

Day 1 - 30.12.2021 (THURSDAY)

Session 1: 09:30 am to 11:00 am

INAUGURATION

Chief Guest: Col. B.Venkat, AICTE Director for FDP, New Delhi-110070



The INAUGURATION for the AICTE-ISTE sponsored 6 days Induction / Refresher Programme on "BLOCKCHAIN TECHNOLOGY IN HEALTH CARE" was opened up with the prayer song continued with the welcome address by Dr. M. Maheswari, Professor and Head of the Department of Electronics and Communication Engineering followed by the presidential address given by Dr. D. Srinivasan, Principal, K. Ramakrishnan College of Engineering (Autonomous). He listed out the various developments achieved by K.Ramakrishnan college of Engineering from the inception in 2008. Dr. C. Jeyalakshmi, Associate Professor, Department of Electronics and Communication Engineering gave the brief introduction about the Programme and highlighted the achievements of the Chief Guest Col. B.Venkat, AICTE Director for FDP, New Delhi-110070. The Chief Guest Col. B.Venkat, AICTE Director for FDP gave an enthusiastic speech towards continuous learning and updating in learning in various fields. He insisted the faculty members to utilize the opportunity to learn new emerging technologies and don't consider this as another certificate.

Day 1 - 30.12.2021 (THURSDAY)

Session 2: 11.30 am to 1.00 pm

Topic: CRYPTOGRAPHIC TOOLS FOR BLOCKCHAIN

Speaker: Dr. T. Revathi, Professor and Head, Department of Information technology, MepcoSchlenk Engineering College, Sivakasi.

The session was started with introduction to block chain technology. Dr. T. Revathi gave brief discussion about the conventional bank transaction methods and compared it with new technology involving crypto currencies. She explained about the unspent transaction output and miners. The status of bitcoin in basic operation of blockchain was explained in a clear manner. The block chain categories in various ways were explained with adequate real time examples. Public key encryption, hashing, merle tree details were also explained. The session also had the demo of Ethereum. Finally the session was concluded with the

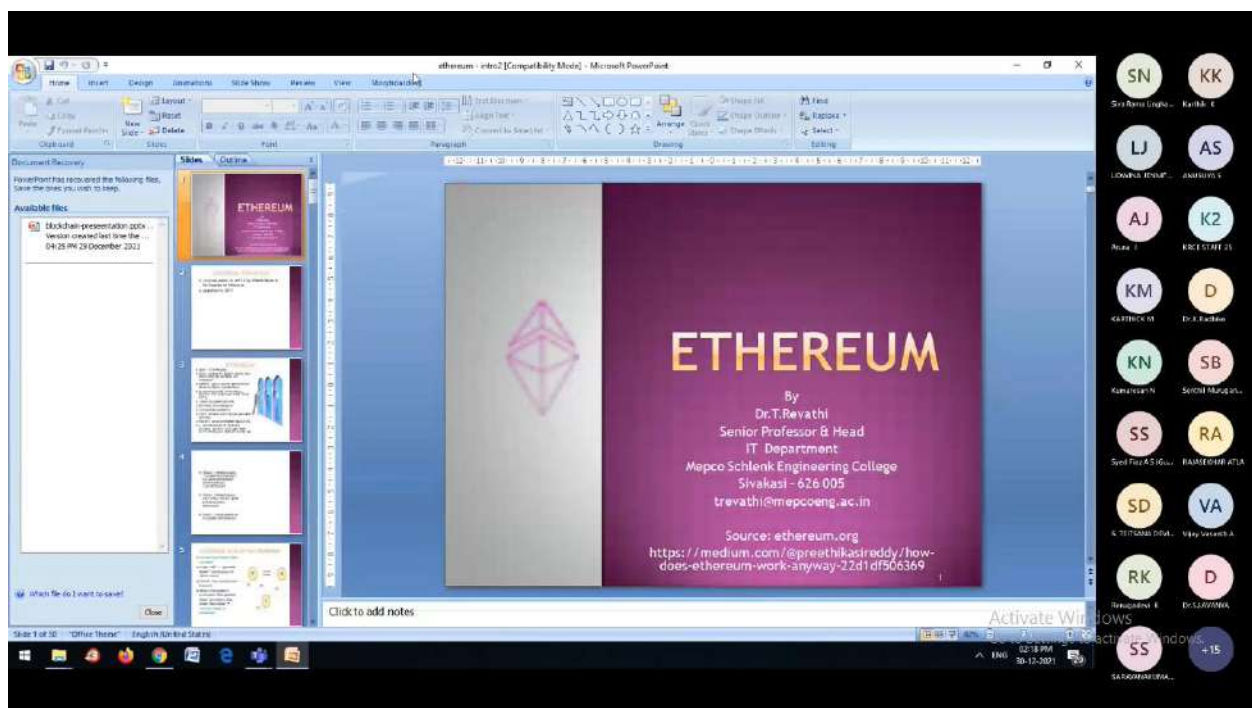
applications of blockchain and some research issues related with blockchain technologies.

Day 1 - 30.12.2021 (THURSDAY)

Session 3: 2.00 pm to 4.00 pm

Topic: A MODEL FRAMEWORK FOR BLOCKCHAIN

Speaker:Dr.T.Revathi, Professor and Head, Department of Information technology, MepcoSchlenk Engineering College, Sivakasi.



The session started with the details of evolution of Ethereum. The paradigm for Ethereum Blockchain was explained with some node examples. The main components of Ethereum were clearly pointed out with merkle tree process. Two nodes in block chain namely full nodes and light nodes were differentiated in a clear manner. The session was concluded with the transaction execution, contract creation and execution model in Ethereum.

