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

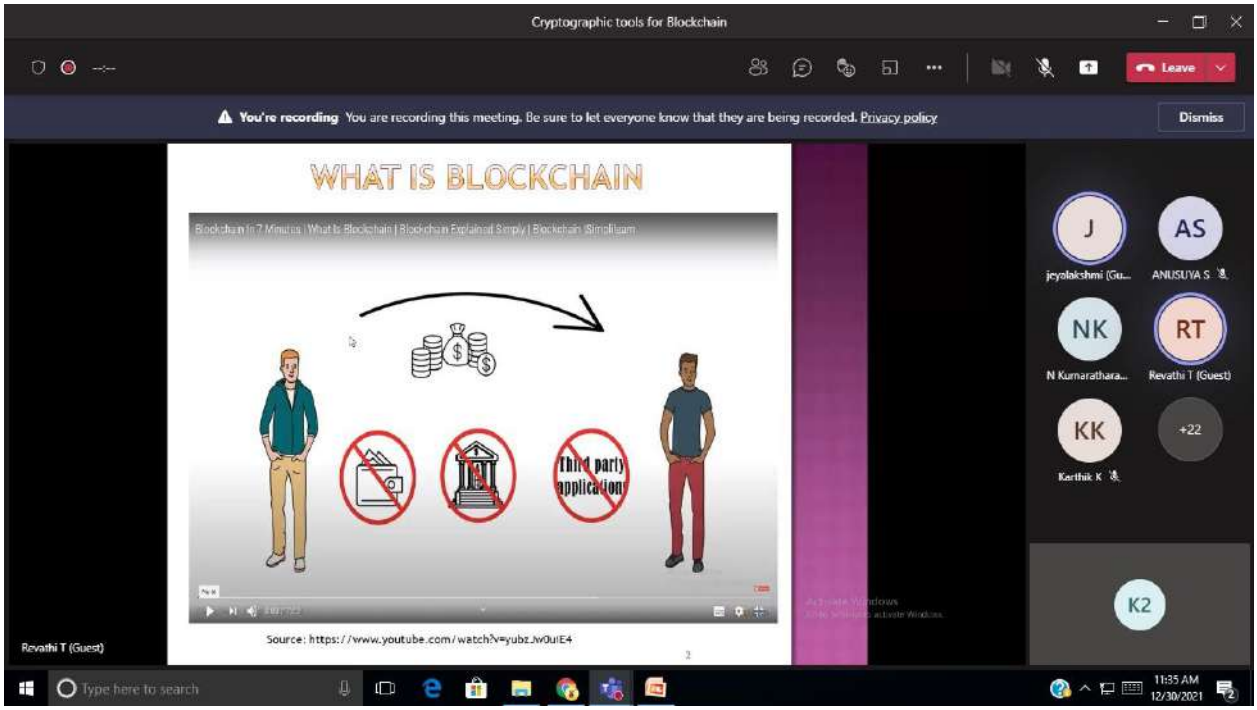
The INAUGURATION for the AICTE-ISTE sponsored 6 days Induction / Refresher Programme on "BLOCKCHAIN TECHNOLOGY IN HEALTH CARE" was opened up with the prayer song continued with the welcome address by Dr. M. Maheswari, Professor and Head of the Department of Electronics and Communication Engineering followed 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 stated 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

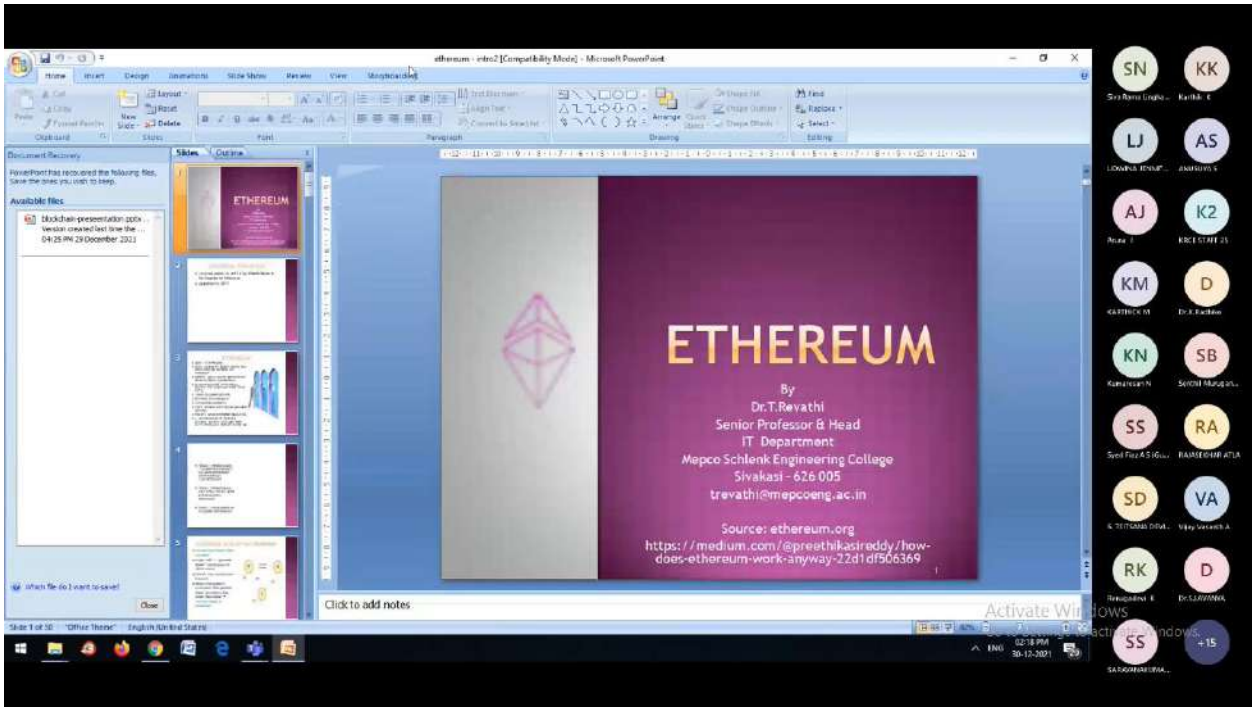
applications of blockchain and some research issues related with blockchain technologies.

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.



