

Date: 20-10-2020
Bengaluru-560 109

From,

Dr. Rekha N
Associate Professor
Telecommunication Dept.
K.S.I.T

To,

The Principal,
K.S.I.T

Through,

The H.O.D
Telecommunication Dept.
K.S.I.T

Respected Sir,

Sub: Request for permission to conduct a workshop on "**Internet of Things(IoT)**"

With reference to the above subject, Department of TCE is planning to conduct a workshop on "**Internet of Things (IoT)**" for the students of Seventh semester under Institution of Electronics and Telecommunication Engineers (IETE) from 22nd October to 24th October, 2020. The resource persons for the workshop are Prof Ravishankar Holla, Asst Prof Dept of ECE, RVCE, Bangalore and Prof Rajesh Sudi Asst Prof Dept of ECE, JIT, Bangalore (Alumni, TCE, Dept.2009 batch). The remuneration for two resource persons of amount Rs 6000/- will be taken from IETE account.

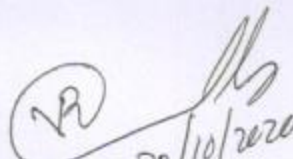
I kindly request you to grant permission for conducting this event.

Thanking you,

Yours Sincerely,



Dr. Rekha N
Event Coordinator, TCE



20/10/2020
H.O.D, TCE



20/10/20

Principal, KSIT

HEAD OF THE DEPARTMENT
Dept. of Telecommunication Engg
K. S. Institute of Technology
Bangaluru - 560 109

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K.S. INSTITUTE OF TECHNOLOGY
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#14, Kanakapura Rd, Raghuvanahalli, Bengaluru, Karnataka 560109
Tel: 080 2843 5722 Email : principal@ksit.edu.in Web : www.ksit.edu.in



Department of Telecommunication Engineering
Under Institution of Electronics and Telecommunication
Engineers (IETE)

Presents a workshop on

“Internet of Things (IoT)”

Resource Persons:

Prof. Ravishankar Holla
Asst.Prof. ,Dept. of ECE,RVCE
Prof. Rajesh Sudi
Asst.Prof. ,Dept. of ECE,JIT

Event Coordinator

Dr.Rekha N
Associate Professor,Dept. of TCE



Date: 22nd to 24th October 2020
Mode of Presentation : Google Meet

Convener
Dr. Chanda V Reddy
HOD, Dept.of TCE

For more Information:

Contact: +91 9019761559

Mail ID: rekhan@ksit.edu.in



K.S.INSITITUTE OF TECHNOLOGY

Department of Telecommunication Engineering

Report on

"Internet of Things (IoT)" Online Workshop report

A online workshop on "Internet of Things (IoT)", was organized by the Department of Telecommunication Engineering, K S Institute of Technology, under Institution of Electronics and Telecommunication Engineers (IETE) ,from 22nd to 24th October 2020. The resource persons of the workshop were Mr. Ravishankar Holla ,Asst.Prof. ,Dept. of ECE,RVCE and Mr. Rajesh Sudi, Asst.Prof. ,Dept. of ECE,JIT.

The resource persons were motivational speaker, who shared with us their knowledge on Internet of Things (IoT) and its design. All three days of online workshop was interactive.

Day 1 was on the introduction to Internet of Things, Key concepts discussed was

Driving Forces of IoT

1. Sensor Technology – Tiny, Cheap, Variety
2. Cheap Miniature Computers
3. Low Power Connectivity
4. Capable Mobile Devices
5. Power of the Cloud
6. Analytics

Big Data Analytics

- Map-Reduce
- Frequent Item-sets
- Similarity
- Clustering
- Dimension Reduction
- Streaming Data