Day 2 - 31.12.2021 (FRIDAY)

Session 1: 09:30 am to 11:00 am

Topic: BITCOIN BASICS AND CRYPTO CURRENCIES

Speaker:Dr.Annapurani Kumarappan, Professor, SRM Institute of Science & Technology, Kattankulathur, Chengalpattu Dt, Chennai, Tamilnadu.

Bitcoin Basics and Crypto Currencies

31:16

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Today's Outline

- What is Bitcoin?
- Bitcoin's Monetary Policy
- Mining Difficulty
- Mining Pools
- Nonce Range
- How transactions picked up by miners?
- Hardware
- Working of Mempools
- Orphaned Blocks
- Cryptocurrency Transactions & UTXOs
- Transaction fees and Wallets

SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
Kattankulathur, Chengalpattu Dt, Chennai, Tamilnadu

Annapurani Kumarappan Dr

JD +27

JEYALAKSH...

K2

Annapurani Kumarappan Dr

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12/31/2021

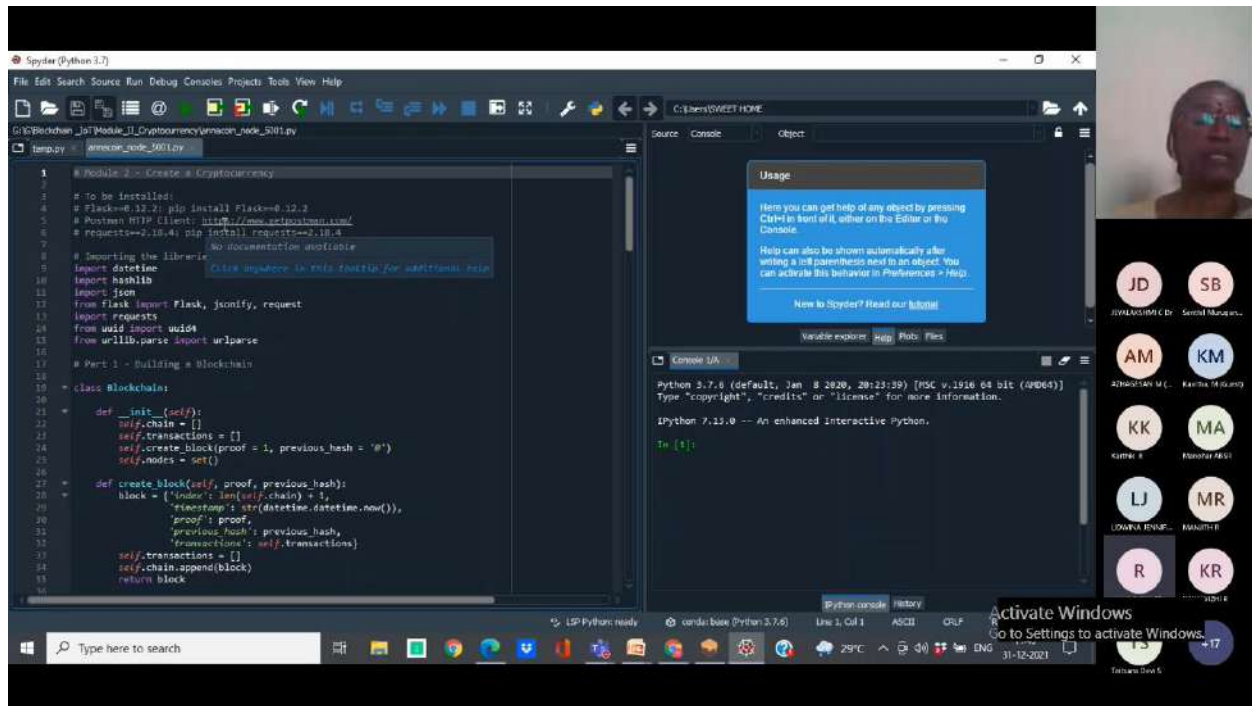
The session was started with the Bitcoin's Monetary Policy. The layered structure used in cryptocurrency where block chain importance was highlighted by Dr. Annapuranikumarappan. The difference between web and blockchain was explained. Thin protocol and thick application layer, Fat protocol and thin application layer was elaborated. The understanding of mining difficulty was explained with some examples. Nonce range was briefed by the speaker. The working of Mempools in miners was discussed with an example. The session was concluded with the cryptocurrency transaction and UTXO.

Day 2 - 31.12.2021 (FRIDAY)

Session 2: 11.30 am to 1.00 pm

Topic: SMART CONTRACTS

Speaker:Dr.Annapurani Kumarappan, Professor, SRM SRM Institute of Science & Technology, Kattankulathur, Chengalpattu Dt, Chennai, Tamilnadu



