 3.0

Web 1.0 vs. Web 2.0 vs. Web 3.0

Web 1.0 refers to the first stage of the World Wide Web evolution. Earlier, there were only few content creators in Web 1.0 with the huge majority of users who are consumers of content. Personal web pages were common, consisting mainly of static pages hosted on ISP-run web servers, or on free web hosting services.

Web 2.0 refers to world wide website which highlights user-generated content, usability and interoperability for end users. Web 2.0 is also called participative social web. It does not refer to a modification to any technical specification, but to modify in the way Web pages are designed and used. The transition is beneficial but it does not seem that when the changes are occurred. An interaction and collaboration with each other is allowed by Web 2.0 in a social media dialogue as creator of user-generated content in a virtual community.

The web browser technologies are used in Web 2.0 development and it includes AJAX and JavaScript frameworks. Recently, AJAX and JavaScript frameworks have become a very popular means of creating web 2.0 sites.

Web 3.0

It refers the evolution of web utilization and interaction which includes altering the Web into a database. In enables the upgradation of back-end of the web, after a long time of focus on the front-end (Web 2.0 has mainly been about AJAX, tagging, and another front-end user-experience innovation). Web 3.0 is a term which is used to describe many evolutions of web usage and interaction among several paths. In this, data isn't owned but instead shared, where services show different views for the same web / the same data.

Hyperledger

"Hyperledger is an open source collaborative effort created to advance cross-industry blockchain technologies. It is a global collaboration, hosted by The Linux Foundation, including leaders in finance, banking, Internet of Things, supply chains, manufacturing, and Technology."

- https://blockgeeks.com/guides/hyperledger/

Is blockchain a silver bullet? **Answer: No**

Siacoin – https://sia.tech

Sectors using blockchain

Banking and finance

Manufacturing

Technology services

Healthcare

Session – IV: Solidity

Software requirements:

Ganache Truffle Suite

Remix – Ethereum IDE

MyEtherWallet

Creating Blockchain (Private):

Photo:


DEPARTMENT OF INFORMATION TECHNOLOGY
Two Day FTP
on
BLOCKCHAIN
TATA CONSULTANCY SERVICES

TATA CONSULTANCY SERVICES

Faculty Development Programme

SANGAM Meeting of Minds

Topic:	**Blockchain**
Institute:	**VR Siddhartha Engineering College, Vijayawada**
TCS Resource Person:	**Mr. Prasanth Sahoo**
Date(s):	**13-Sep & 14-Sep 2019**

Participant Details					Rating - scale of 4 to 1 4- Best; 1 - Worst				Appreciations, if any	Suggestions for improvement, if any
S. #	**Name**	**Dsgn**	**Dept**	**Institution / Organization**						
1	D.Swapna	Asst Prof	CSE	PVP Siddhartha Institute of Technology	**4**	**3**	**2**	**1**	Good	If possible conduct one more session involving only practicals
2	Dr V Ramesh Naik	Asst Prof	MBA	GATES INSTITUTE OF TECHNOLOGY	**4**	**3**	**2**	**1**	EXCELLENT	TO CONDUCT MORE FTPs
3	A.Suresh	Asst Prof	ECE	VITAM	**4**	**3**	**2**	**1**	Thank you for providing Good accommodation.	Over all FTP is Good.
4	S PHANI PRAVEEN	Asst Prof	CSE	PVP Siddhartha Institute of Technology	**4**	**3**	**2**	**1**	Good	Nothing
5	K. Pavan Kumar	Asst Prof	Information Tehnology	PVP Siddhartha Institute of Technology	**4**	**3**	**2**	**1**	Good Resource person	NIL
6	s suresh babu	Asst Prof	cse	SRK Institute of Technology	**4**	**3**	**2**	**1**	Good	No
7	Dr. D. Varalakshmi	Asst Prof	Management	JNTU, Anantapur	**4**	**3**	**2**	**1**	Resource person presentation and clarification of doubts are excellent	its more useful when you provide this type of training programs for five days...
8	D.Venkatesh	Asst Prof	Computer Science & Engineering	Sasi Institute of Technology & Engineering	**4**	**3**	**2**	**1**	more communicative.	Need to explain the interface where this specific technology can be implemented
9	K PURNA PRAKASH	Asst Prof	IT	SIR C.R.REDDY COLEEGE OF ENGINEERING	**4**	**3**	**2**	**1**	Selection of emerging technology is appreciable. Well organized.	If possible add one more day for forthcoming FTPs. Then we can learn more.