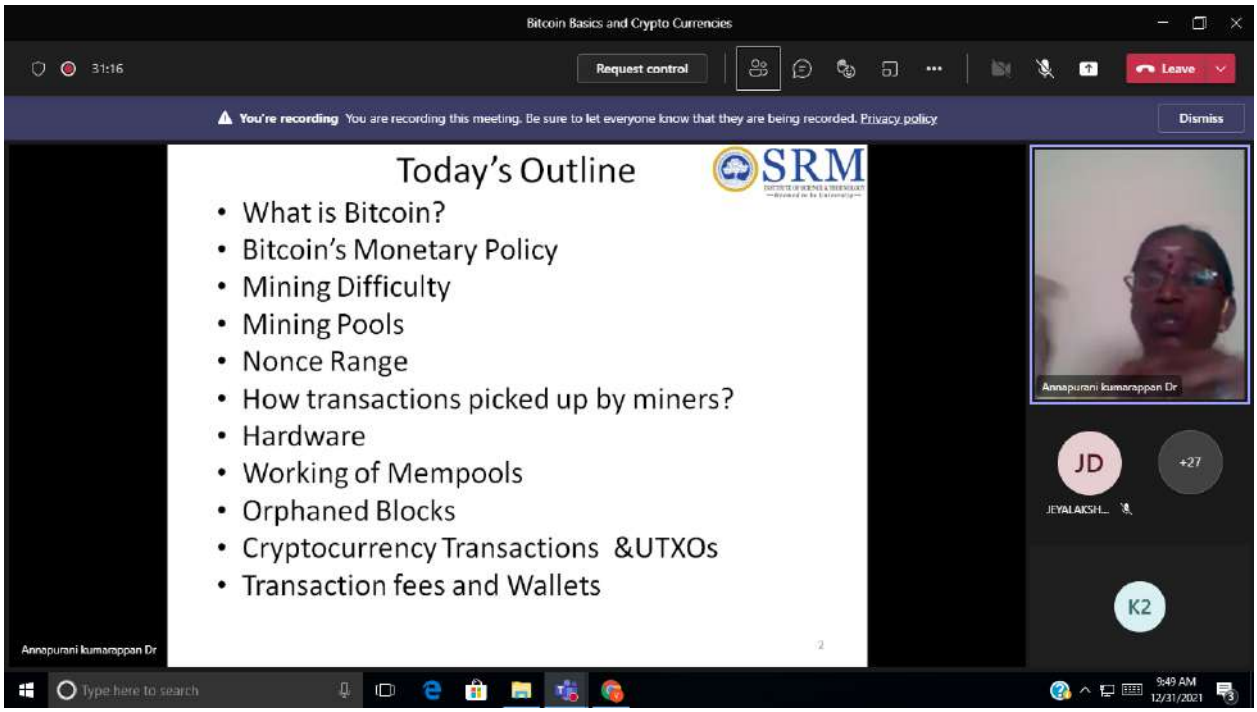
The session started with the details of evolution of Ethereum. The paradigm for Ethereum Blockchain was explained with some node examples. The main components of Ethereum were clearly pointed out with merkle tree process. Two nodes in block chain namely full nodes and light nodes were differentiated 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.Annapuranikumarappan, Professor, SRM Institute of Science & Technology,Kattankulathur,ChengalpattuDt,Chennai, Tamilnadu.



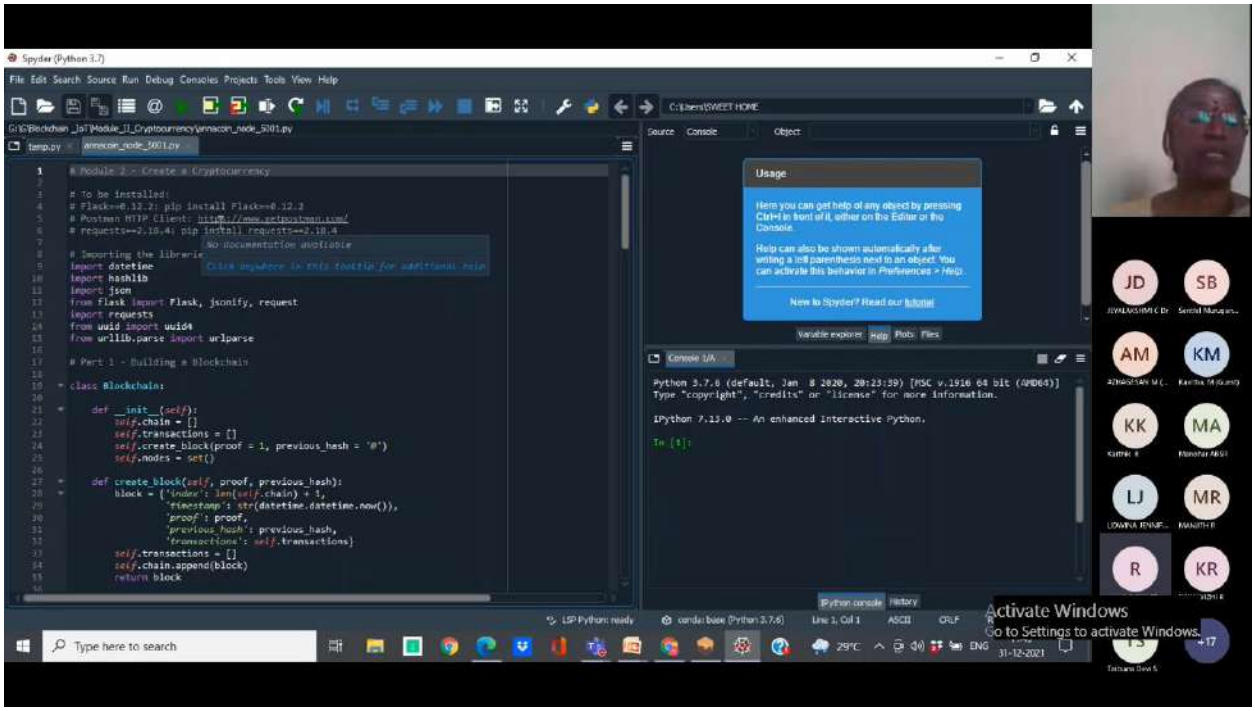
The session was started with the Bitcoin's Monetary Policy. The layered structure used in cryptocurrency where block chain importance was highlighted by Dr. Annapuranikumarappan. The difference between web and blockchain was explained. Thin protocol and thick application layer, Fat protocol and thin 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.Annapuranikumarappan, Professor, SRM SRM Institute of Science &Technology,Kattankulathur,Chengalpattu Dt, Chennai, Tamilnadu