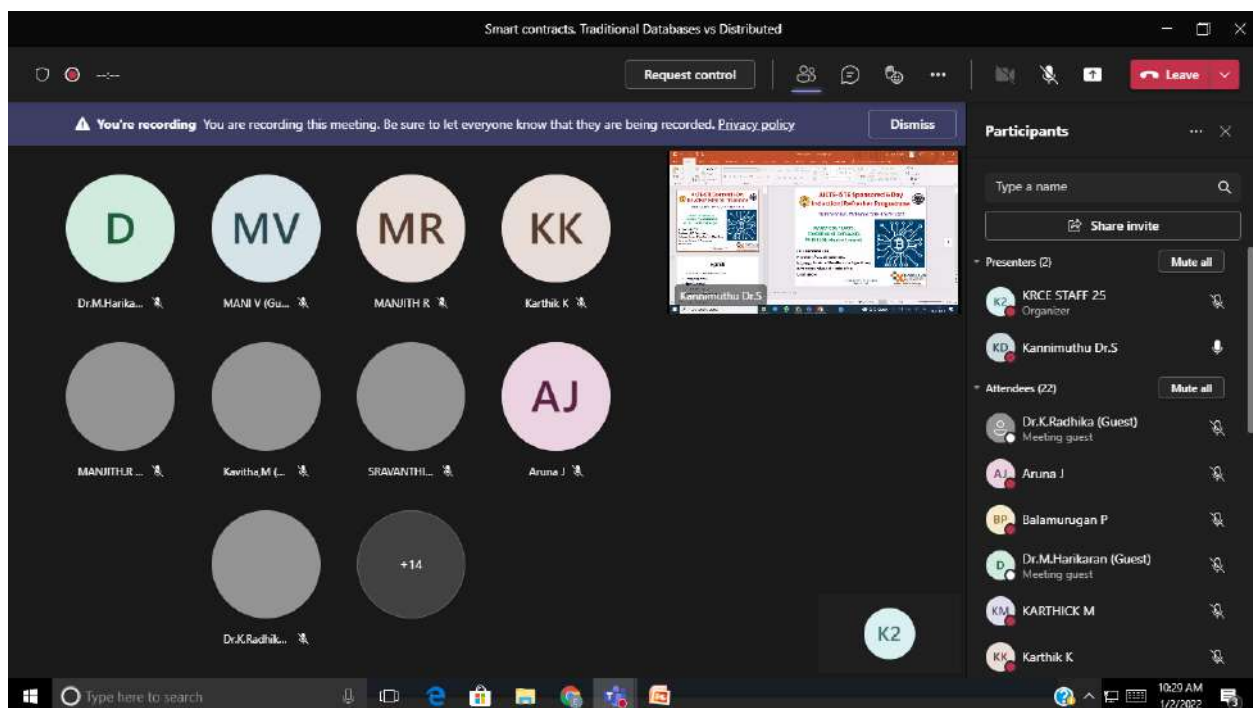
To facilitate, execute and enforce the terms of an agreement in Smart Contract, the executable code runs on blockchain. These processes are explained clearly by Dr.Annapurani Kumarappan. Decentralized application and its two main components are discussed with its layer structure. Benefits of public, decentralized applications are discussed to understand the smart contract. The architecture of Ethereum Virtual Machine was explained with its diagrammatic representation. The Decentralized Autonomous Organization was compared with the traditional top down organization. The session was concluded with the Hard fork and Soft fork.

Day 3 - 02.01.2022 (SUNDAY)

Session 1: 09:30 am to 11:00 am

Topic: SMART CONTRACTS, TRADITIONAL DATABASES VS DISTRIBUTED LEDGERS

Speaker: Dr. S. Kannimuthu, B.Tech.,ME., PhD, Professor,Department of CSE, Karpagam College of Engineering, Coimbatore, Tamilnadu



Introduction to block chain technology was explained with the help of a bitcoin transaction example by Dr. S. kannimuthu. A basic introduction to cryptocurrency and its basic work structure have been explained. Brief benefits of smart contracts were also explained. Database with respect to block chain technology was explained in a detailed manner with the help of its architecture. Some key points related to DLT: A block chain way was shared for the participants. The architecture was briefed with the help of Traditional DB vs DLT. The issues with DLT were also highlighted. The session was concluded with the overall summary of the architecture used in blockchain.

Day 3 - 02.01.2022 (SUNDAY)

Session 1: 11.00 am to 1.00 pm

Topic: BUILDING BLOCKCHAIN APPLICATIONS USING SOLIDITY-
HEALTHCARE USECASES

Speaker:Dr. S. Kannimuthu, B.Tech.,ME., PhD, Professor,Department of CSE,
Karpagam College of Engineering, Coimbatore, Tamilnadu

The screenshot shows a PowerPoint presentation slide titled "AICTE-ISTE Sponsored 6 Day Induction/Refresher Programme ON BLOCKCHAIN TECHNOLOGY IN HEALTH CARE". The slide content includes "BUILDING BLOCKCHAIN APPLICATIONS USING SOLIDITY-HEALTHCARE USECASES" and a list of topics in the agenda: Introduction, What is Solidity?, Contracts in Ethereum Solidity, Layout of Solidity File, Value Types in Solidity, Operators, Data Structures in Solidity, and Control Structures. The presenter is identified as Dr. S. Kannimuthu, Professor / CSE Department, Incharge-Center of Excellence in Algorithms, Karpagam College of Engineering, Coimbatore. The slide also features logos for AICTE, ISTE, and Karpagam College of Engineering.

