



Department of  
Electronics and Communication  
Engineering



## Jaypee University of Information Technology Waknaghat

### Event Report: Session-4

24<sup>th</sup> July, 2021

Department of Electronics and Communication Engineering of Jaypee University of Information Technology, Solan organized the fourth session of “Workshop on Industrial Revolution 4.0” on 24<sup>th</sup> July 2021. The topic of the fourth session was “**Development of IOT Applications**” delivered by our honourable speaker **Mr. Harmesh Lal**, Director, Embsoft Products research and development(LLP).

**Jaypee University of Information Technology**  
**Department of Electronics & Communication Engineering**

 **Workshop on Industrial Revolution 4.0**  
(3<sup>rd</sup> July 2021 - 4<sup>th</sup> Sep 2021) 

*Keynote Speaker for Session 4:  
Development of IoT applications*



**Mr. Harmesh Lal**  
Director, Embsoft Products Research  
and Development(LLP)

*Date: 24th July, 2021, Time: 11:00 - 13:00 IST*  
*Medium: GoogleMeet*

**Dr. Shweta Pandit**, Assistant Professor, Department of Electronics and Communication Engineering welcomed the speaker and gave a brief introduction of his achievements. Mr. Harmesh Lal explained the development of the IOT applications in day to day life. He continued explaining its applications, how it is designed and used nowadays in every field. He also explained the IOT hardware modules like Raspberry pi, simplelink WI-FI CC3200 Lauchpad etc. and also about the various IOT clouds in Industry 4.0 'The Fourth Industrial Revolution'. He broadly explains about the development of IOT applications in various fields.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide with the following content:

- INTERNET OF THINGS APPLICATION DEVELOPMENT**
- EPRD EMBSOFT PRODUCTS RESEARCH & DEVELOPMENT LLP**
- [www.embsc.in](http://www.embsc.in) (partially visible)
- [www.eprd.in](http://www.eprd.in)

The meeting controls at the bottom show a recording icon (REC) and the name 'harmesh lal is presenting'. The participant list on the right includes: Gourav Choudhir, Deep Narayan Tripathi, Pramod Kumar, Abhishek Ray, 55 others, and You.

The screenshot shows a Zoom meeting interface with a presentation slide titled "INTERNET OF THINGS IOT Application Development". The slide content is as follows:

- INTERNET OF THINGS**
- IOT Application Development**
- Device Controlling and Temperature Monitoring**
- IOT Hardware - ESP32 Dev Module**
- IOT Cloud - Blynk IOT**
- User Interface - Mobile App**

The diagram illustrates the system architecture:

- An **ESP32/On Chip wifi** module is connected to **GPIO-12** (controlling an **LED LIGHT**) and **GPIO-36 / A0** (connected to a **Temperature Sensor LM-35**).
- The ESP32 module is connected to the **internet**.
- The **internet** is connected to the **Blynk IOT Cloud**.
- The **Blynk IOT Cloud** is connected to the **Blynk IOT Mobile App**.

The meeting controls at the bottom show a recording icon (REC) and the name 'harmesh lal is presenting'. The participant list on the right includes: DR. GAURAV VI..., Deep Narayan..., Ahmad Faiz Mi..., Pramod Kumar, Emjee Puthoor..., Rahul Rana 201..., 73 others, and You.

meet.google.com/cxu-ziaj-dwv

REC | harmesh lal is presenting

### INTERNET OF THINGS VARIOUS IOT CLOUDS

- 1. AWS-IOT Core:**
  - Free Account for one years with most of features with payment credentials.
  - Some Advance functions are Paid.
- 2. IBM Watson IOT :**
  - Free Lite Plan for limited period with Limited device Connectivity
  - Different Paid Planes as per organization requirement
- 3. Microsoft Azure IOT**
  - Free with limited Functionality
  - Different Paid planes as per IOT transactions.