TATA CONSULTANCY SERVICES

Faculty Development Programme

SANGAM Meeting of Minds

Topic:	**Blockchain**
Institute:	**VR Siddhartha Engineering College, Vijayawada**
TCS Resource Person:	**Mr. Prasanth Sahoo**
Date(s):	**13-Sep & 14-Sep 2019**

Participant Details					Rating - scale of 4 to 1 4- Best; 1 - Worst				Appreciations, if any	Suggestions for improvement, if any
S. #	**Name**	**Dsgn**	**Dept**	**Institution / Organization**						
10	P RAMAIAH CHOWDARY	Asst Prof	INFORMATION TECHNOLOGY	SIR C R REDDY COLLEGE OF ENGINEERING	4	3	2	1	way of organizing is Good and well planned @selection of new technology	---
11	Naga Pavan	Asst Prof	IT	SRKIT	4	3	2	1	...	....
12	P.V.V.S.D.Nagendrudu	Asst Prof	Information Technology	Sasi Institute of Technology and Engineering	4	3	2	1	I appreciate your dedicated commitment	Need More Practical seesions
13	A.Radhika	Asso Prof	CSE	SRK Institute of Technology	4	3	2	1	The lecturer was very informative.	Need more practical exposure
14	Ch. Hari Prasad	Asst Prof	CSE	VVIT, Guntur	4	3	2	1	Overall very Nice	No Significant amount of Practical Training
15	M.Seshu Bhavani	Asso Prof	CSE	NRI INSTITUTE OF TECHNOLOGY, AGIRIPALLI	4	3	2	1	EXCELLENT EXPLANATION	NOTHING
16	Dr M.Rama Naik	Asst Prof	Management	JNTU College of Engineering, Ananthapur	4	3	2	1	Delivering lecturer is Good	Instead of 2 day ftp one week fdp is Good
17	Aneesha Vemuri	Asst Prof	Computer Science & Engineering	AKRG College of Engineering & Technology	4	3	2	1	Good	Explain in detail how the blockchain technology works. Need a 1 week hands on training workshop.

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18	VENKATA RAO JONNADULA	Asst Prof	INFORMATION TECHNOLOGY	NRI INSTITUTE OF TECHNOLOGY, AGIRIPALLI	4	3	2	1	Able to acquire Knowledge on the Recent Trends in IT Industry and very Happy for Selecting the Domain Experts..	Hands-On session or Continuation to this is required to enhance My Skills
19	G V RAMANA	Asst Prof	CSE	DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY	4	3	2	1	Good	NO
20	MRS.V.MADHU LATHA	Asst Prof	BUSINESS MANAGEMENT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	VERY INFORMATIVE AND INTERACTIVE PROGRAM. RESOURCE PERSON IS REALLY AN EXPERT IN THIS BLOCKCHAIN TECHNOLOGY. HE IS VERY COOL IN CLARIFYING DOUBTS	NIL
21	Dr.T.NAGA NIRMALA RANI	Asst Prof	DEPT OF MANAGEMENT STUDIES	TJPS COLLEGE GUNTUR	4	3	2	1	ITS A Good PROGRAMME TO ENHANCE MY KNOWLEDGE ON BLOCK CHAIN TECHNOLOGY	ITS Good IF YOU MAINTAIN SAME

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22	POKURI DEEPIKA	Asst Prof	INFORMATION TECHNOLOGY	USHA RAMA COLLEGE OF ENGINEERING AND TECHNOLOGY	4	3	2	1	Good PRESENTATION	EXPECTED MORE HANDS-ON SESSION
23	M PRASANNA lAKSHMI	Asst Prof	MCA	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	i have confusion on block chain and bitcoin.now it is cleared in this session	no
24	K.Anji Reddy	Asst Prof	Computer Applications	V.R.Siddhartha Egineering College	4	3	2	1	Presentation and subject content is very Good	No
25	DR.N.C.S.RAO	Asso Prof	BUSINESS MANAGEMENT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Training Program on BLOCK HAIN TECHNOLOGY IS quite futuristic. Resource person from TCS Mr. Prasanth Sahoo has been quite proficient in the technology. His pedagogy has been excellent and highly interactive. Program has been well organized.	Involve MBA faculty of our college in such training programs in future.

