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GUEST LECTURE ORGANIZED BY DEPARTMENT OF PHYSICS 2024-2025

"IOT and real life application"

The Department of Physics has organized a guest lecture entitled "IOT and real-life application", by Mr Arjith Chakraborti, Global Account Delivery lead, Storage, DXC Technology, Bangalore India.

The event was conducted on 13.04.2024 in the MVJCE auditorium. The students were assembled in the auditorium by 10.00 am and the event started around 10.30 am and ended at 12.30 pm. Approximately 1000 students of Physics and Chemistry cycle attended the guest lecture.

The Internet of Things (IoT) has a wide range of applications across various fields, revolutionizing industries by enabling connectivity and data exchange between devices and systems. Here are some examples of how IoT is applied in different fields:

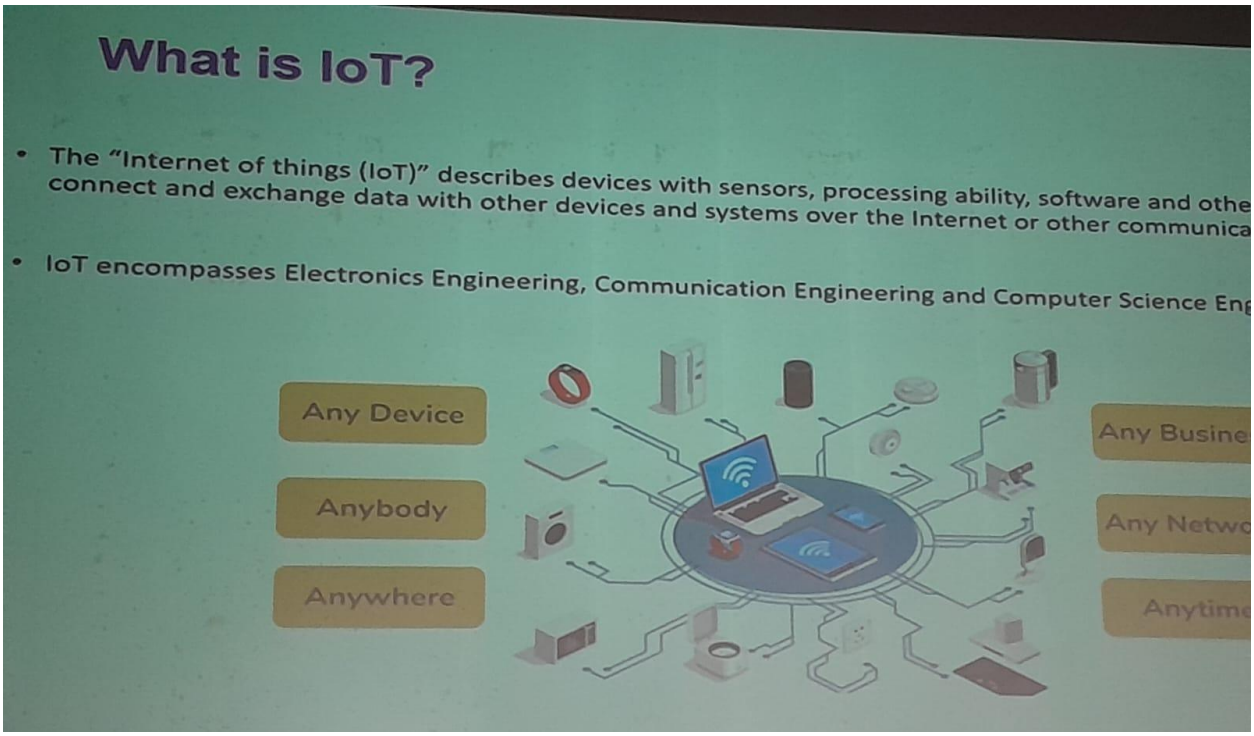
Smart Home Automation: IoT devices like smart thermostats, lights, locks, and security cameras allow homeowners to control and monitor their home remotely. This enhances convenience, energy efficiency, and security.

Healthcare: IoT devices such as wearable fitness trackers, remote patient monitoring systems, and smart medical devices help in tracking patient health metrics, providing timely interventions, and facilitating remote consultations, thus improving healthcare delivery and patient outcomes.