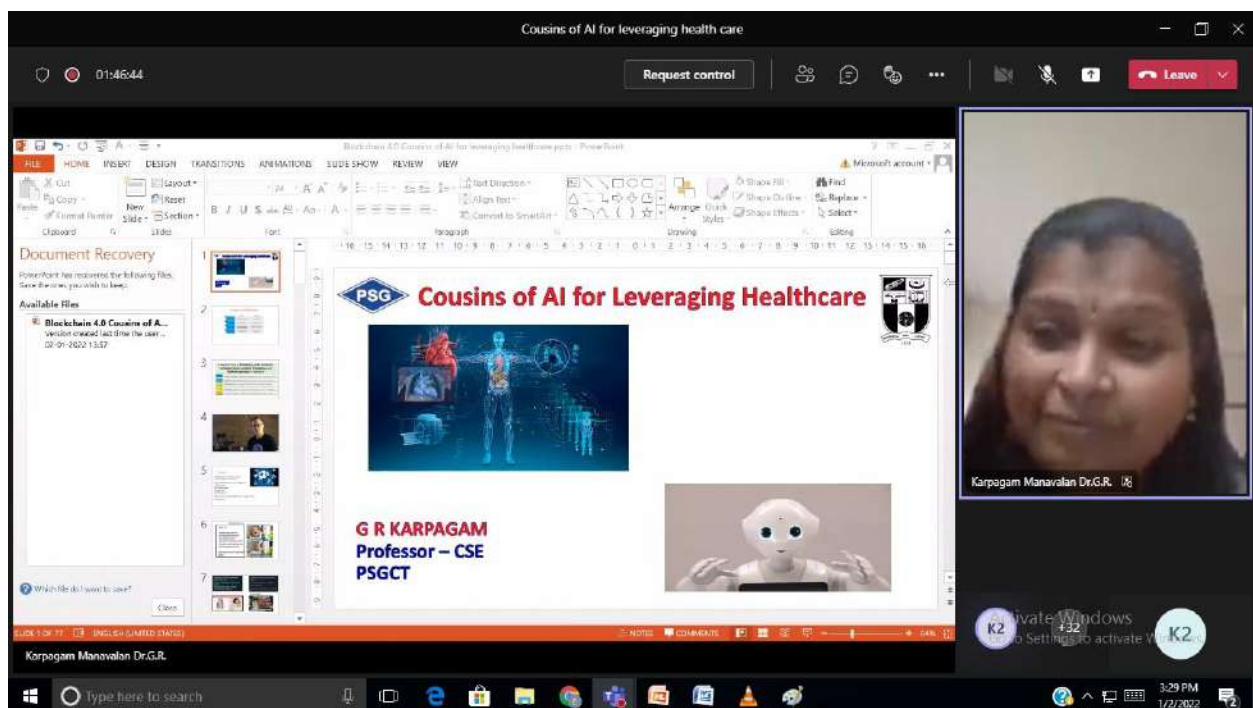
The session started with the introduction to solidity. The contracts in Ethereum Solidity were discussed in a brief manner. The layout and value types in Solidity were clearly explained by Dr. S. Kannimuthu. Brief discussion about the Ethereum was done for better understanding. Strings and operators in solidity was discussed under the topic of value types. The basic necessities of data structures in solidity were also discussed. Arrays and mapping were explained with some examples. The session was concluded with the use cases in health care.

Day 3 - 02.01.2022 (SUNDAY)

Session 3: 2.00 pm to 4.00 pm

Topic: COUSINS OF AI FOR LEVERAGING HEALTH CARE

Speaker: Dr. G R Karpagam Manavalan, Professor, Department of CSE, PSG college of Technology, Coimbatore, Tamil Nadu



The session started with the evolution of blockchain from version 1.0 to 4.0. The layered view of Blockchain, Smart Contracts, Crypto currencies, Artificial Intelligence and Machine Learning in healthcare was discussed. The use case of Artificial intelligence was discussed. Ideas related to AI in healthcare were elaborated. Examples related to AI in transportation were discussed. Difference between traditional programming vs machine learning was discussed. The session concluded with various examples of artificial intelligence software's.

Day 4 - 03.01.2022 (MONDAY)

Session 1: 09:30 am to 11:00 am

Topic: SMART CONTRACTS FOR MEDICAL INSURANCE AND SUPPLY CHAIN SETTLEMENTS

Speaker: Dr. P. Sasikumar, Professor & Head, Department of Embedded Technology, Vellore Institute of Technology, Vellore, India

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "The arbitration mechanism verification phase". The slide contains a flowchart with the following steps:

- START
- Download Cert & Data
- Verify SIE MI (Decision: Y/N)
- Verify SIE IC (Decision: Y/N)
- Verify SIE IK (Decision: Y/N)
- If Y: The claim has paid acceptably. END
- If N: No insurance application by MI. END
- If N: No medical treatment by PI. END
- If N: No settlement request by IC. END

The meeting interface includes a "Recording has started" notification, a "Participants" list on the right, and a Windows taskbar at the bottom. The participants list includes:

- Presenters (3): KRCE STAFF 25 (Organizer), JEYALAKSHMI C Dr, Sasikumar Dr.P
- Attendees (28): Dr.K.Radhika (Guest), Aruna J, AZHAGESAN M (Guest), Balamurugan P, BELSAM JEBA ANANTH M (On hold)

The session started with the introduction to Smart contracts in block chain technology. The architecture analysis was neatly presented by Dr. P. Sasikumar. Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss. Smart contracts will likely be used first for simpler insurance processes like underwriting and payouts. Supply chain management terminologies in relation with block chain were explained. The session ended with the application and use cases in supply chain management.

Day 4 - 03.01.2022 (MONDAY)

Session 2: 11.30 am to 1.00 pm

Topic: NATIONAL EDUCATION POLICY 2020

Speaker:Dr.D.P.Kothari, Director Research and Professor, S B Jain Institute of Technology, Management and Research, Nagpur

The screenshot shows a Zoom meeting interface. At the top, the title is "National Education Policy 2020" and the duration is 47:08. The main content area displays a slide with the following text:

- It will bring the uncovered age group of 3 to 6 years under school curriculum, which has been recognized globally as the crucial stage for development of mental faculties of a child.
- It will also have 12 years of schooling with three years of Anganwadi/ pre schooling.
- Class 10 and 12 board examinations to be made easier, to test core competencies rather than memorised facts, with all students allowed to take the exam twice.

