Department: IT | Date: Sep. 21-25, 2021

ONLINE FACULTY DEVELOPMENT PROGRAMME
on
MEAN STACK TECHNOLOGIES
(September 21-25, 2021)
Sponsored by
AICTE TRAINING AND LEARNING (ATAL) ACADEMY

AICTE Training and Learning (ATAL) Academy sponsored online Faculty Development Programme (FDP) on "**MEAN Stack Technologies**" is organized by Department of Information Technology, Sree Vidyanikethan Engineering College (Autonomous), Tirupati, Andhra Pradesh. India during September 21-25, 2021. An amount of Rs. 93,000.00 (Rupees Ninety Three Thousands only) is sanctioned to **Dr. V. Lokanadham Naidu** on August 16, 2021 (F. No.: 01_/AICTE/ATAL-HQ/2020-21/199(23)) for organizing the FDP.

The online FDP is conducted using the *Webex* Video conference. A total of 187 participants are participated in the FDP. The participants are the faculty and research scholars of various engineering colleges and government institutions across the country. Further, the participants are trained by the industry experts from Accenture, Hewlett-Packard, CapGemini, Plivo, and Netenrich. The experts conducted hands-on based training virtually on various aspects of web application development using MEAN stack technologies. The FDP has received an overwhelming response from the participants. A total of 14 sessions are conducted. Out of 14, 13 are technical sessions and one is on "Health and Happiness" to promote the FIT INDIA movement across the country.

The main aim of the FDP is to provide insights and hands-on training for faculty on MEAN Stack Technologies. The objectives and outcomes of FDP are as follows:

Objectives of FDP:

- To provide insights and hands-on training for faculty on MEAN Stack (Open source) Technologies.
- To demonstrate the various features of Angular framework for front-end development.
- To develop the back-end code using NodeJS runtime environment and build web applications using ExpressJS light-weight web framework.
- To familiarize with document-oriented database MongoDB for the data management.

Outcomes of FDP:

- Gain knowledge on MEAN Stack Technologies.
- Design and develop scalable web applications rapidly using the MEAN stack technologies.
- Develop open source and user-friendly web applications using a single language JavaScript.
- Conduct hands-on training for students on MEAN stack technologies to make them industry ready.

The inaugural function of the online FDP on **"MEAN Stack Technologies"** is scheduled on September 21, 2021 at 9:00 AM. In the inaugural function, **Ms. C. Silpa**, Assistant Professor, Department of Information Technology welcomed the chief guest **Mr. Ramesh Mehta,** Sr. Software Engineer, Hewlett-Packard, Bangalore, **Dr. B. M. Satish,** Principal, Sree Vidyanikethan Engineering College (Autonomous), **Dr. B. Raveendra Babu,** Dean (Computer Sciences), SVEC, **Dr. K. Ramani**, Professor & Head, Department of Information Technology, and all the participants to the online FDP. The event is started with a prayer song.
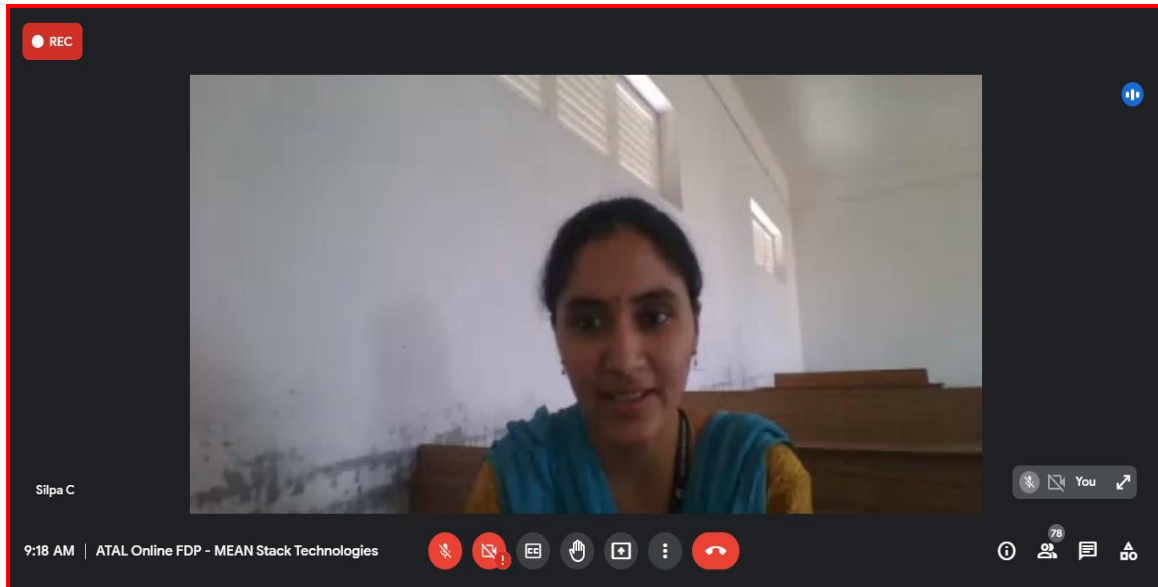
Ms. C. Silpa is welcoming the Chief Guest, Principal, Dean (computer sciences), Head (IT) and the participants.

Dr. V. Lokanadham Naidu, Coordinator of ATAL FDP given the welcome speech. In the welcome speech, the coordinator welcomed the Chief Guest, Principal, Dean, participants and also thanked the ATAL academy for sponsored the FDP. Further, the coordinator highlighted the objectives of the FDP, the technologies to be discussed, and the outcomes of the FDP.