Industrial IoT (IIoT): In manufacturing and industrial settings, IoT sensors and devices are used for predictive maintenance, asset tracking, inventory management, and process optimization. This leads to reduced downtime, lower costs, and increased productivity.

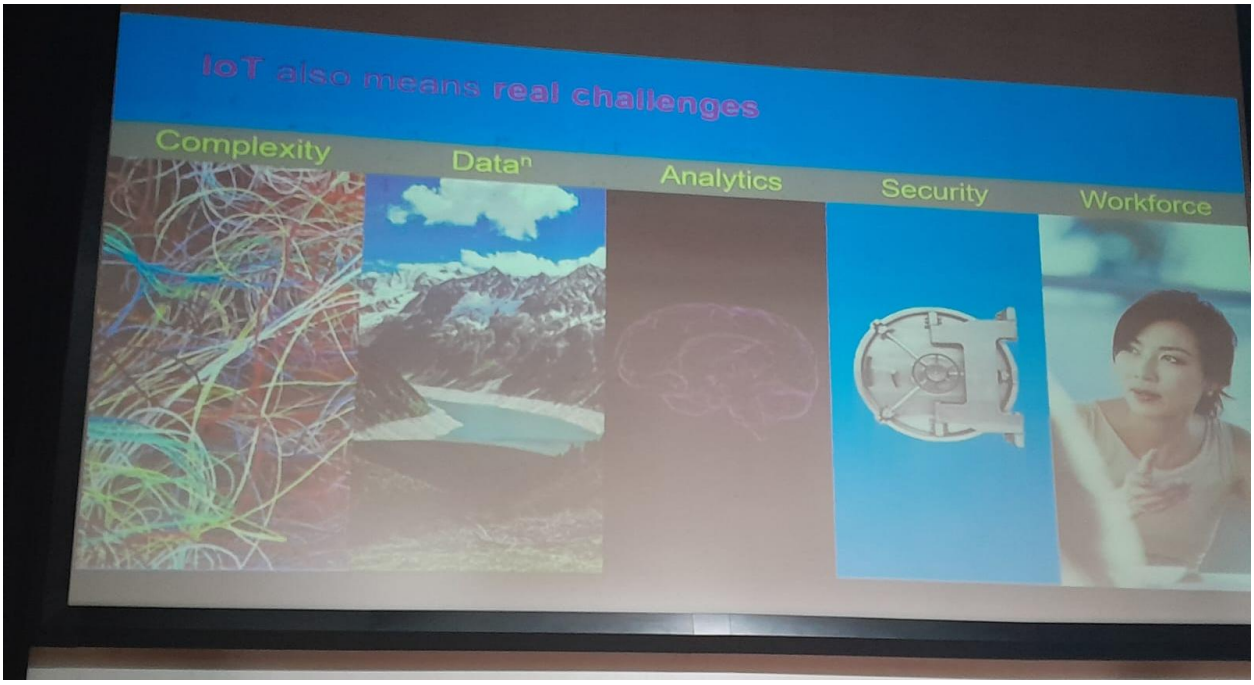
Agriculture: IoT sensors deployed in fields gather data on soil moisture levels, temperature, humidity, and crop health. This data helps farmers make informed decisions about irrigation, fertilization, and pest control, leading to higher yields and reduced resource wastage.

Transportation and Logistics: IoT-enabled tracking devices are used to monitor the location and condition of goods during shipping. Fleet management systems utilize IoT for route optimization, vehicle maintenance scheduling, and fuel efficiency monitoring, thereby improving supply chain efficiency and reducing costs.



Smart Cities: IoT technologies are deployed in urban infrastructure for various purposes, including traffic management, waste management, environmental monitoring, and public safety. Smart city initiatives aim to enhance the quality of life for citizens by optimizing resource utilization and improving service delivery.