The participants list on the right side includes:

- Presenters (2): KRCE STAFF 25 (Organizer), JEYALAKSHMI C Dr
- Attendees (24): Aruna J, AZHAGESAN M (Guest), Dr. D P Kothari (Guest), Karthik K, KAVITHA T, Kavitha.M (Guest)

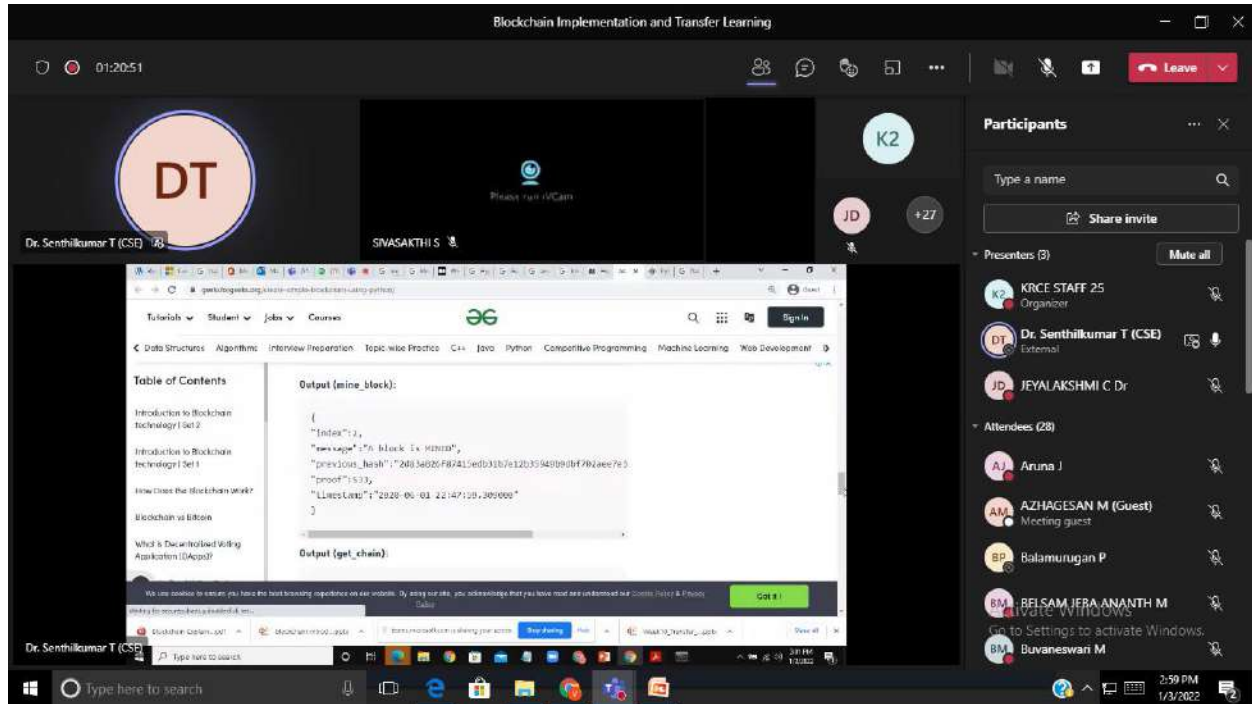
The session started with the introduction of New Education Policy (NEP) 2020. The key points of NEP were discussed very deeply. The changes in the new education policy were also highlighted. The session concluded that A New Education Policy aims to facilitate an **inclusive, participatory and holistic approach**, which takes into consideration field experiences, empirical research, stakeholder feedback, as well as lessons learned from best practices.

Day 4 - 03.01.2022 (MONDAY)

Session 3: 2:00 pm to 4.00 pm

Topic: BLOCKCHAIN IMPLEMENTATION AND TRANSFER LEARNING

Speaker: Dr.T.Senthilkumar, Professor/CSE, Amritha university, Coimbatore, Tamilnadu