Connectivity

- M2M
- WSN
- IPv6 and 6LowPAN
- Bluetooth LE and ZigBee
- WiFi and LTE

Devices and Platforms

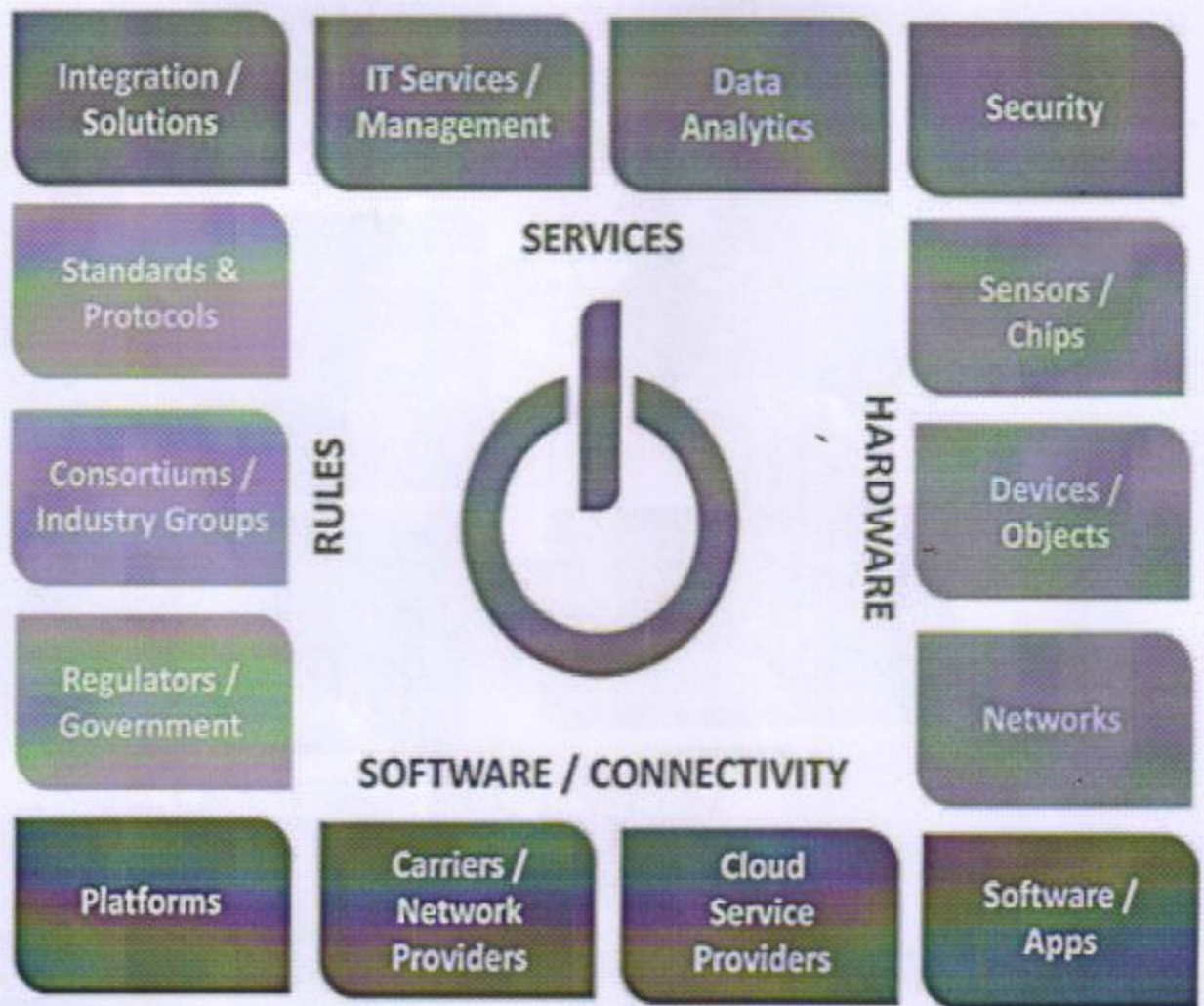
- Mobile Systems
- Sensor Systems
- Wearables
- Energy Harvesting
- Security and Privacy