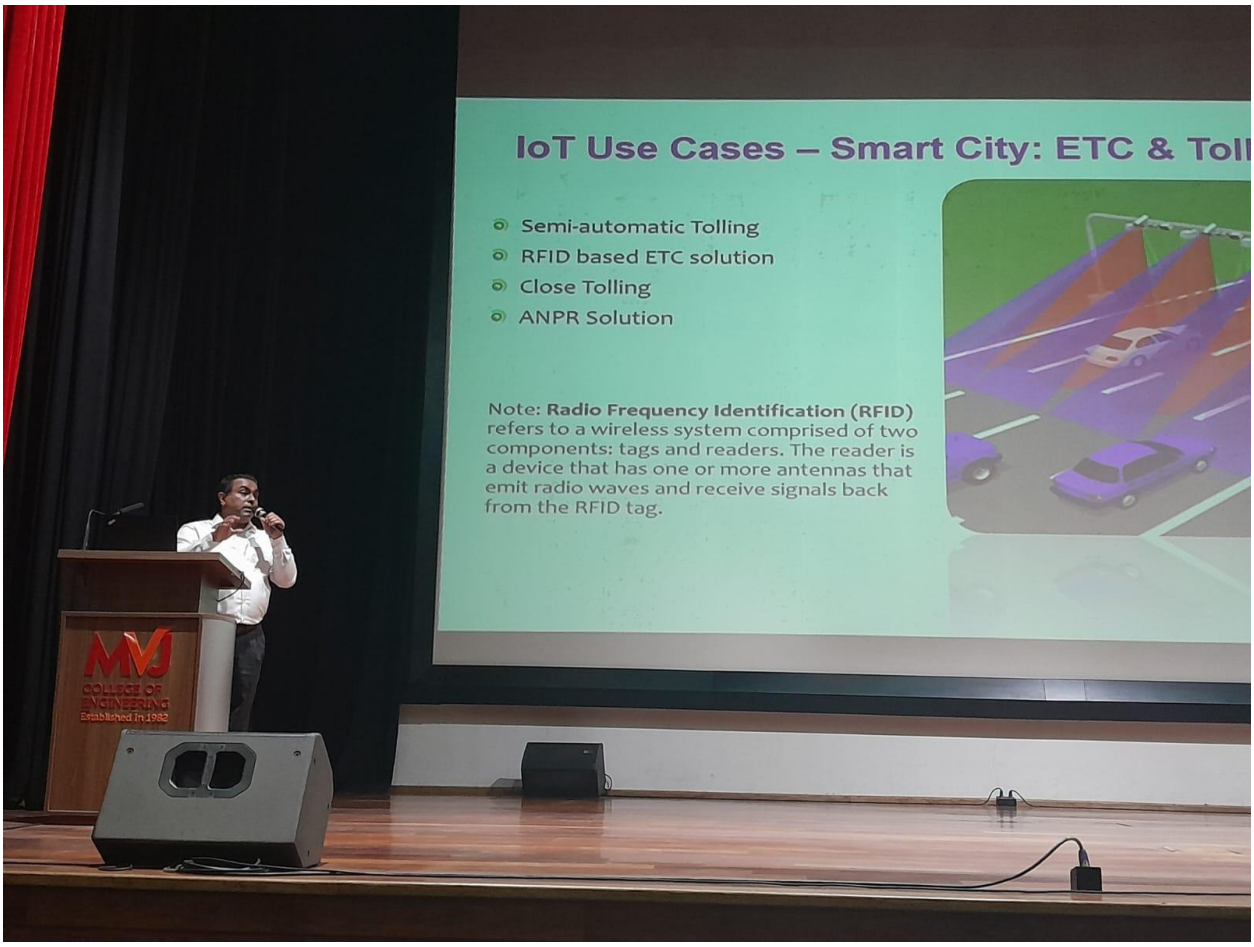
Retail: In retail environments, IoT devices such as beacons, RFID tags, and smart shelves are used for inventory management, personalized marketing, and improving the overall shopping experience for customers.



Energy Management: IoT-enabled smart grids and meters help utilities monitor energy consumption in real-time, detect faults, and optimize distribution. This enables more efficient energy usage and facilitates the integration of renewable energy sources into the grid.

Environmental Monitoring: IoT sensors are deployed in natural environments to monitor air and water quality, detect pollution, and track changes in ecosystems. This data is crucial for environmental conservation efforts and mitigating the impact of climate change.

Education: IoT devices such as interactive whiteboards, smart classroom systems, and educational apps facilitate personalized learning experiences, improve collaboration among students, and enable remote learning opportunities.



Then Dr Sathish presented a memento to honour the guest, and concluded the guest lecture with vote of thanks.

Outcome of the Event

The participants had a good opportunity to identify and enhance their knowledge in the field of IoT and were motivated to learn more on the applications of IoT in various fields.