Dr. V. Lokanadham Naidu, Coordinator, ATAL online FDP is giving the welcome speech.

Dr. K. Ramani, Professor & Head, Department of Information Technology highlighted the skills that are required for the faculty to train the students as per industry needs and the job opportunities on MEAN Stack Technologies.
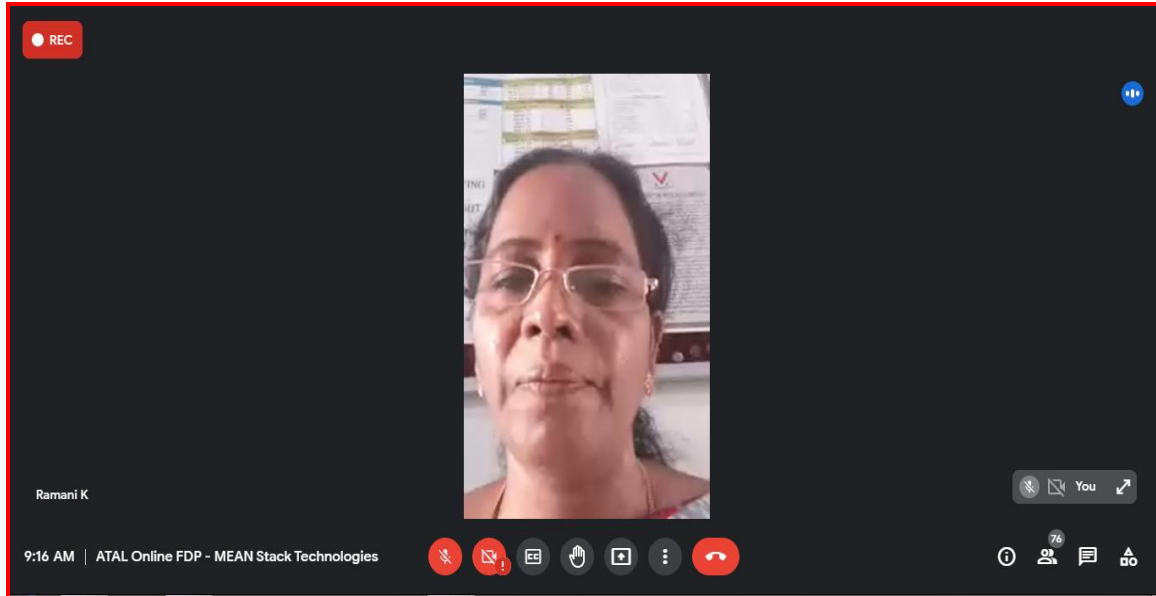

Dr. K. Ramani, Professor and Head, Department of IT is addressing the participants.