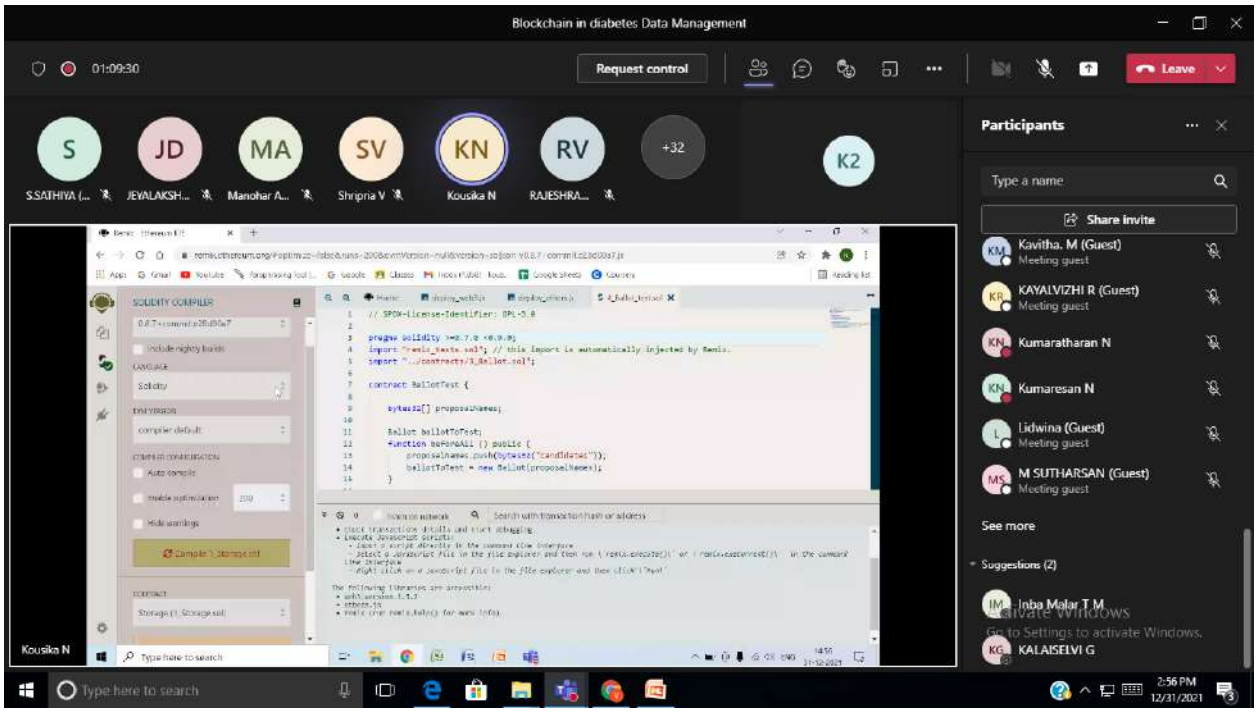
To facilitate, execute and enforce the terms of an agreement in Smart Contract, the executable code runs on blockchain. These processes are explained clearly by Dr.Annapuranikumarappan. Decentralized application and its two main compacts are discussed with its layer structure. Benefits of public, decentralized 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 2 - 31.12.2021 (FRIDAY)

Session 3: 2.00 pm to 4.00 pm

Topic: BLOCKCHAIN IN DIABETES DATA MANAGEMENT

Speaker: Prof. N. kousika, Krishna college of Engineering and Technology, Coimbatore



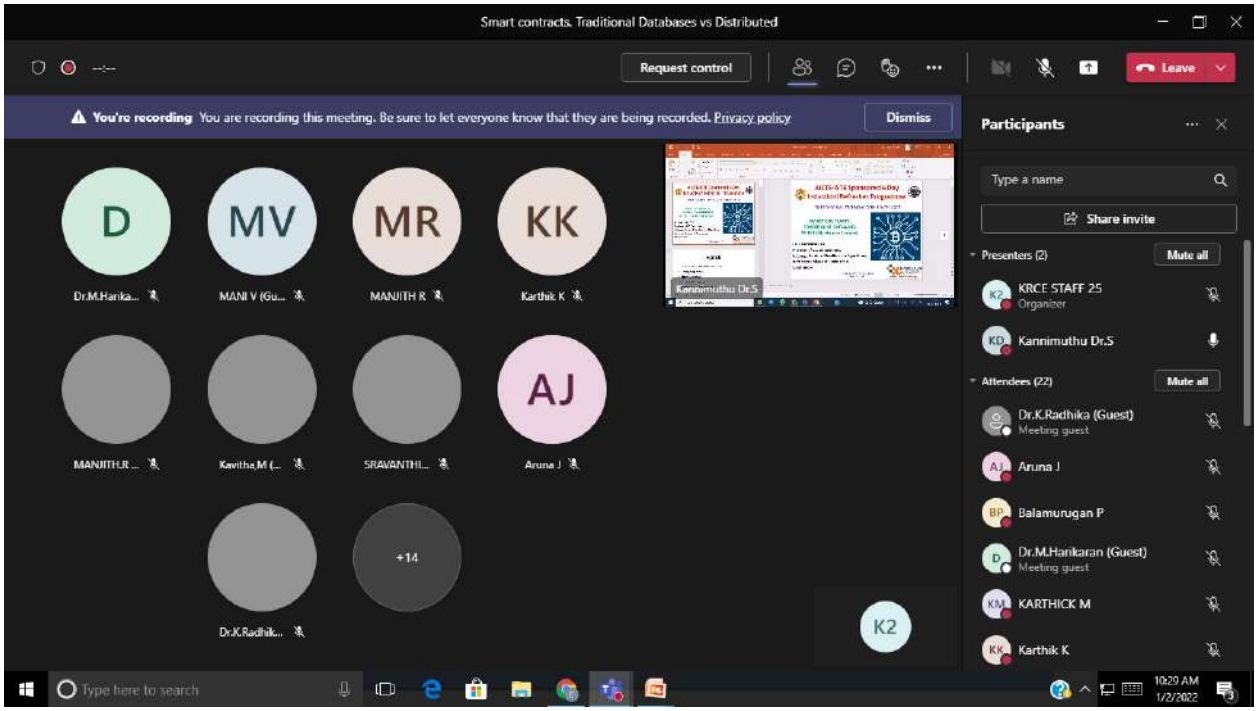
The session started with the overview of Centralized vs Decentralized vs Distributed networks used in block chain. The step by step view of the working of block chain was shared by Dr. N. Kousika. The features of block chain wasdiscussed. The requirements of HASH algorithm were also discussed. The session also contained the benefits of smart contracts. Brief discussion about block chain applications in healthcare was explained. Features and structure of a solidity code was also discussed. Finally the session ended with real time view of smart contract application.