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26	Dr. Ch. Rupa	Prof	CSE	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Query clarification were very clearly explained with lot of patience.	Good
27	Sandeep Y	Asst Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	.	.
28	Fathimabi Shaik	Asst Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	DISCUSSION IS MORE CLEAR TO KEYWORDS	HOW BLOCKCHAIN CAN BE USED FOR COMMON MAN
29	N.Neelima	Asst Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good	Might have explained with an example
30	Dr. Ganga Rama Koteswara Rao	Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Training Programme was excellent	no of days for training in blockchain technology need to be increased
31	P.Ramadevi	Asst Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Very patients in answering for any doubts. Good interactiveness	No
32	Madhavi.k	Asst Prof	It	Velagapudi Ramakrishna Siddhartha Engineering	4	3	2	1	Good in all aspects	Nothing
33	Y Kalyan Chakravarti	Asst Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good	Strict Timings should be followed

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34	JayaLakshmi Gundabathina	Asst Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	ExCellent	Learned concepts theoretically and practically
35	S. Kranthi	Asst Prof	Information technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good FTP	Everything is fine
36	K. Pranathi	Asst Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Very Good	-
37	Ch. Nanda Krishna	Asst Prof	It	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good	-
38	Dr.S.Suhasini	Asso Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good and more informative	More applications are needed
39	Manne Suneetha	Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Excellent every body with out basic knowledge also easily learned new concept like Block chain with Prasanth Shaoo. Thanks to TCS and particularly Richard Sir for his support, suggestions and cooperation. I am very much thankful to you sir.	Nothing everything is Good

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40	PRAVEENA N	Asst Prof	it	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good	no
41	K.Sobhana	Asst Prof	Computer Science and Engineering	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Delivery of content with Good examples	No
42	Dr.T.Anuradha	Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good Lectures with demos	Can be for more days
43	sangeetha yalamanchili	Asso Prof	IT	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good	Please conduct no of FTP s in future
44	Dr.A.Srisaila	Asst Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Sessions are very Good i.e very informative and interactive	It will be better if it will be three more days
45	B L N Phaneendra Kumar	Asst Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good and informative session.	Nothing
46	M Ramesh	Asst Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Good Lecture	No
47	M Ashok Kumar	Asst Prof	Information Technology	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Informative sessions by Prasanth	May be conduct for two more days
48	M Mukhesh	Asst Prof	CSE	Velagapudi Ramakrishna Siddhartha Engineering college	4	3	2	1	Well organized and good resource persons.	Conduct more events related to new technologies.
49										

VELAGAPUDI RAMAKRISHNA SIDDHARTHA Engineering College

(Autonomous)

Kanuru, Vijayawada, Andhra Pradesh- 520 007

Department Of Information Technology

Two Day Faculty Development Program on

"Faculty Training Programme on BlockChain"

In Collaboration with "Tata Consultancy Services, Hyderabad" under AICTE MARGDARSHAN

TATA CONSULTANCY SERVICES

INFORMATION TECHNOLOGY

This is to certify that Mr./ Mrs_____

of _____has attended Two Day "Faculty Training Programme on BlockChain" in collaboration with "TATA Consultancy Services, Hyderabad" during 13th and 14th Sep, 2019 organized by the Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh.

Dr. M. Suneetha	Sri M. S.Subrahmanyam	Sri Prasanth Sahoo	Dr. A. V. Ratna Prasad
Convener, HOD IT	Delivery Head, TCS, Hyderabad	Certified Blockchain Expert, TCS,Hyderabad,	Principal – VRSEC

సదస్సులో టీసీఎస్ ముఖ్యప్రతినిధి ఎంఎస్ సుబ్రహ్మణ్యం తదితరులు

కానూరు, న్యూస్‌టుడే: ప్రస్తుత తరుణంలో బ్లాక్ చైన్ టెక్నాలజీతో బహుళ ప్రయోజనాలు ఉన్నాయని టీసీఎస్ ముఖ్యప్రతినిధి ఎంఎస్ సుబ్రహ్మణ్యం (హైదరాబాద్) అన్నారు. శనివారం స్థానిక వీఆర్ సిద్ధార్థ ఇంజినీరింగ్ కళాశాలలో ఏఐసీటీఈ మార్గదర్శన్ నేతృత్వంలో ఐటీ విభాగం సహకారంతో జరిగిన రాష్ట్ర స్థాయి అధ్యాపకుల శిక్షణ తరగతుల్లో ఆయన మాట్లాడారు. ఈ పరిజ్ఞానంతో సున్నితమైన డేటాను సురక్షితంగా భద్రపర్చవచ్చన్నారు. బ్లాక్ చెయిన్ ఉపయోగించి స్మార్ట కాంట్రాక్టులు సృష్టించవచ్చన్నారు. ఈ సాంకేతిక అంశంపై అధ్యాపకులు విద్యార్థులచే పరిశోధనలు చేయించాలన్నారు. అనంతరం కళాశాల అధ్యాపకుల సందేహాలను రిసోర్స్‌పర్సన్లు నివృత్తి చేశారు. కళాశాల ప్రిన్సిపల్ రత్నప్రసాద్, ఐటీ విభాగాధిపతి మన్నే సునీత, బ్లాక్ చెయిన్ టెక్నాలజీ నిపుణులు ప్రశాంత్