Dr. B. Raveendra Babu, Dean (Computer Sciences) addressed the participants about the importance of full stack technologies and the requirements of industry. Later, **Ms. C. Silpa** introduced the chief guest **Mr. Ramesh Mehta** to the participants.
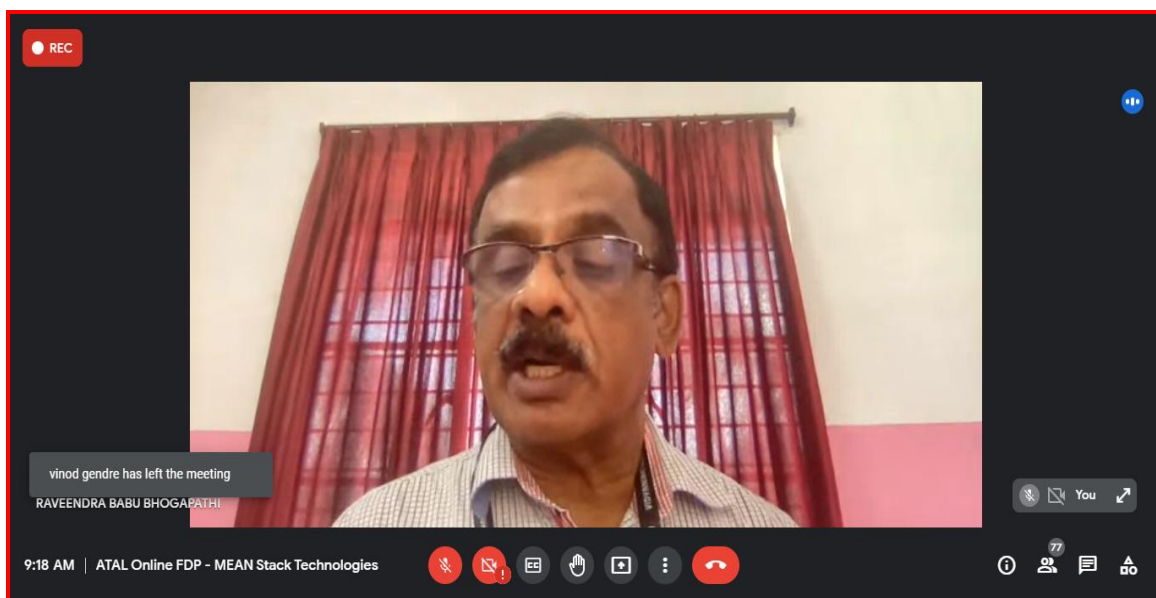
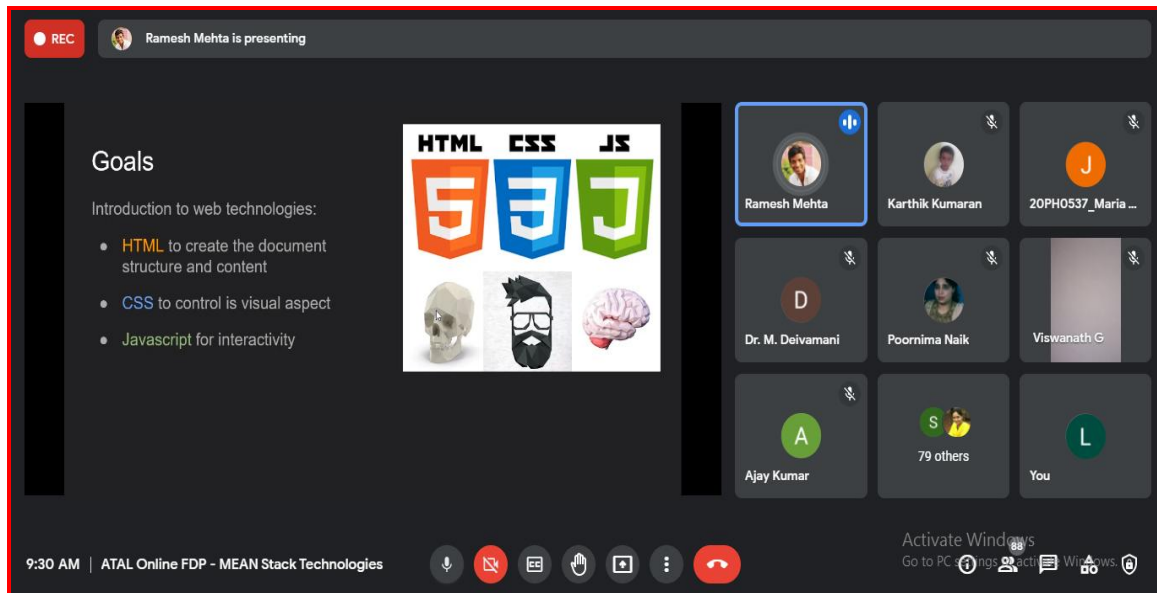**Dr. B. Raveendra Babu**, Dean (Computer Sciences), SVEC is addressing the participants.
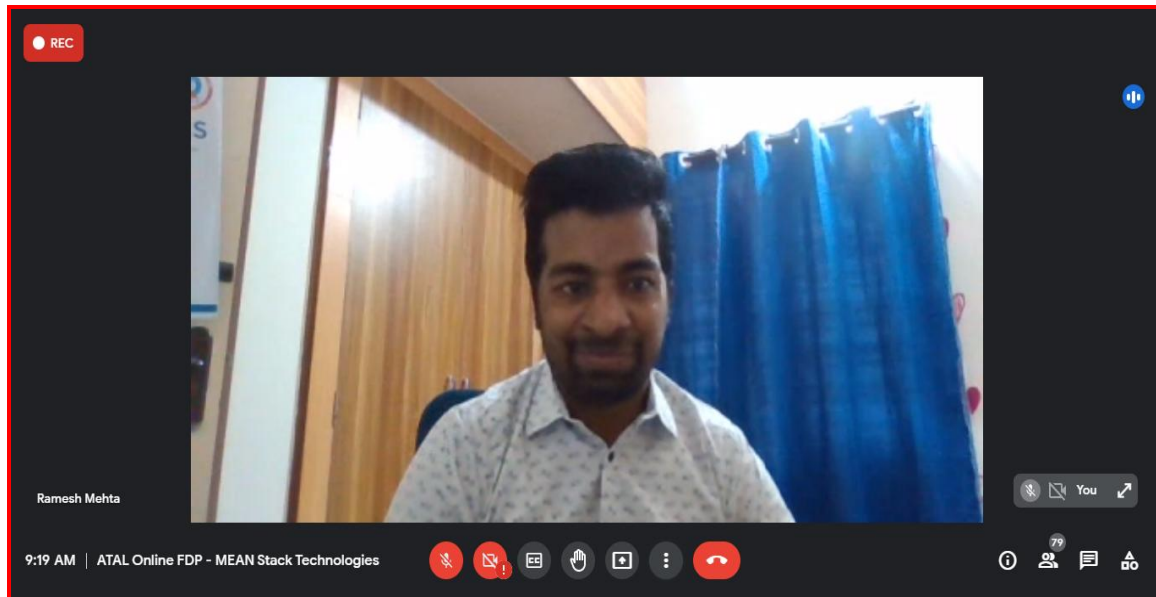
Mr. Ramesh Mehta, Sr. Software Engineer, Hewlett-Packard, Bangalore is addressing the participants.

Mr. Ramesh Mehta emphasized the role of a full stack developer, industry requirements, opportunities, and advantages of full stack developers. Moreover, the skills that can gain by the participants after learning the **M**ongoDB, **E**xpressJS, **A**ngular and **N**odeJS (MEAN) Stack Technologies to develop scalable and enterprise web applications. The details of technical sessions are as follows.