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



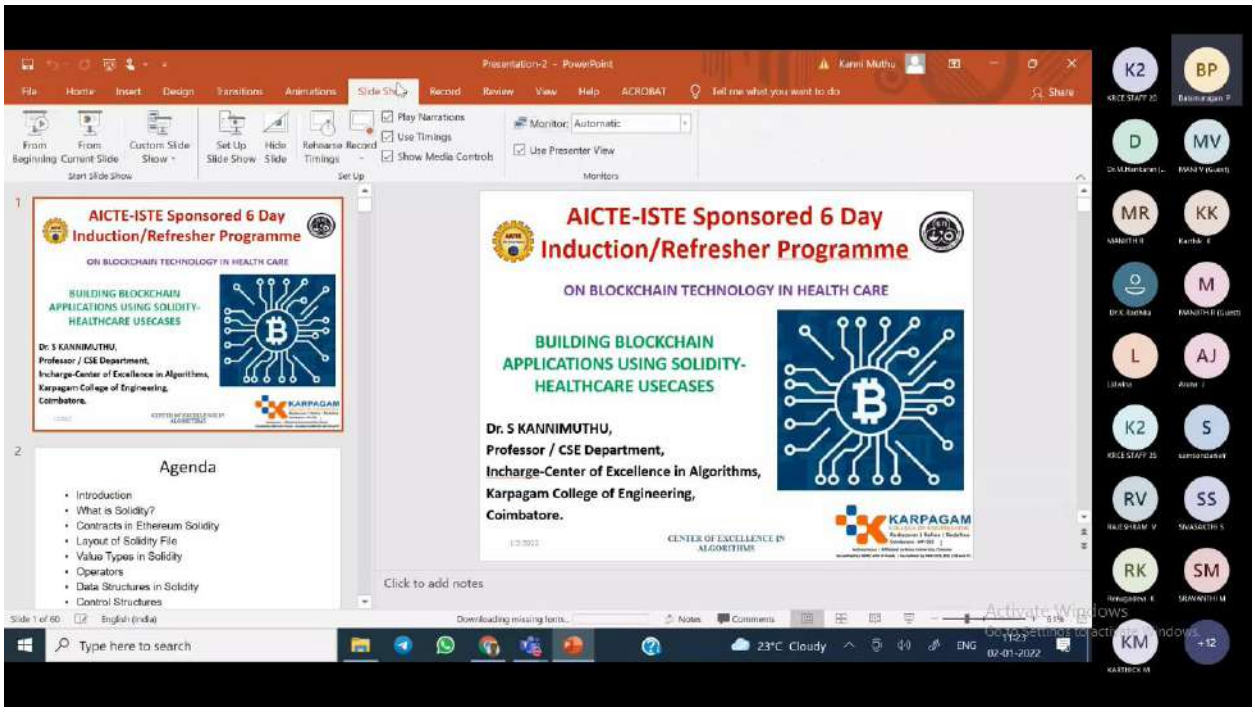
Introduction to block chain technology was explained with the help of a bitcoin transaction example by Dr. S. kannimuthu. A basic introduction to cryptocurrency and its basic work structure have been explained. Brief benefits of smart contracts were also explained. Database with respect to block chain 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



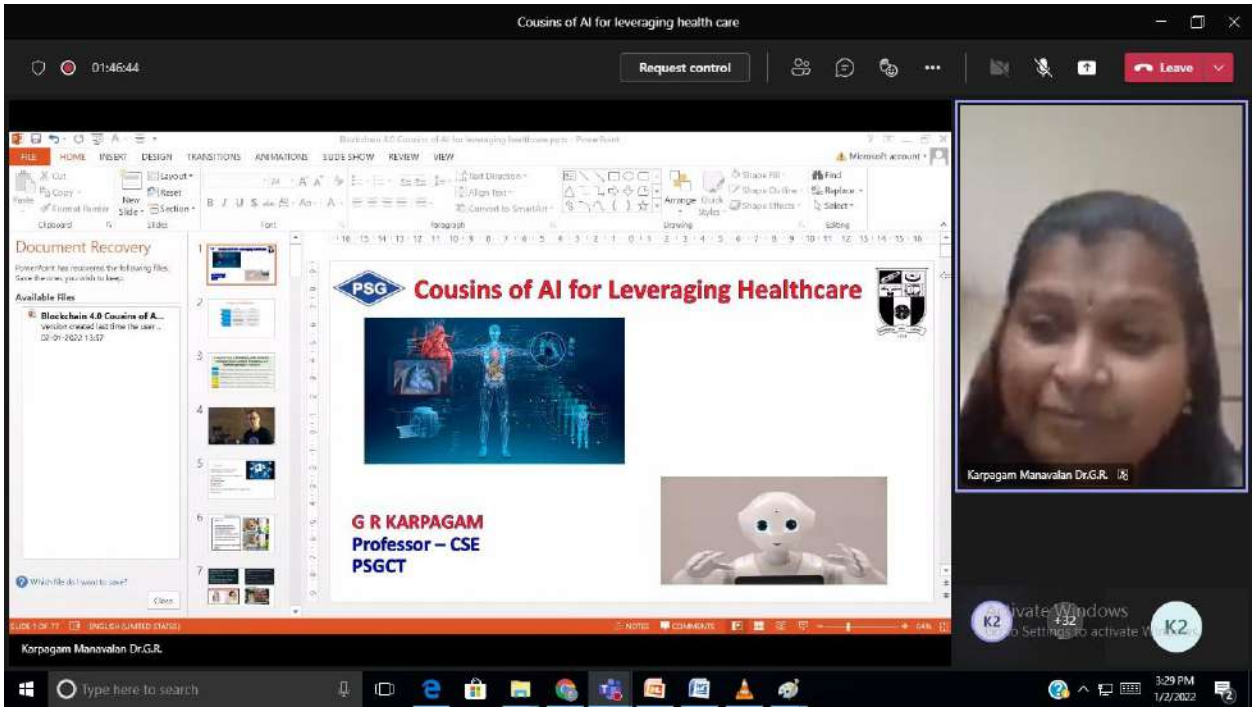
The session started with the introduction to solidity. The contracts in Ethereum Solidity were discussed in a brief manner. The layout and value types in Solidity were clearly explained by Dr. S. Kannimuthu.Brief discussion about the Ethereum was done for better understanding. Strings and operators in 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 KarpagamManavalan, Professor, Department of CSE, PSG college of Technology,Coimbatore, Tamilndu