Skills

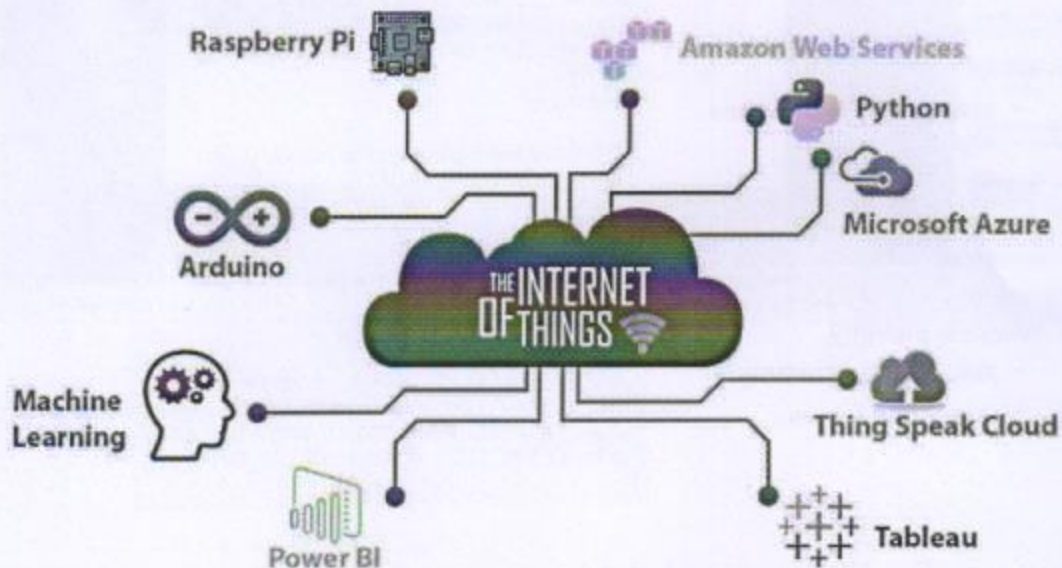
- Hardware Interface -- Sensors, Microcontrollers, actuators
- Cloud computing -- Protocols
- Artificial Intelligence and Machine Learning -- Data analytics, interpretation & Decision making
- Information Security – Secure protocols
- Networking -- Ethernet and wireless – Protocol networking
- Business intelligence – Hadoop, data management etc
- UX/UI Design – User interaction

Main features of IoT Hardware Development Platforms

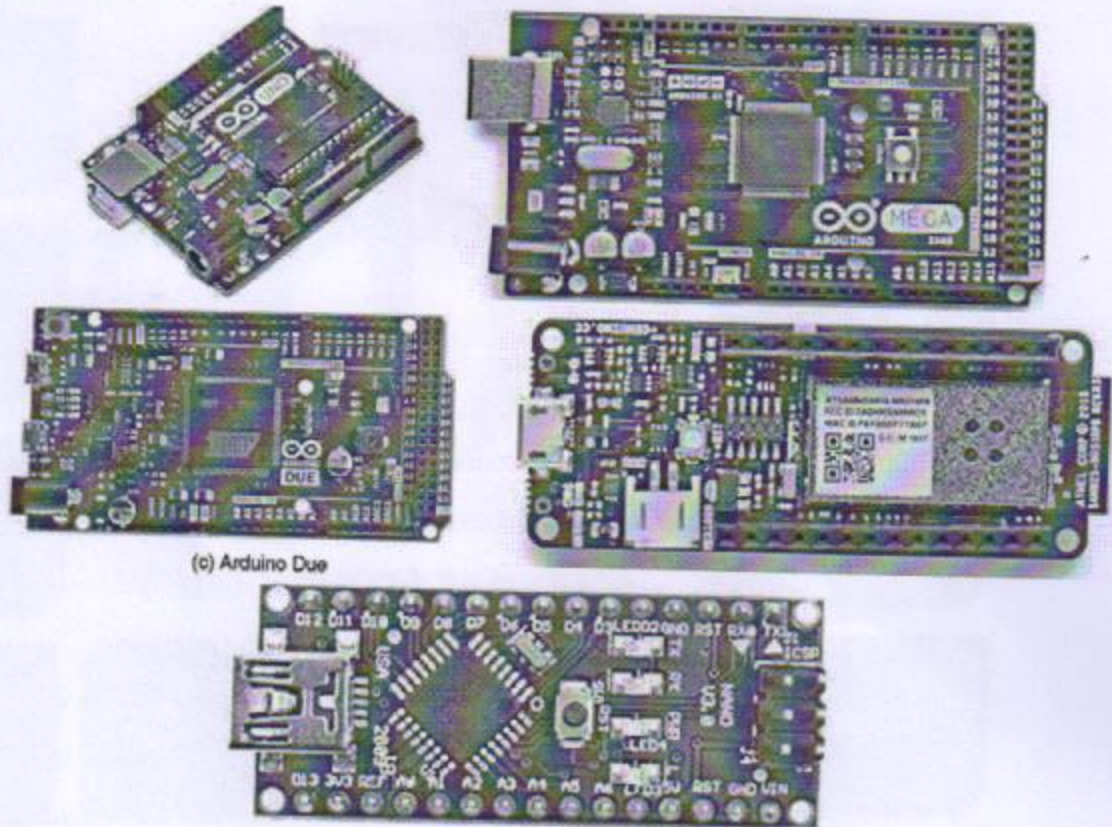
- Processing and memory/storage capacity.
- Power consumption.
- Size.
- Cost.
- Operating Systems and programming language.
- Connectivity and customizability of peripherals of hardware platforms.
- On-board sensors and hardware security features.