Day – 1: September 21, 2021 (Tuesday)

Mr. Ramesh Mehta, Sr. Software Engineer, Hewlett-Packard, Bangalore acted as a resource person for first two sessions of Day-1 to deliver the fundamental concepts of HTML, CSS and JavaScript. The first session of Day-1 is started at 09:30 AM. The participants are trained on the concepts of HTML and CSS. In addition, the participants have gained the practical knowledge on design and development of interactive static web pages. The second session of Day-1 is started at 11:45 AM. In this session, **Mr. Ramesh Mehta** discussed the programming constructs of JavaScript. The participants were introduced with the practical examples of JavaScript to validate web pages as well as to desing user-friendly web pages.
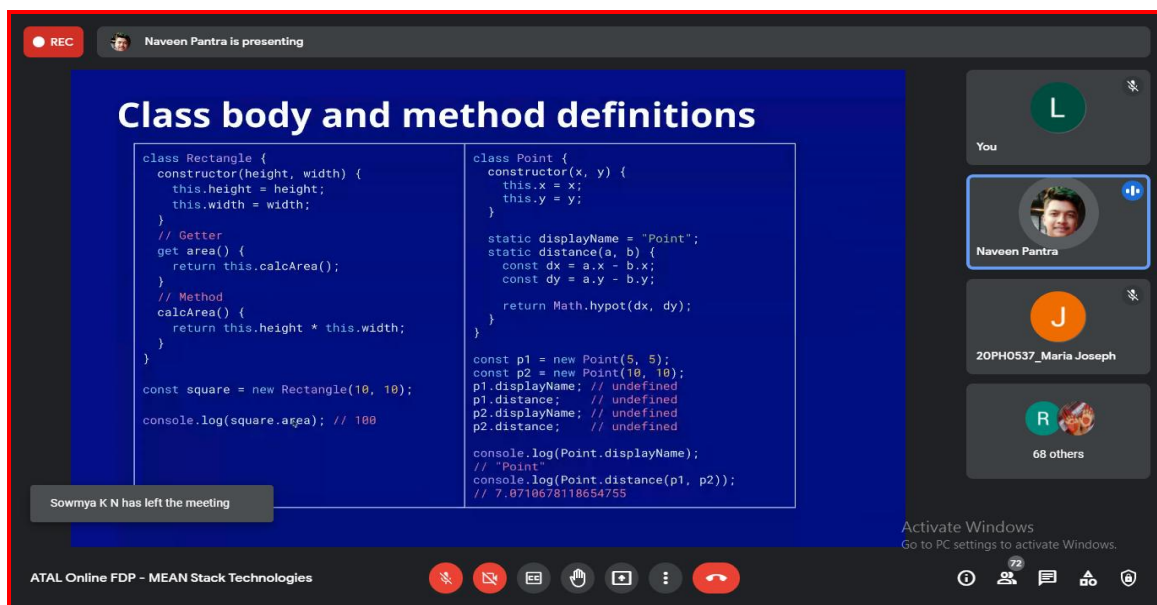
Mr. Ramesh Mehta is delivering the session on HTML, CSS and JavaScript.

The third session of Day-1 was started at 2:30 PM. **Mr. Naveen Pantra,** Software Development Engineer 2, Plivo, Bangalore acted as a resource person to deliver the advanced concepts of JavaScript. In this session, the participants have gained the practical knowledge on JavaScript objects, functions and classes.

Mr. Naveen Pantra, Software Development Engineer 2, Plivo, Bangalore is explaining the JavaScript classes

Day – 2: September 22, 2021 (Wednesday)

Mr. Krishnamoorthy Venkatraman, Software Development Team Lead, Accenture, Chennai acted as a resource person for all three sessions of Day-2. **Ms. C. Silpa**, Assistant Professor, Department of IT introduced **Mr. Krishnamoorthy Venkatraman** to the partcipants. **Mr. Krishnamoorthy** conducted the sessions on Angular concepts. He explained the pre-requisites that are required to learn Angular as well as the components of Angular. The participants have gained the practical knowledge on the following concepts.

- Prerequisites, Introduction
- Installation and Project setup
- Project Structure and Overview
- Components, Data Binding
- Directives, Pipes
- Forms, Services, Routing
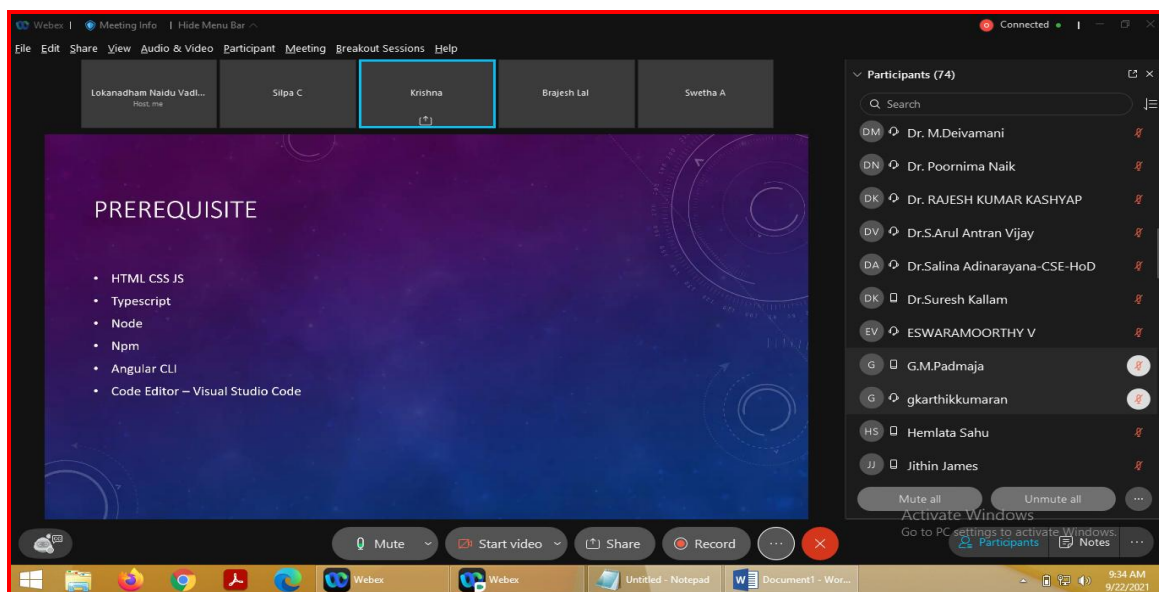
Mr. Krishnamoorthy is explaining the pre-requisites to learn Angular.