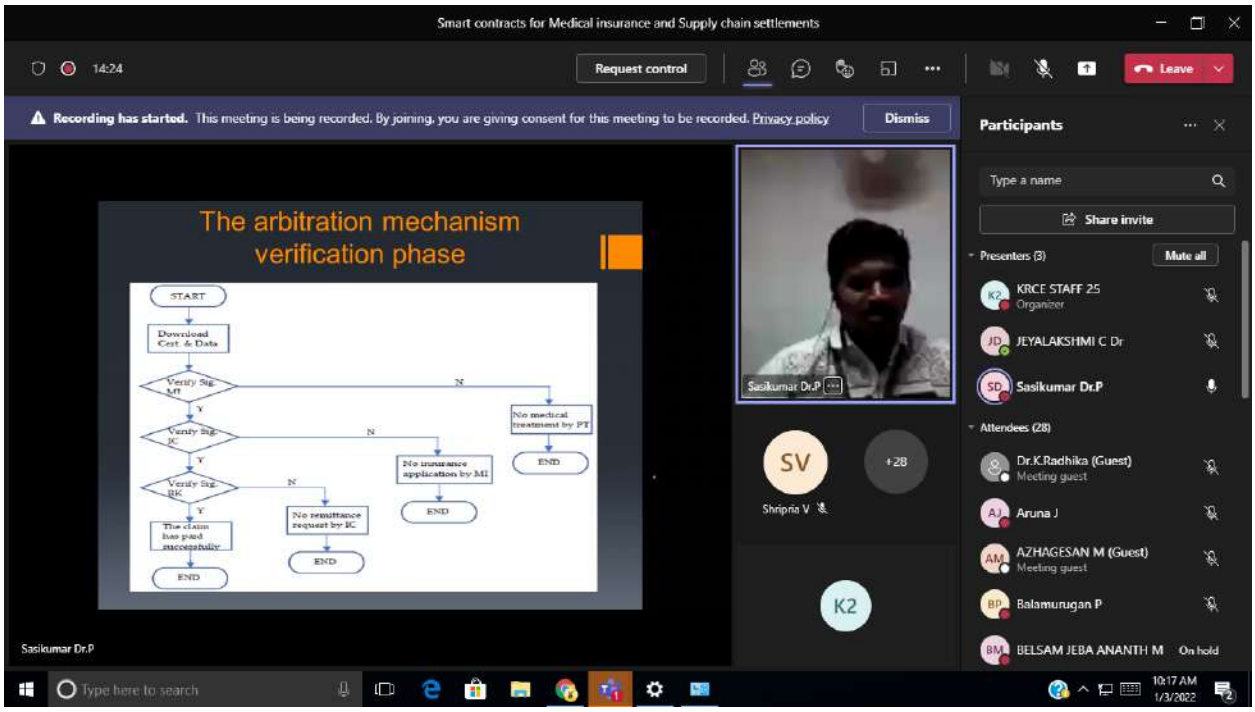
The session started with the evolution of blockchain from version 1.0 to 4.0. The layered view of Blockchain, Smart Contracts, Crypto currencies, Artificial Intelligence and Machine Learning in healthcare was discussed. The use case of Artificial intelligence was discussed.Ideas related to AI in healthcare 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



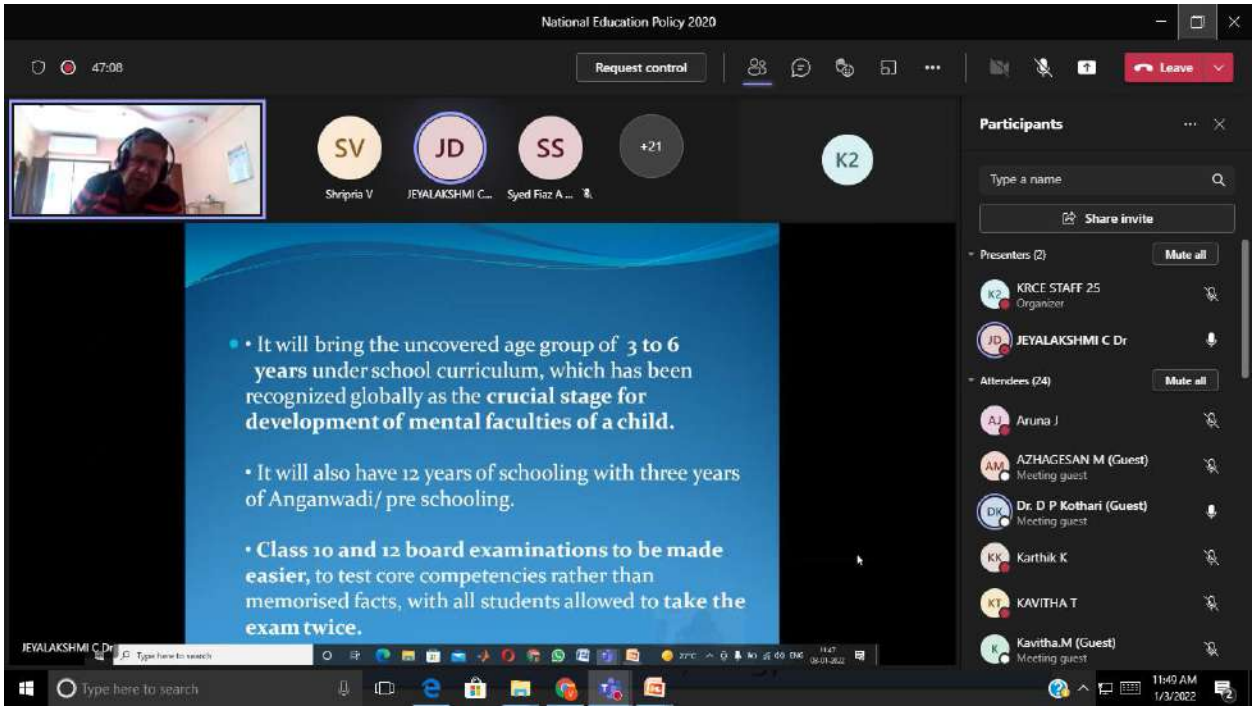
The session started with the introduction to Smart contracts in block chain technology. The architecture analysis was neatly presented by Dr. P. Sasikumar. Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. They typically are used to automate the 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