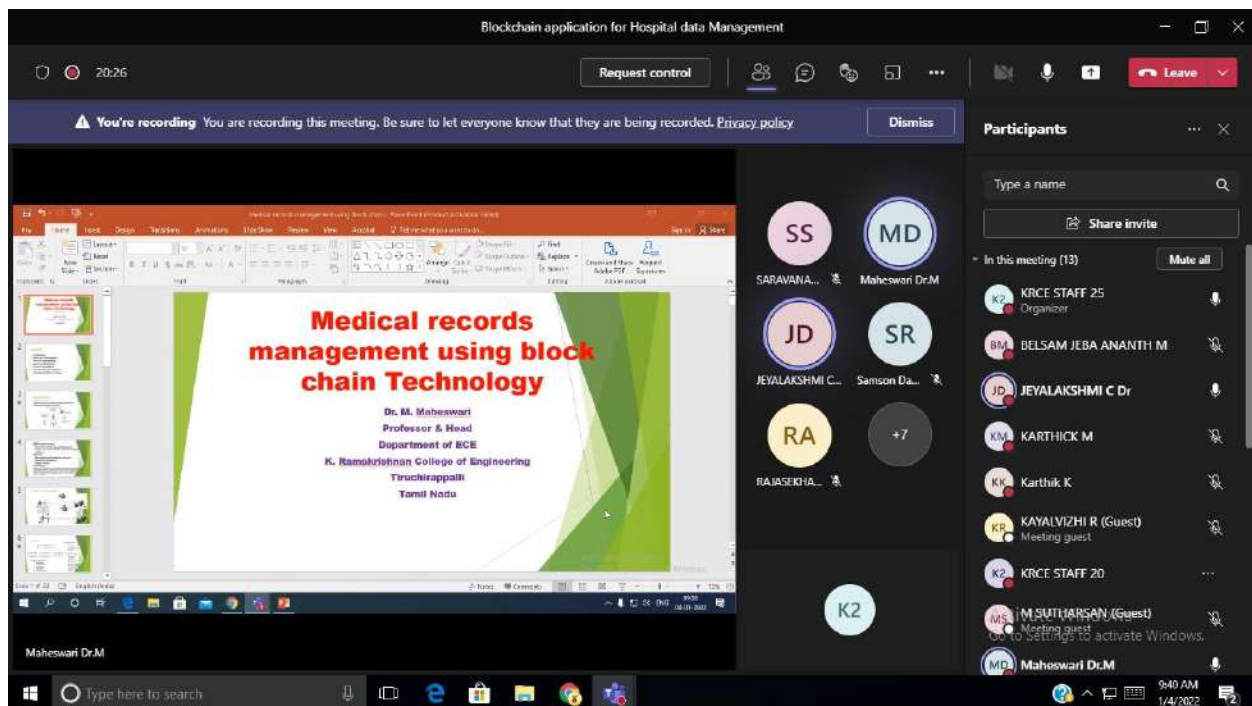
The session started with introduction to the implementation methodologies followed for the blockchain. The security features in block chain were shared by Dr. T. Senthilkumar. He pointed out that Traditional ML uses data from same domain to be trained then it predicts the data in tests while in Transfer learning the model uses different domains of data to learn and predict on various other domains. He also summarized that A Blockchain is an open ledger that records transaction details between two parties.

Day 5 - 04.01.2022 (TUESDAY)

Session 1: 09:30 am to 11:00 am

Topic: BLOCKCHAIN APPLICATION FOR HOSPITAL DATA MANAGEMENT

Speaker: Dr.M.Maheswari, Professor and Head, Department of ECE, K.Ramakrishnan college of Engineering(Autonomous),Trichy, Tamilnadu, India



Brief introduction about the basics of cryptography was highlighted before the topic of Medical Records Management using block chain technology. The encryption and decryption methodologies were explained in detailed manner. The architectural model of Inter Planetary File System to organize user data was explained by Dr. M. Maheswari.

Day 5 - 04.01.2022 (TUESDAY)

Session 2: 11.30 am to 1.00 pm

Topic: BLOCKCHAIN ESSENTIALS AND APPLICATIONS

Speaker: Dr. K. Priyadarshini, Professor, Department of ECE, K. Ramakrishnan college of Engineering (Autonomous), Trichy, Tamilnadu, India

The screenshot displays a Zoom meeting interface for a session titled "Blockchain Essentials and applications". The meeting is currently at 52:51. The top bar includes a "Request control" button and icons for participants, chat, and video. A row of participant avatars is visible, including AM, JD, SV, KM, KN, RA, and K2. The main content area shows a presentation slide titled "Why blockchain?". The slide text states: "Blockchains are an emerging technology pattern that can radically improve banking, supply chain and other transaction networks, giving them new opportunities for innovation and growth while reducing cost and risk." It also includes a diagram titled "Secure and trusted record keeping" showing a flow from "Transaction" to "Block" to "Blockchain". Below the diagram is a table:

Transaction	Block	Blockchain
Search for network participants that receive changes in asset control, as opposed to centralized ledger (bank/registry/authority)	Grouping of the blocks in which controls are placed for the transaction (the blocks are hashed)	A record-keeping structure consisting of blocks. It secures the history of each control and some changes, as well as a number of controls and ledger records.

The Zoom interface on the right shows a list of participants: KRCE STAFF 25 (Organizer), JEYALAKSHMI C Dr, Priyadarshini Dr.K, and 22 attendees. The system tray at the bottom shows the date as 04/01/2022 and time as 12:03 PM.

The introduction to Blockchain essentials was given by Dr. K. Priyadarshini which has Cryptographic keys, peer to peer network and a means of computing. The network types are explained in contrast with the block chain technology. The evolution of the block chain was elaborated to understand the needs and necessities. The characteristics of block chain were also handled. The block chain for financial services was explained with some examples. Block chain in supply chain management was also explained with a flow graph. The session concluded with the example of Vehicle wallet (Denmark), Ben Ben (Ghana), Project Ubin (Singapore) and its challenges.

Day 5 - 04.01.2022 (TUESDAY)

Session 3: 2:00 pm to 4.00 pm

Topic: BLOCKCHAIN BASED PRIVACY SECURING E- HEALTHSYSTEM FOR HEALTHCARE

Speaker:Mr.P.Saravanan, Research Assistant, King Saud University, Saudi Arabia

Blockchain based privacy securing E- healthsystem for Healthcare

24:38

Request control

Participants

Type a name

Share invite

Presenters (3)

Mute all

Attendees (20)

On hold

2:28 PM 1/4/2022

Scenario on Health Care Industry

- Global Health Care expenditure have been raised drastically in the last four years and especially, this two COVID inflicted years.
- The healthcare industry's top priority is increasing its **financial performance**.
- Technology has been synonymous with innovation in healthcare and ever-increasing rise in technology to provide virtual care.
- These technologies have assisted in **cost-cutting solutions** for both patient and provider.