**Day – 3: September 23, 2021 (Thursday)**

The first session of Day-3 was started at 9.15 AM. In this session, **Mr. Krishnamoorthy** demonstrated the usage of forms, services, and routing in web page

developmnet. In addition, **Mr. Krishnamoorthy** practically shown the design of a simple web application using Angular.
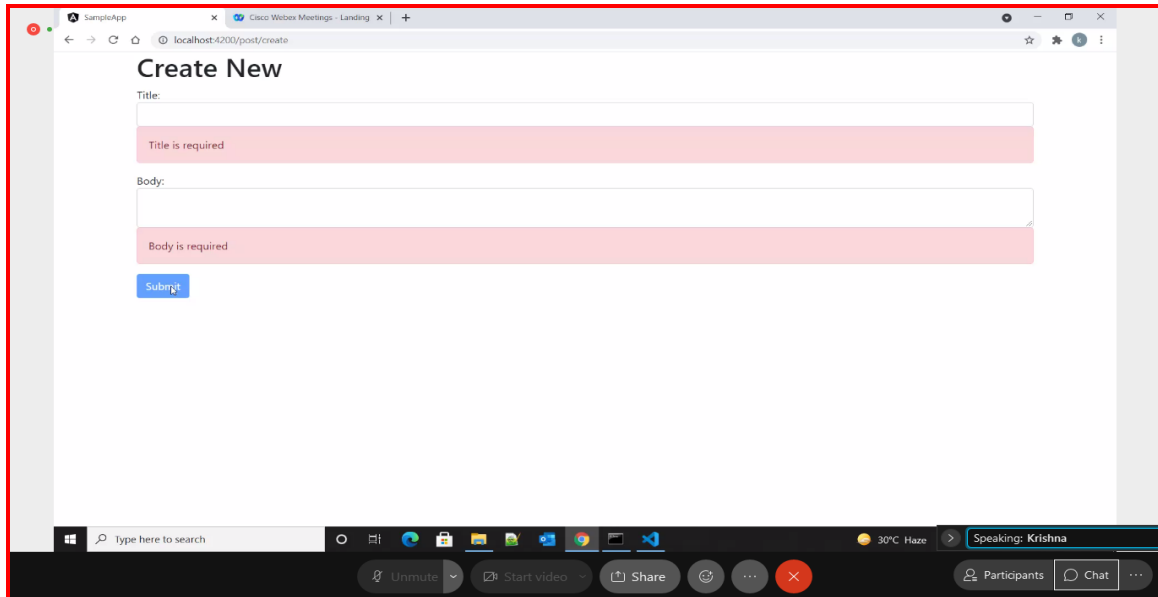
Mr. Krishnamoorthy is showing the web page development using Angular.