Lab Modules



Arduino Boards



(c) Arduino Due

Structure of an Arduino Program

- An arduino program == 'sketch'
 - Must have:
 - setup()
 - loop()
 - setup()
 - configures pin modes and registers
 - loop()
 - runs the main body of the program forever
 - like while(1) {...}
 - Where is main() ?
 - Arduino simplifies things
 - Does things for you

```
/* Blink - turns on an LED for DELAY_ON msec,
then off for DELAY_OFF msec, and repeats
BJ Furman rev. 1.1 Last rev: 22JAN2011
*/
#define LED_PIN 13 // LED on digital pin 13
#define DELAY_ON 1000
#define DELAY_OFF 1000

void setup()
{
  // initialize the digital pin as an output:
  pinMode(LED_PIN, OUTPUT);
}

// loop() method runs forever,
// as long as the Arduino has power

void loop()
{
  digitalWrite(LED_PIN, HIGH); // set the LED on
  delay(DELAY_ON); // wait for DELAY_ON msec
  digitalWrite(LED_PIN, LOW); // set the LED off
  delay(DELAY_OFF); // wait for DELAY_OFF msec
}
```

Meeting ID: 838 381 1234 5678

meet.google.com/dcn-ybka-vtb

REC Rajesh Sudi is presenting

Meeting details

People (29)