11:38 AM | cxu-ziaj-dwv

meet.google.com/cxu-ziaj-dwv

harmesh lal is presenting

### INTERNET OF THINGS IOT - HARDWARE MODULES

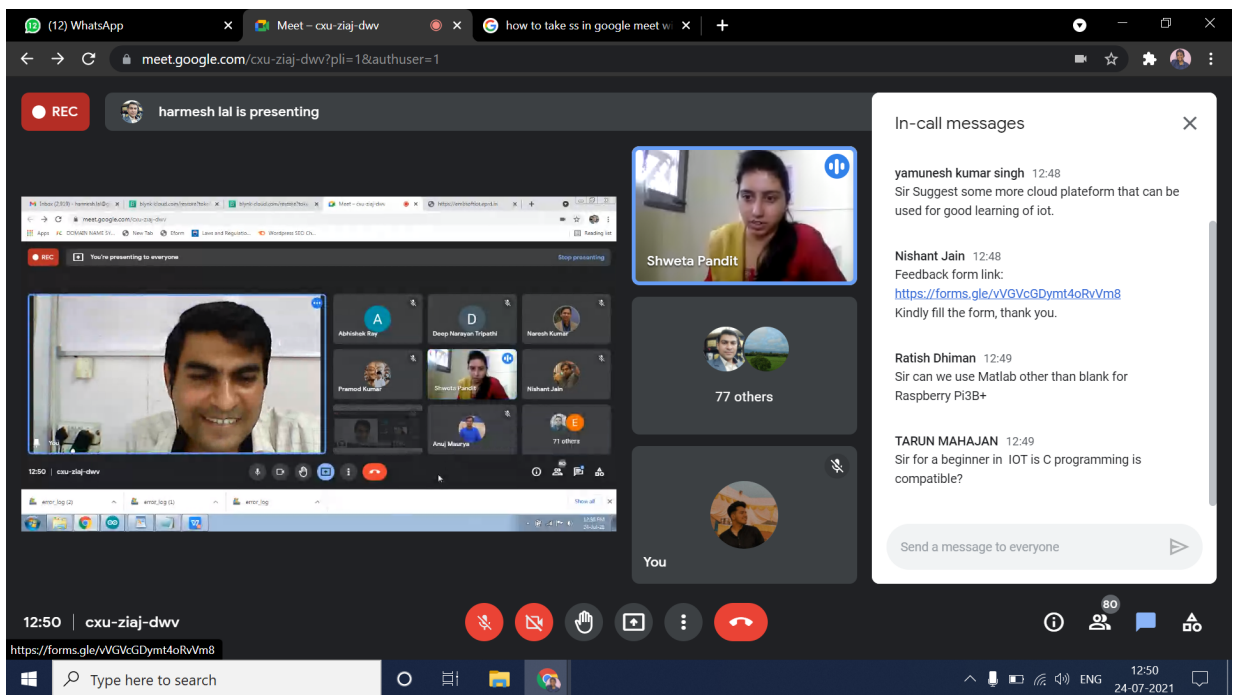
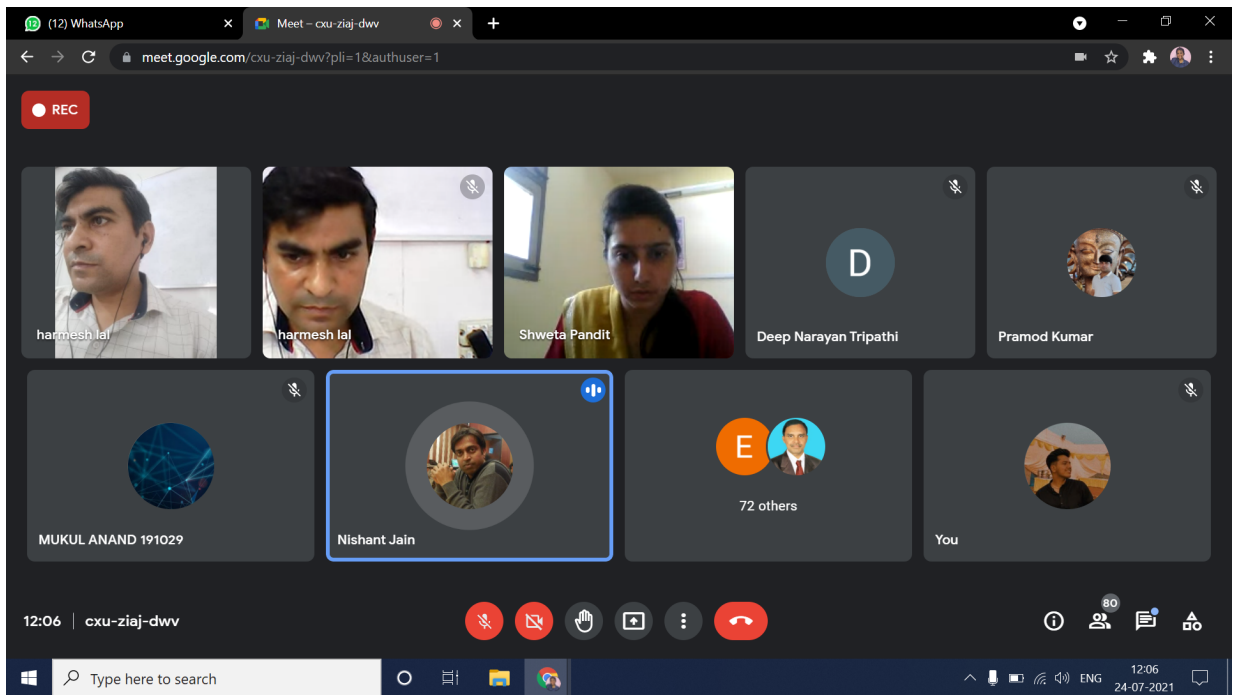
- 4. Other Adaptations of ESP8266 are**
  - Node MCU Module
  - Wemos , Wemos D1 , Wemos D1 Mini

The main chip in these module is same .

11:28 AM | cxu-ziaj-dwv

He demonstrated how one may develop a simple IoT system using Arduino and Blynk App. In the demonstration he explained how one may write a code in Arduino and can create the required GUI on Blynk App. Thereafter he, with the help of Dr. Shweta demonstrated that the LED light present in his room can be controlled by Dr. Shweta sitting in the University.





In the conclusion , the several doubts were cleared and developed immense interest in the applications. Several queries raised by the participants were answered and developed immense interest in various fields and applications. The session was worthy and taught a lot of things. In the conclusion , the several doubts were cleared and developed immense interest in the applications. The session was worthy and taught a lot of things. Two hour session on the development of IOT applications helped the participants to gain a lot of knowledge in this field.

