LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
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Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada
L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India
DEPARTMENT OF ELECTRONICS& COMMUNICATION ENGINEERING

REPORT on Online Guest Lecture on "Advancement in Electronics & Modern Embedded Systems"

Event Type	:	Guest Lecture
Date / Duration	:	29.06.2023
Name of Coordinator(s):		Dr.G.L.N.Murthy
Target Audience	:	B.Tech ECE Students
Total no of Participants:		II semester Students -81 Nos.
Objective of the event:		To expose the students to advances in Electronics and Modern Embedded Systems
Outcome of event	:	By attending the Guest Lecture, the students can be able to get acquainted with the developments in the advances in the embedded environment. The importance of the ECE program in the internet ruled world is educated so that the students shift from software orientation to core platform.

Description / Report on Event:

The session has begun by introducing the resource person Mr.S.Bhavani Shankar , Executive Manager, Efftronics Systems Pvt.Ltd by Dr.G.L.N.Murthy , Coordinator , Reconfigurable Computing Club, Department of ECE . Efftronics is having more than 35 years experience in the railway signaling sector. It has built largest 10T network built for Indian railways with more than 6 million things connected across 9,000 locations. Mr.Bhavani Shankar is heading IoT services division in Efftronics instrumental in its growth and in positioning it as one of India's smart solutions company. Backed by rich R&D, Efftronics is now a leading provider of smart solutions for Railways signaling, Smart cities, Smart Buildings, and Industrial domains.

The Session started by informing the students about the rapid development in modern day computing. The technology has reached scenario where very M scale devices have been developed starting with main frame computers. During this

evolution speed, performance and size are increased with subsequent fall in cost. Computer can not only understand numerous operations but also can understand and perform the things done by human biological functions. India and China are contributing 60% to global GDP. Due to industrial revolution people started moving from muscle power to machine power. With the industrial revolution 4.0, the entire physical world is augmented with a layer of smartness driven by new technologies. The design principles of Industry 4.0 were elaborated, the aims at interoperability, Virtualization, Modularity and decentralization. Algorithms are the heart of each and every system. They not only define products and services but even replacing business. The role of IoT in different applications like smart farming, harsh environment like volcanos has been elaborated. Various phases in IoT like capture, Communicate, Analyze and act were introduced to students The developments in computing are not only in terms of micro controllers and GPUs but also in neuromorphic computing. Different layers in the IoT reference model were explained to the students along with tires and interfaces. Edge tier, Platform tire and enterprise tire that are the three tires of an IoT architecture are also explained. All the students are advised to pay much focus on measurement principles, transducers and sensing systems. At the physical layer level ARM controllers are replacing the erstwhile microprocessors like 8085. People with strong mathematical background can work in the data analytics platform as told. Various phases and facts about Analytics were explained. The session ended by briefing the students about the students about the future trends and the role of engineer .

Feedback:

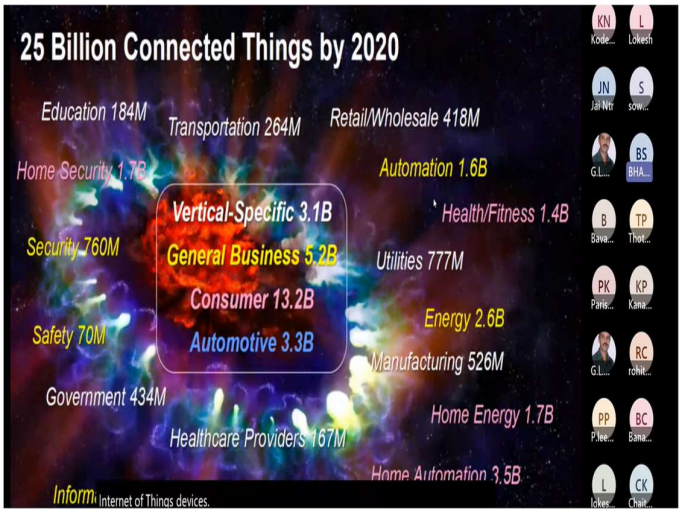
1. More explanation Needed
2. Conduct More workshops
3. Offline Programs are to be conducted
4. Duration to be increased.

Comments on feedback:

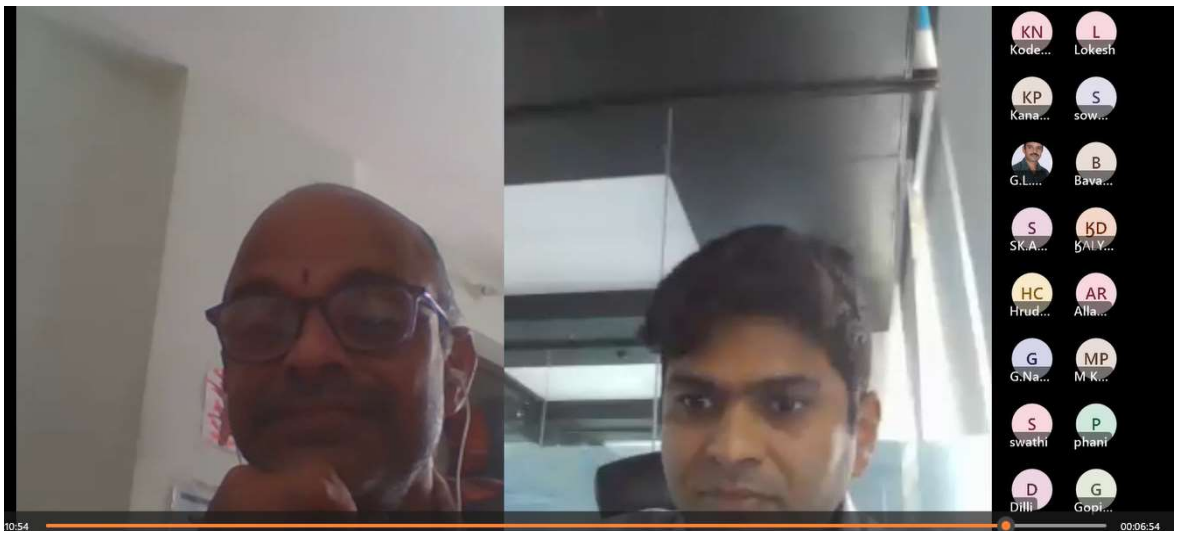
1. As the lecture is an introductory session overall view of the embedded Environment is provided. Further, as it is organized at the II semester level, in- depth presentation may make it difficult for students to understand.
2. Based on the availability of time for the students, definitely more lectures will be organized in the upcoming semester.
3. As the permission has been given in the last minute, the session has been arranged in online mode despite the busy schedule of the resource person.
4. Based on the topic and level of the students, duration will be increased subsequently.

Photos:

Smart farmimg



Evolution of IoT



Dr.G.L.N.Murthy , Coordinator , Reconfigurable Computing Club and Mr.S.Bhavani Shankar, Executive Managaer, Efftronics Systems Pvt.Ltd during the session

Head of the Department