The second session of the Day-3 was started at 11:30 AM. As a part of FIT INDIA movement and to promote it across the India, the session on "**Health and Happiness**" is conducted. This session was delivered by **Sri. S. V. Suresh**, Art of Living Coordinator, Chittoor, Andhara Pradesh. **Dr. V. Lokanadham Naidu**, Associate Professor, Department of IT introduced the resource person to the participants.
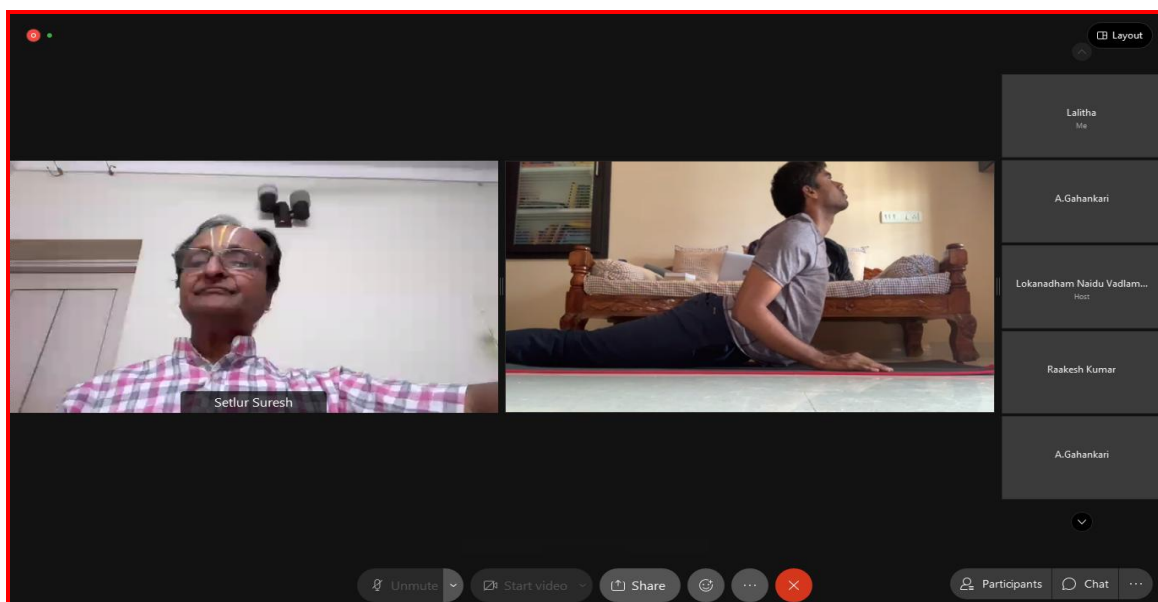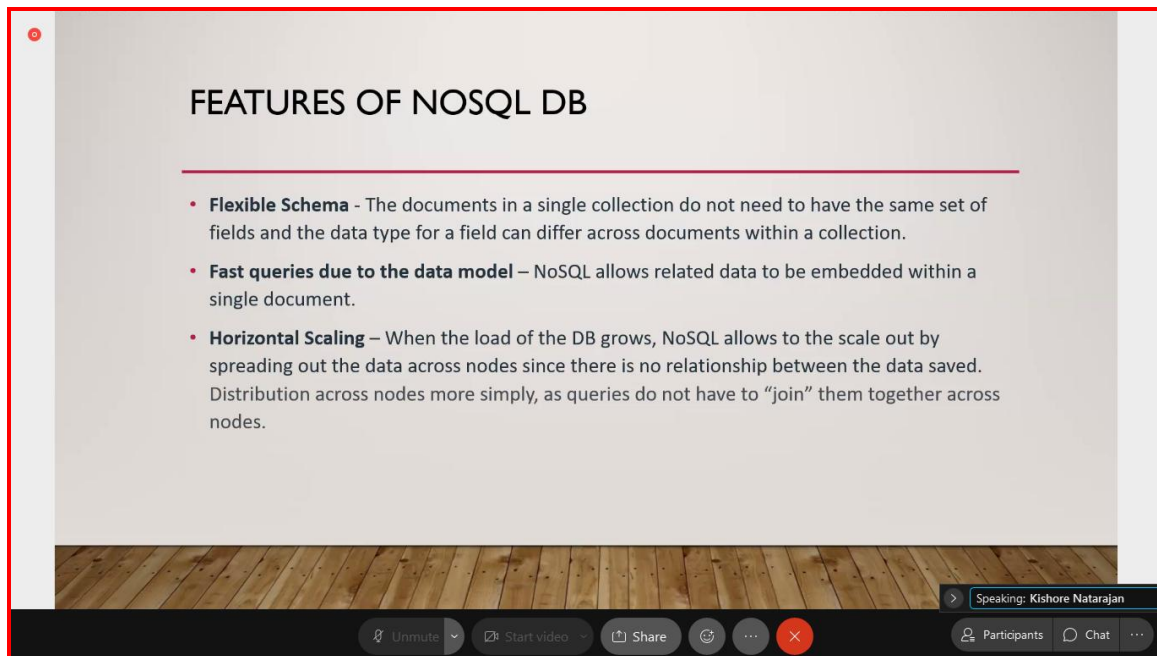

Sri. S. V. Suresh is demonstrating the Yoga Asanas for health and happiness.

In this session, Sri. S. V. Suresh demonstrated the different types of Yoga Asanas and their benefits for health and happiness.

The last seesion of Day-3 was started at 2:30 PM. **Mr. Kishore Natarajan,** Application Development Senior Analyst, Accenture Pvt. Solutions, Bangalore acted as a resource person. He delivered a session on MongoDB. **Dr. V. Lokanadham Naidu**, Coordinator of ATAL FDP introduced the resource person to the participants. **Mr. Kishore** emphasized about NoSQL, MongoDB and Differences between RDBMS and NoSQL. And also, he has shown MongoDB installation and configuration process. The participants have gained the practical knowledge on the following topics of MongoDB.

- CRUD Operations in MongoDB
- Additional useful Queries and Aggregation in MongoDD
- Taking Backup and Restore
- Import and Export data in MongoDB

Mr. Kishore Natarajan is explaining the features of NoSQL database.

Day – 4: September 24, 2021 (Friday)