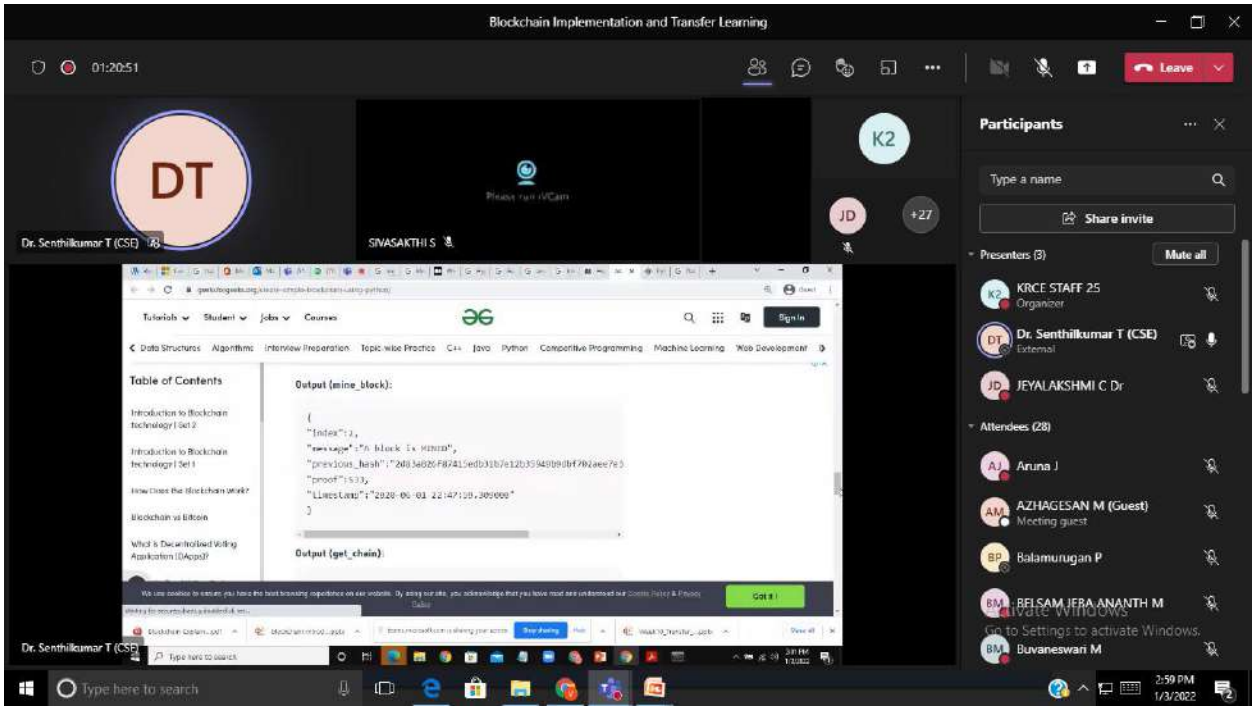
The session started with the introduction of New Education Policy (NEP) 2020. The key points of NEP were discussed very deeply. The changes in the new education policy were also highlighted.The session concluded that A New Education Policy aims to facilitate an **inclusive, participatory and holistic 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



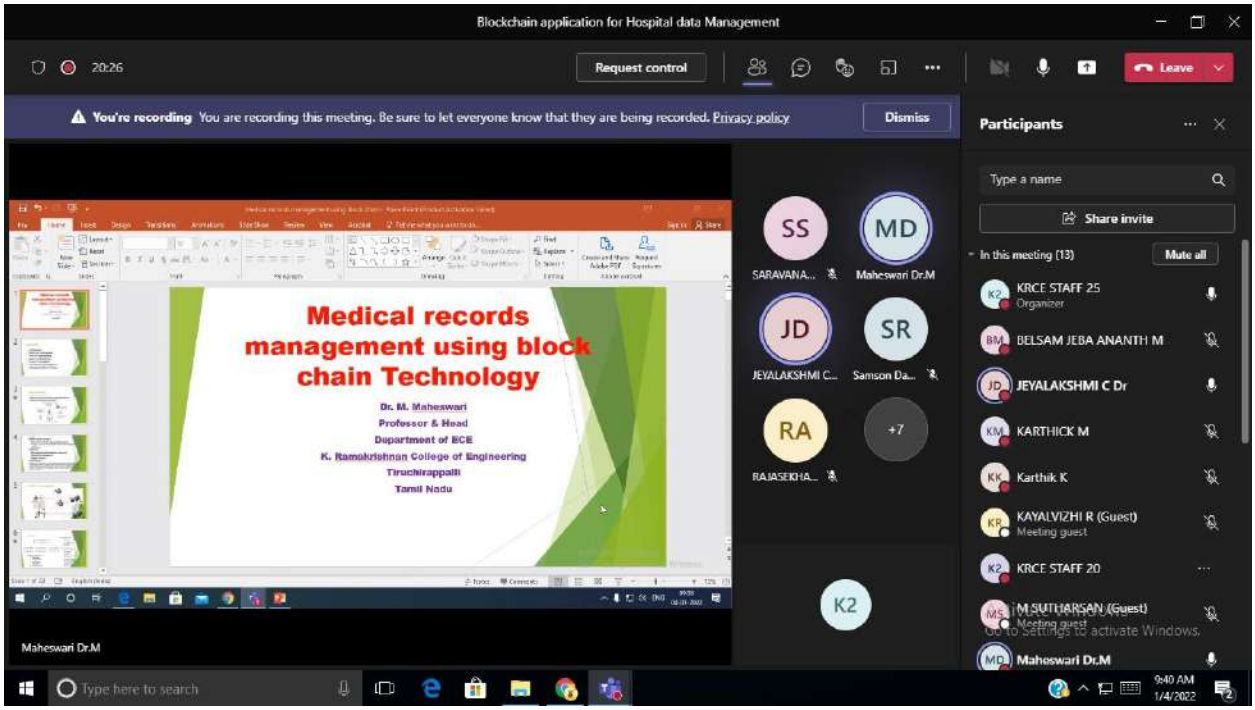
The session started with introduction to the implementation methodologies followed for the blockchain. The security features in block chain were shared by Dr. T. Senthilkumar. He pointed out that Traditional ML uses data from same domain to be trained then it predicts the data in tests while in Transfer 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 ledge 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