Diagram illustrating the Health Care Industry scenario, showing the flow of information and services between Patient, Healthcare, and Provider, involving various stages like Diagnosis, Treatment, and Monitoring.

The session started with the scenario on Health Care industry. A complete overview of the hospital management system was discussed very briefly by Mr. P. Saravanan. A discussion on challenges in IoT based hospital management system was carried out in an interesting manner. The privacy concern in healthcare in terms of block chain was also discussed. Techniques for securing medical records through block chain were also intimated. Finally the session concluded with the real concerns for the blockchain security for healthcare.

Day 6 - 05.01.2022 (WEDNESDAY)

Session 1: 09:30 am to 11:00 am

Topic: HEALTHCARE SUPPLY CHAIN USING BLOCKCHAIN TECHNOLOGY

Speaker: Dr. A. Rajesh, Associate Professor, Department of ECE, Sastra Deemed to be University, Tanjore, Tamilnadu, India

The screenshot shows a Zoom meeting interface. At the top, it says "Meeting in 'General'" and "15:00". Below the title bar, there are icons for "Request control", a group of people, a chat icon, a share icon, and a "Leave" button. A row of participant avatars is visible, including MANI V (GV...), Rajesh A, SATHIYA S (...), Manohar A..., JEYALAKSHI..., Samson Da..., and K2. The main content area displays a slide titled "Introduction" with the following text:

- "A blockchain is a magic computer that anyone can upload programs to and leave the programs to self-execute, where the current and all previous states of every program are always publicly visible, and carries a very strong cryptoeconomically secured guarantee that programs running on the chain will continue to execute in exactly the way that the blockchain protocol specifies"
- "To understand the power of blockchain systems, and the things they can do, it is important to distinguish between three things that are commonly shuffled up, namely, bitcoin currency, specific blockchain and the idea of blockchains in general"
- Blockchain add complete security to the asset, globally with shared ledger technology and smart contracts

Handwritten notes in red ink include "enabler of Supply chain in Healthcare" and "The Trust Machine, The Economist". The slide is attributed to "Vitalik Buterin". The bottom of the slide shows the name "Rajesh A" and a page number "4". On the right side, the "Participants" list includes:

- Presenters (3): KRCE STAFF 25 (Organizer), JEYALAKSHMI C Dr, Rajesh A
- Attendees (17): C.M.Naga Sudha (External), Dr. Joe Prathap P M (Guest), KARTHICK M, Karthik K, Karthika I

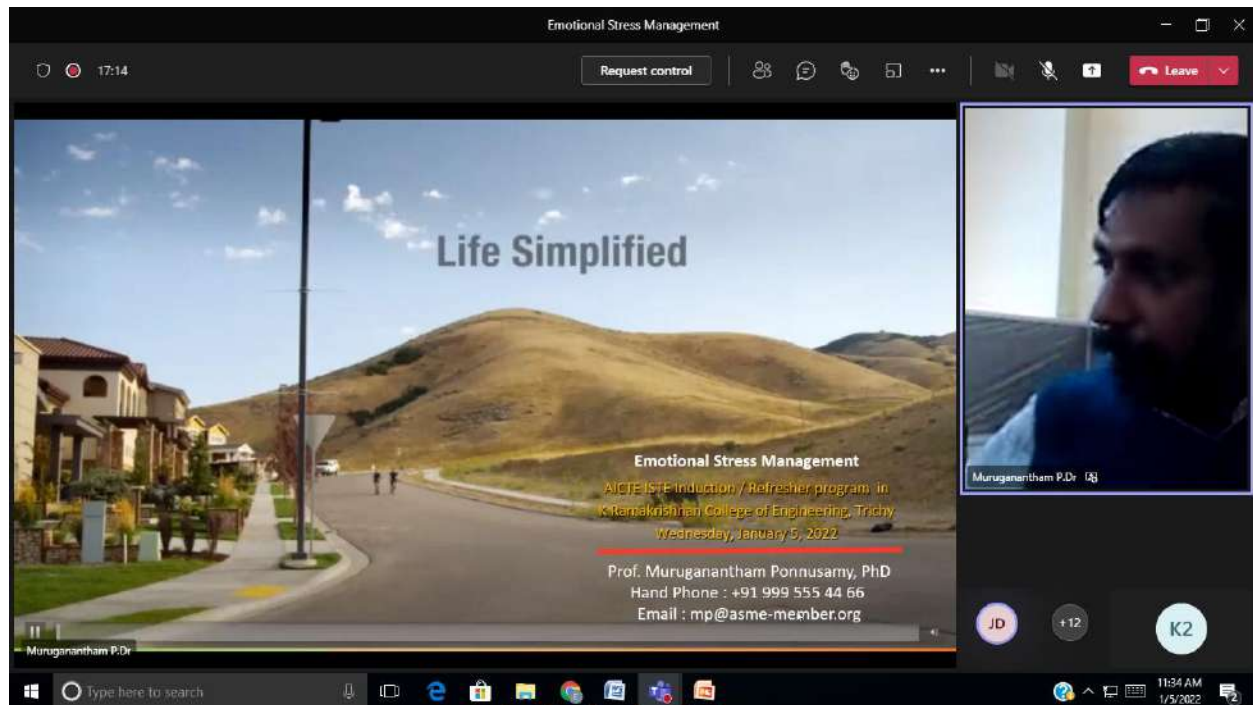
The introduction for blockchain with evolution and capability was dealt with some survey by Dr. A. Rajesh. Applications of Blockchain 2.0 were expressed in a very interesting way to the participants. The need for blockchain in supply chain logistics was explained. PoW algorithm usage in mining was clearly explained for the better understanding of the basic structure of the blockchain. Some use cases were also discussed in an interesting way. Few points related to deployment model for HSC-GPOs were also discussed. Finally the session was concluded with the attacks on blockchain.