Chat

You 8:27 AM
No sir

Gowtham V 9:27 AM
No doubts sir

Gowtham V 9:30 AM
No doubts sir

Ravitej Jada 9:34 AM
No doubt Ma'am

Kavyas 10:17:00 9:55 AM
No doubts sir

Madhu Sree 9:56 AM
No doubts sir

Ravishankar Hota 9:58 AM
Thank you students

You 9:58 AM
Thank you sir

Send a message to everyone

10:09 24-10-2023

Meeting ID: 838 381 1234 5678

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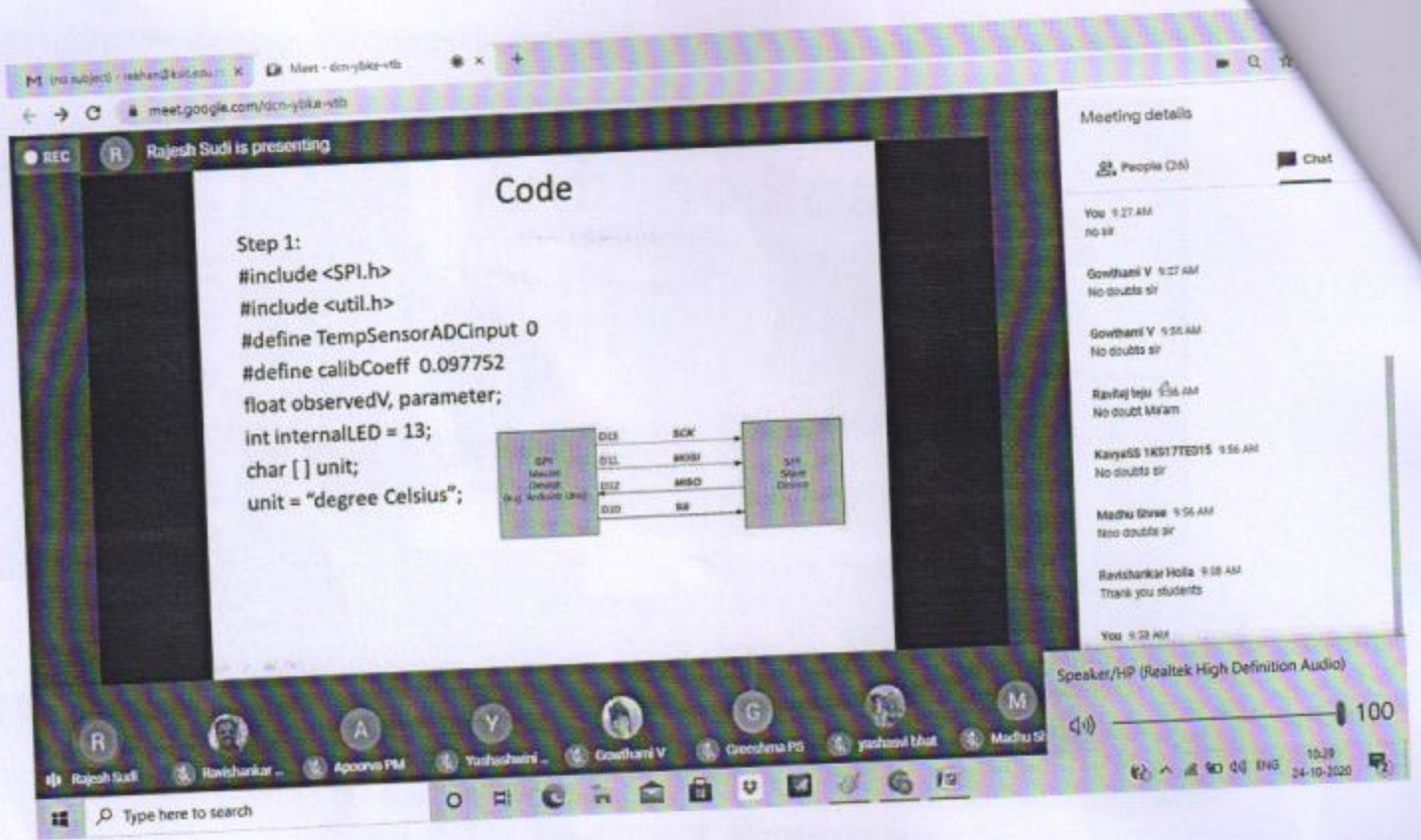
Madhu Sree 9:56 AM
No doubts sir

Ravishankar Hota 9:58 AM
Thank you students

You 9:58 AM
Thank you sir

Send a message to everyone

10:09 24-10-2023



On the whole the workshop was educative on both theoretical as well as Practical aspects. Overall 40 Students from seventh semester TCE were involved. The workshop was very helpful to all the students who are finding it difficult to decide on which programming courses to be taken up next for complex IoT design.

It also motivated students to learn new technologies and programming languages. All the students liked the session very much and are looking forward to many more like this.

The entire Department thank Principal and Management for supporting us throughout the event and making this event a successful one.

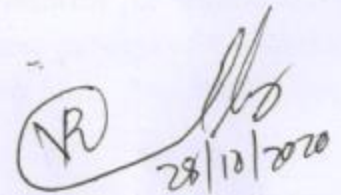
Mapping of workshop with PO'S and PSO'S

Program	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
workshop	2	2	3	2	2	-	-	-	-	2	-	2

- PO1: Students gained the knowledge of engineering fundamentals.
- PO2: Students can be able to analyze complex engineering problems.
- PO3: Students can be able to apply the knowledge in designing new IoT.
- PO4: Students can identify complex problems for research work.
- PO5: Students can utilize modern tools for research work.
- PO10: Students can communicate effectively by gaining knowledge.
- PO12: Students can apply the basic knowledge in lifelong learning of new programming languages.



Dr. Rekha N
Co-ordinator



28/10/2020

Dr. Chanda.V. Reddy
HOD

HEAD OF THE DEPARTMENT
Dept. of Telecommunication Engg
K. S. Institute of Technology
Bengaluru - 560 109

L. G. S.
29/10/2020.

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₹ 3,000

Paid to
Rajesh Sudi

IoT workshop



Paid ₹ 3,000

24 Oct 2020 • 4:51 PM



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sudi.rajesh@okhdfcbank

From: REKHA N (State Bank of India)
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