The first session of Day-4 was started at 10:00 AM. **Mr. Dharani Kumar Meda,** Software Engineer, Netenrich, Bangalore acted as a resource person to deliver the concepts of ExpressJS. In this session, the participants have gained the practical knowledge on Rest architecture and methods. **Mr. Dharani** practically shown the application development using ExpressJS.
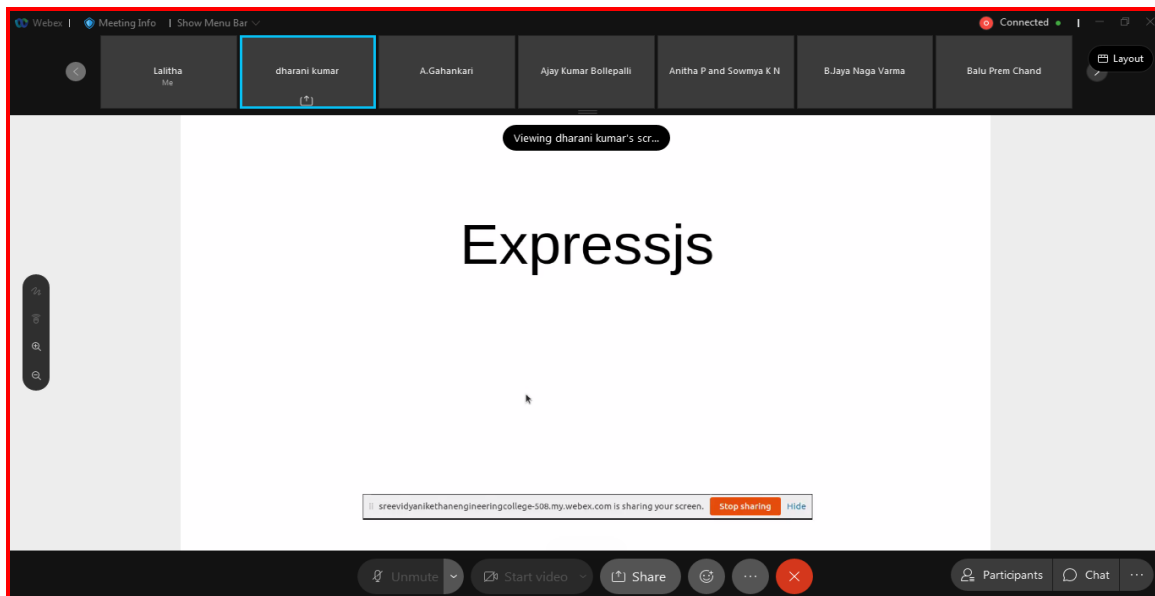
Mr. Dharani Kumar Meda is explaining the concepts of ExpressJS.

Mr. Avinash Gurugubelli, UI Architect, CG, Bangalore acted as a resource person for the second session of Day-4. The session was started at 1:00 PM. **Mr. Avinash** demonstrated the fundamental concepts of React. In this session, the participants were introduced with the partical examples on the following:

- React introduction, Setting up a React environment
- Components, state less and state full components
- React fundamentals
- Props, State, Events, Life cycles and Forms
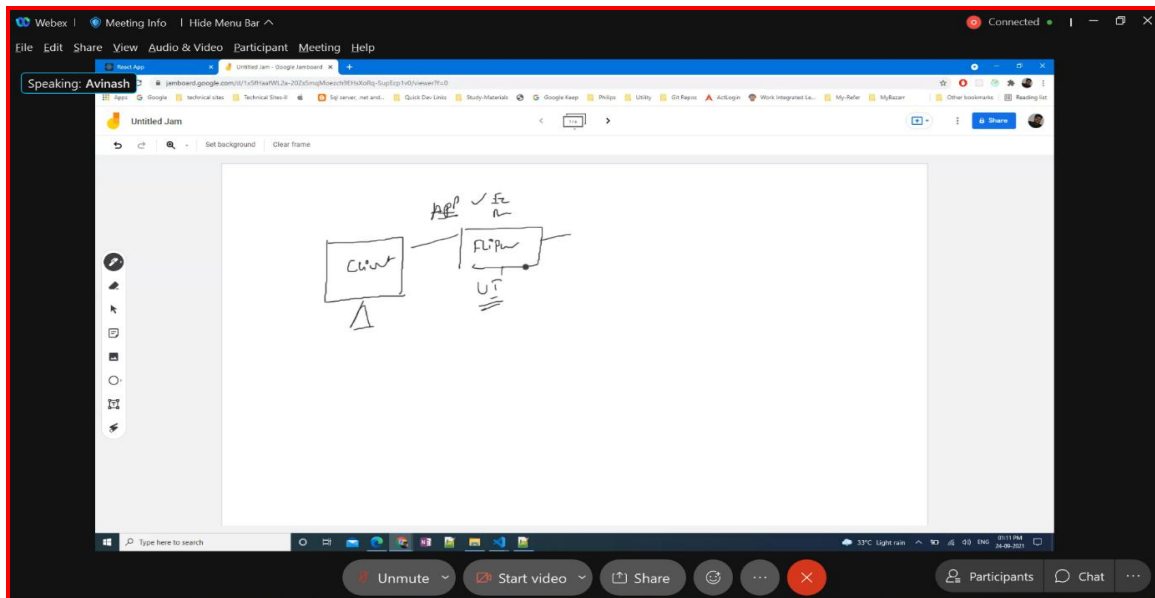
Mr. Avinash G is explaining the concepts of React.

Day – 5: September 25, 2021 (Saturday)

Mr. Krishnamoorthy Venkatraman, Software Development Team Lead, Accenture, Chennai acted as a resource person for the first two sessions of Day-5. The session of Day-5 was started at 09:15 AM. **Mr. Krishnamoorthy** delivered the fundamental concepts of NodeJS. The participants are gained the practical knowledge on the following concepts of NodeJS.