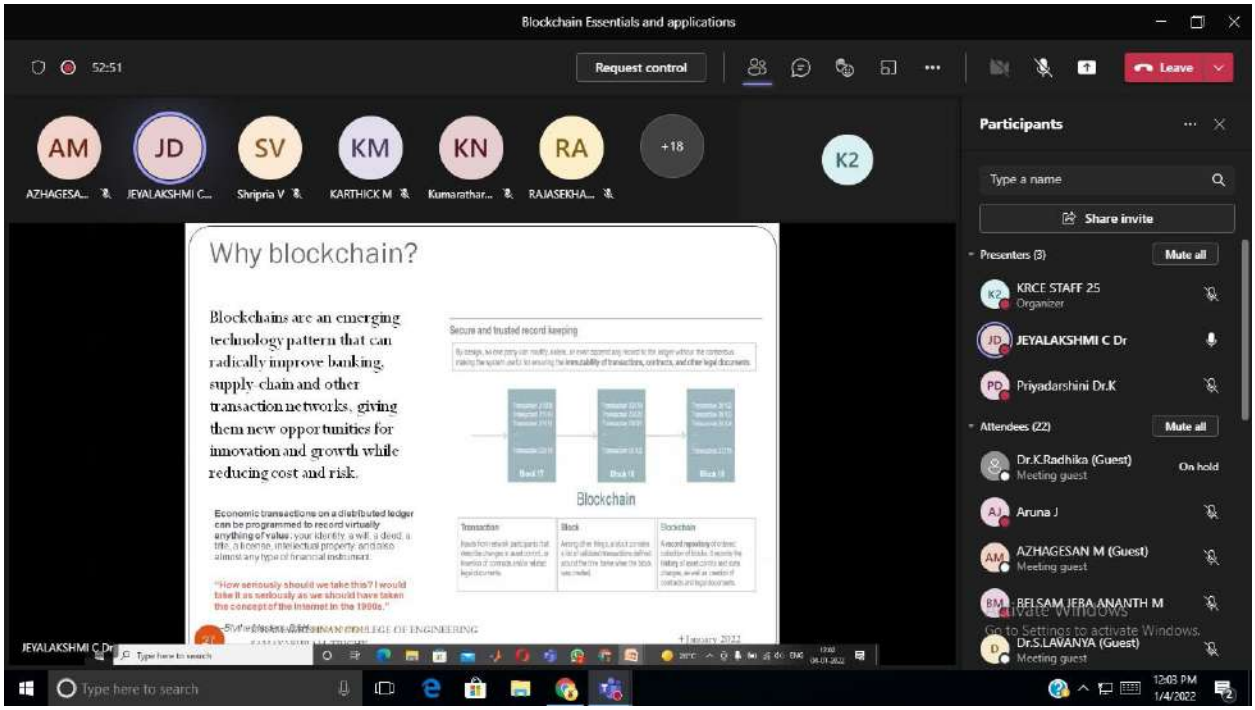
Brief introduction about the basics of cryptography was highlighted before the topic of Medical Records Management using block chain technology. The encryption and decryption methodologies were explained in detailed manner. The architectural model of Inter Planetary File System to organize user data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



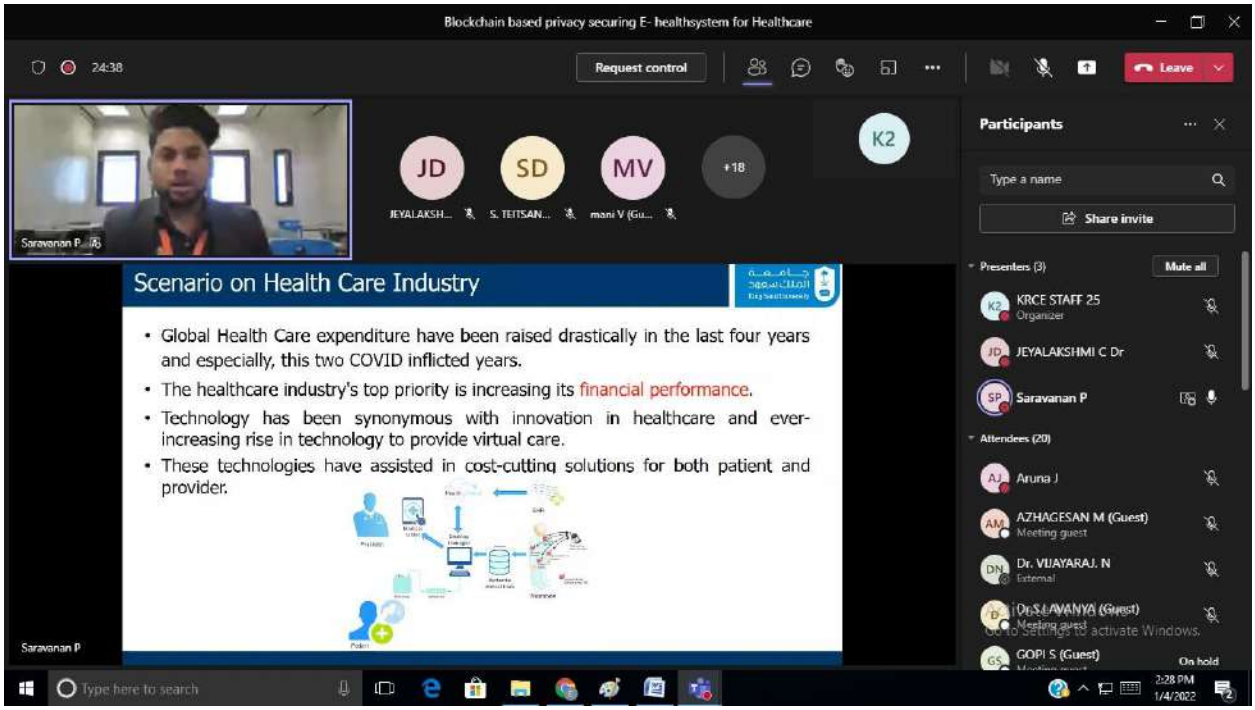
The introduction to Blockchain essentials was given by Dr. K. Priyadarshini which has Cryptographic keys, peer to peer network and a means of computing. The network types are explained in contrast with the block chain technology. The evolution of the block chain was elaborated to understand the needs 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