Day 6 - 05.01.2022 (WEDNESDAY)

Session 2: 11:30 am to 1:00 pm

Topic: EMOTIONAL STRESS MANAGEMENT

Speaker:Dr.P.Muruganatham, Deputy Registrar, Indian Institute of Information Technology, Kalyani, West Bengal, India



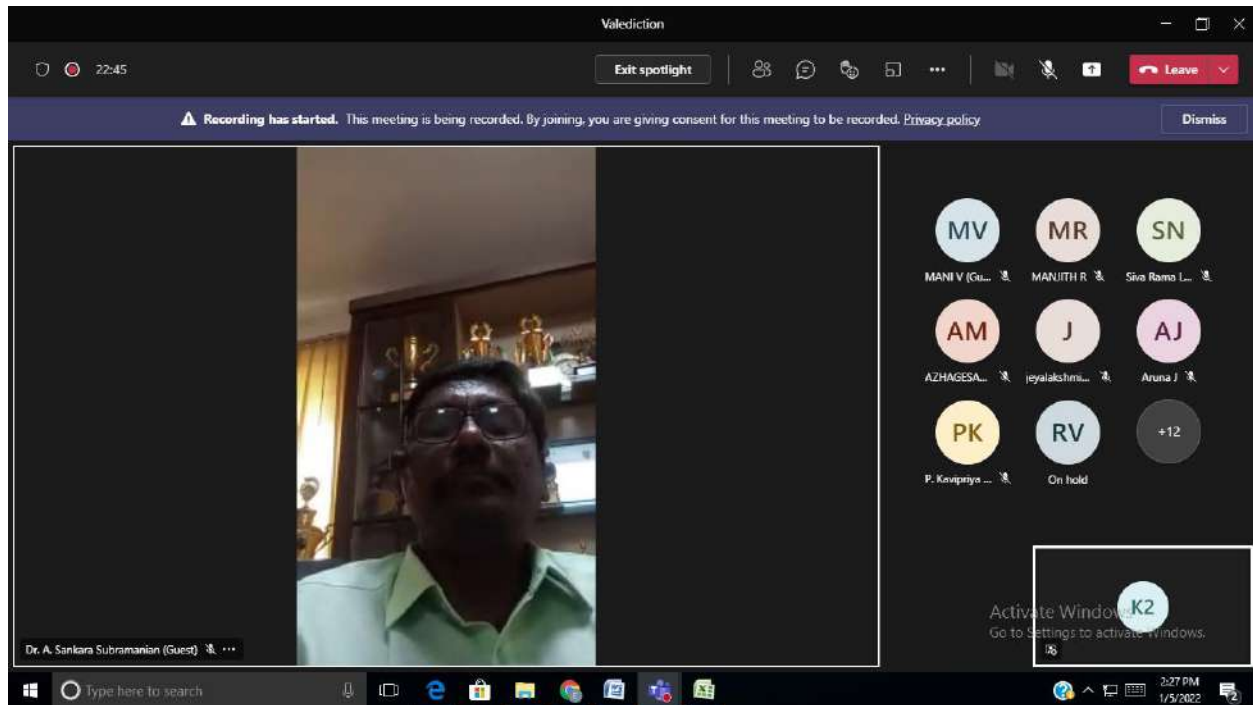
The stress management session was spitted into three sessions namely Social, Courtesy, Flexibility. The social skills techniques to be followed for the development were clearly explained. Listening skill development ideas were also shared by Prof. MuruganathamPonnusamy. To have proper social skill better communication channel to be utilized was highlighted in the session. Examples were told to be positive in life to achieve higher goals. Change management model was elaborated to better living. 7c model was also explained with Mckinsey 7s model. Finally the session concluded with imposing the importance of personal and social responsibility of every individual.

Day 6 - 05.01.2022 (WEDNESDAY)

Session 3: 2:00 pm to 4.00 pm

VALEDICTION

Speaker:Dr.A.Sankara Subramanian, Chairman, ISTE Tamilnadu section,
Principal, GRG Polytechnic College, Coimbatore, Tamilnadu



The valediction started with the prayer song by final year student Kingston followed with welcome address by Mr. N. R. Nagarajan, Assistant Professor, K. Ramakrishnan College of Engineering (Autonomous). The coordinator of the event Dr. C. Jeyalakshmi invited the Chief Guest for Valediction Dr. A. Sankara Subramanian, Chairman, ISTE Tamilnadu Section. Then our Principal, Dr.D.Srinivasan given felicitation address and briefed about the program conducted for six days. He thanked all the resource persons for the lectures delivered and spent their valuable time. He asked the participants to utilize this opportunity to enhance their knowledge in this recent technology. He also adds, as a whole 80 participants were registered from 24 various Engineering colleges of 6 different states like Haryana, AndhraPradesh, Hyderabad, Telangana, Maharashtra and Tamilnadu. Out of 80 participants, 63 are eligible to receive the certificate by successfully attended the program and completed the online test.

Then valediction address is given by our ISTE chairman, Tamilnadu section Dr. A.Sankara Subramanian and he congratulated KRCE for conducting this programme. He insisted the participants to make use of this opportunity to develop their skill in the latest technologies. The program ended up with the vote of thanks proposed by Mr.M.Karthick, Assistant Professor/KRCE followed by National anthem.