- Environment Setup
- REPL Terminal
- Package Manager
- Callback concepts
- Event Loop, Event Emitter, Buffers, Streams
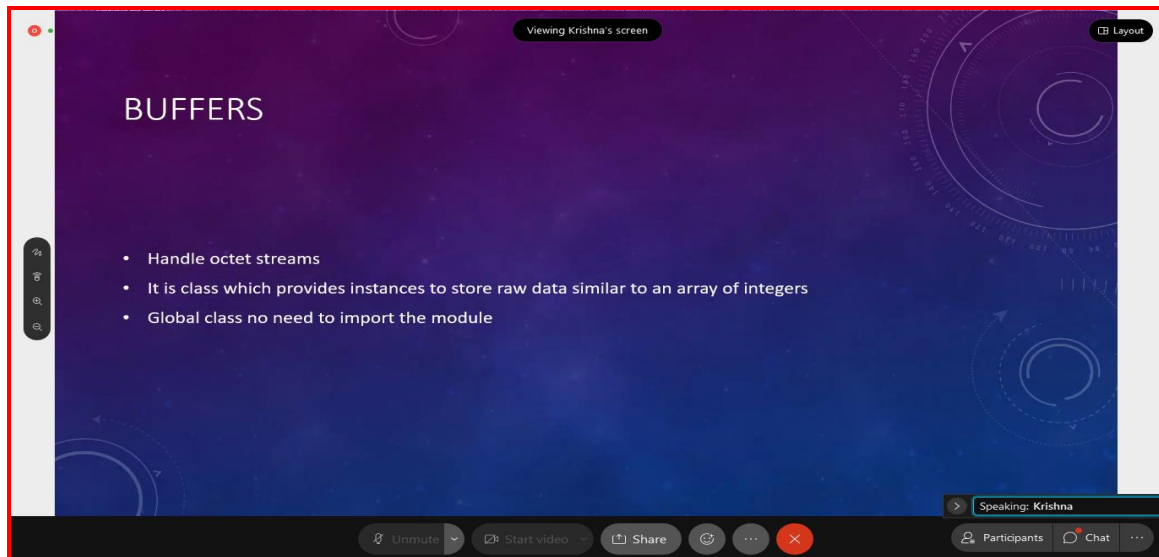
Mr. Krishnamoorthy Venkatraman is explaining the concepts of NodeJS.

The second session of Day-5 is started at 11:45 AM. In this session, the participants were introduced with the practical examples on the following of NodeJS.

- File Systems, Global Objects
- Utility Modules, Webmodule
- ExpressFramework, Restful Api

Mr. Avinash Gurugubelli, UI Architect, CG, Bangalore acted as a resource person for the third session of Day-5 of ATAL FDP. He discussed Routing, Redux fundamentals, CRUD operations of React. Moreover, **Mr. Avinash** practically shown the development of real-time web application using React.
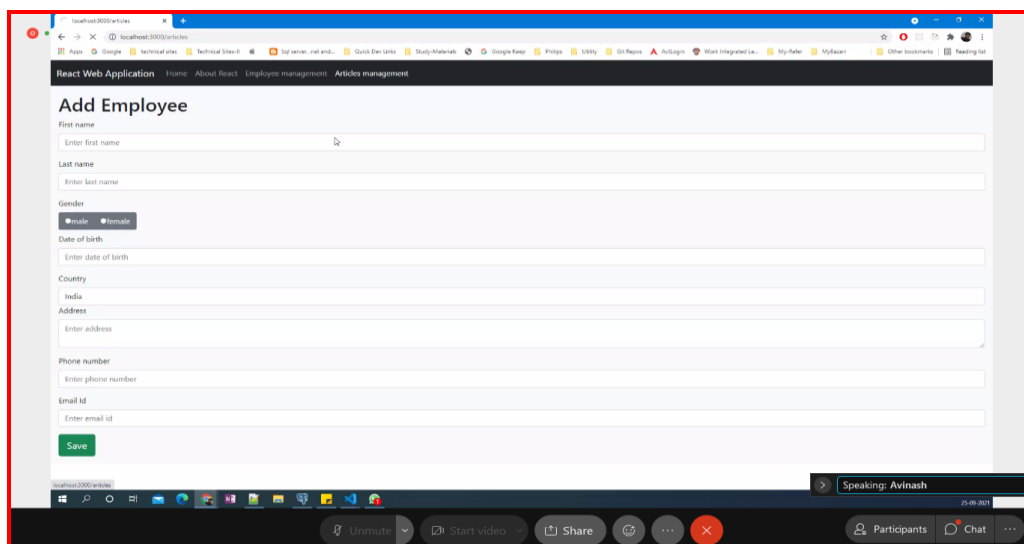
Mr. Avinash G is demonstrating the web application development using React.

The valedictory function of AICTE Training and Learning (ATAL) Academy sponsored online Faculty Development Programme (FDP) on "**MEAN Stack Technologies**" was started at 4.30 PM on September 25, 2021. In the valedictory function, Dr. B. Raveendra Babu, Dean (Computer Sciences), SVEC, Dr. K. Ramani, Professor & Head, Department of Information Technology are participated. The participants shared their valuable feedback on the sessions that are conducted and the knowledge gained.

Dr. V. Lokanadham Naidu, Coordinator, ATAL FDP proposed a Vote-of-Thanks. Initially, the coordinator thanked the Core team of ATAL for sponsoring the FDP to organize at national level and also for their suggestions, support and guidance. Later, he thanked the participants of various engineering colleges and government institutions for their enthusiastic participation. At the end, he conveyed his heartfelt thanks to the management, Sree Vidyanikethan Engineering College (Autonomous), Tirupati, Andhra Pradesh, Dr. P. Giridhara Reddy, Director (A & R), SVEC, Dr. B. M. Satish, Principal, SVEC, Dr. B. Raveendra Babu, Dean (Computer Sciences), SVEC, Dr. K. Ramani, Professor & Head (IT), Mr. Ch. Sreenu Babu, Co-coordinator, Ms. C. Silpa, Assistant Professor, Department of IT and student coordinators for their constant support to make the online FDP a grand success.

Dr. V. Lokanadham Naidu
Coordinator, ATAL FDP (online)

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