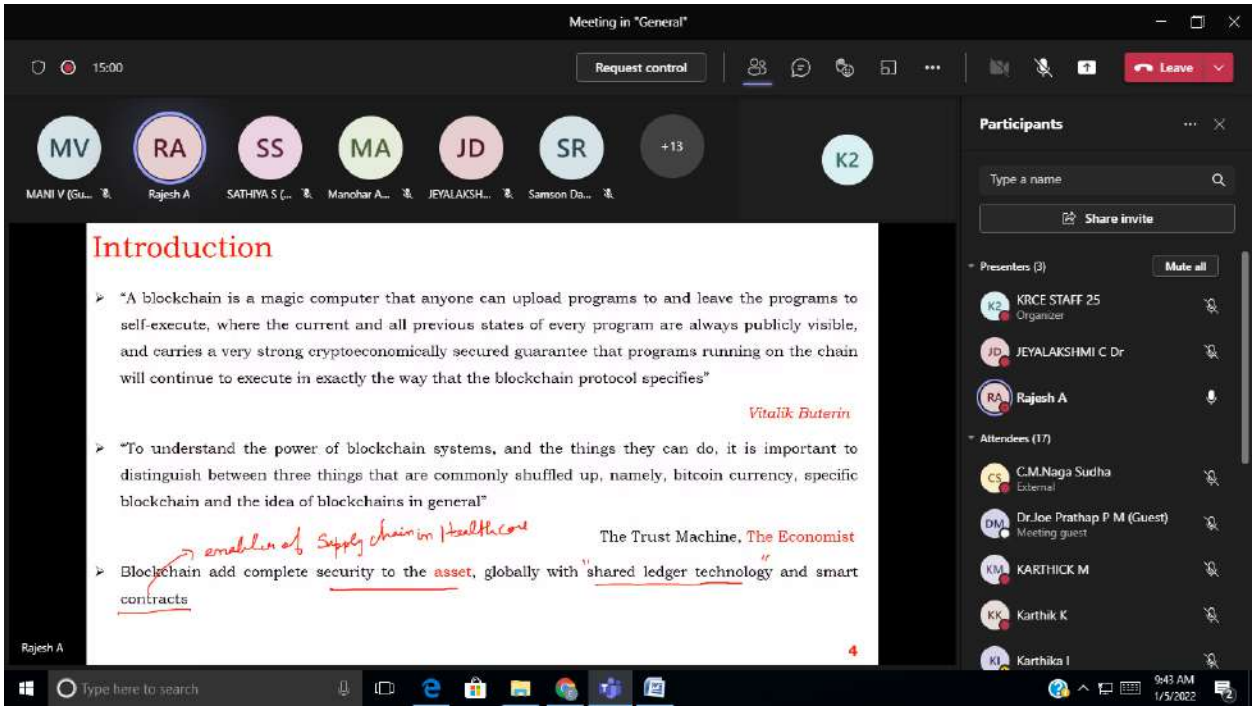
The session started with the scenario on Health Care industry. A complete overview of the hospital management system was discussed very briefly by Mr. P. Saravanan. A discussion on challenges in IoT based hospital management system was carried out in an interesting manner. The privacy concern in healthcare 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 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.Muruganantham, Deputy Registrar,Indian Institute of Information Technology, Kalyani, West Bengal, India

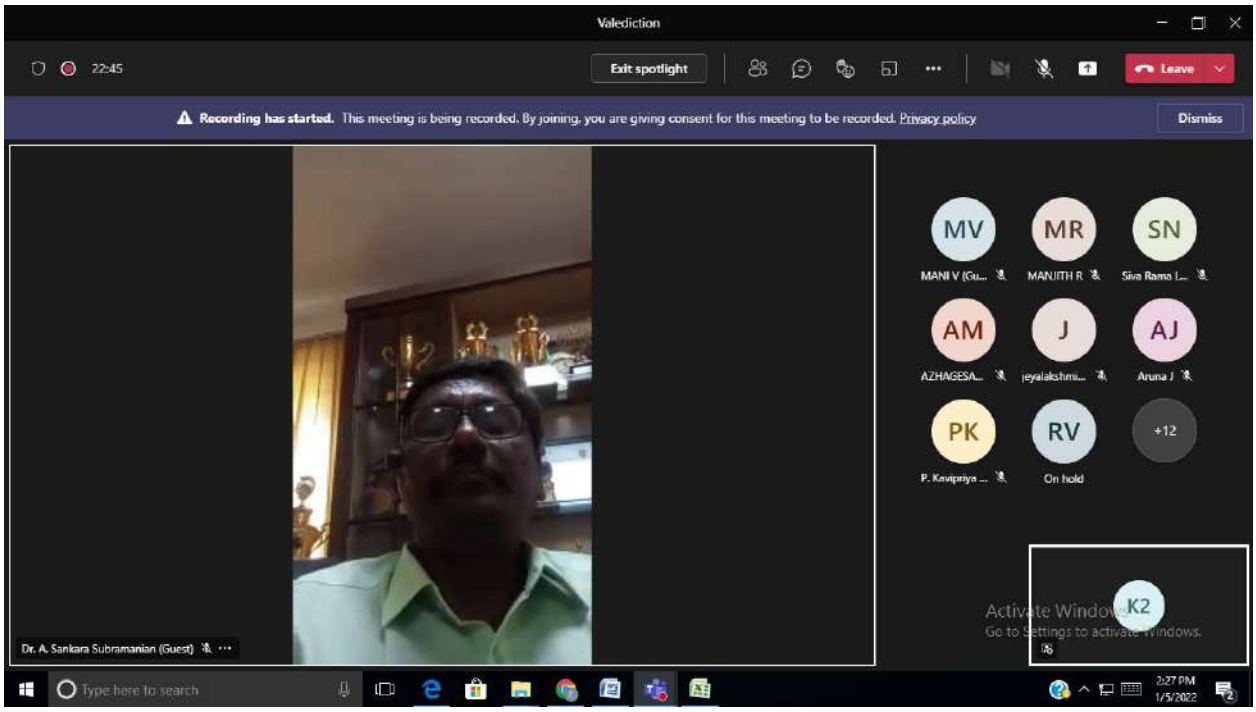
The stress management session was spitted into three sessions namely Social, Courtesy, Flexibility. The social skills techniques to be followed for the development were clearly explained. Listening skill development ideas were also shared by Prof. MuruganathamPonnusamy. To have proper social skill better 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, AndraPradesh, 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.