A REPORT ON
BASICS OF IoT WORKSHOP
HELD FROM 22nd OCTOBER TO 10th DECEMBER

Organized by:

Techwiki and Yantralaya club of IETE Student Forum,

Department of Electronics and Communication Engineering,

Gayatri Vidya Parishad College of Engineering(A),

Visakhapatnam-530048

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Approved by AICTE, New Delhi and Affiliated to JNTU-Kakinada
Re-accredited by NAAC with "A" Grade with a CGPA of 3.47/4.00
Madhurawada, Visakhapatnam - 530 048.

ABOUT IETE:

The Institution of Electronics and Telecommunication Engineers (IETE) was founded in 1953 and is one of the leading professional societies in India. IETE student forum of GVP consists of enthusiastic and talented students formed as a group, to upskill themselves through a series of events.

TECHWIKI AND YANTRALAYA CLUB:

As a part of life, communication is the one which makes the difference in our career. That can be achieved through presentations conducted by Techwiki. As a part of engineering, projects play a crucial role. So, Yantralaya is a platform to improve your technical skills

PROGRAM AGENDA:

In the present day, INTERNET OF THINGS(IoT) is one of the most dominant technologies. Lectures on BASICS OF IoT and introducing TINKERCAD software tool for designing circuits, is the main agenda of this workshop. This also includes the implementation in real life and gaining hands-on experience.

ABOUT SPEAKER:

The students from final year of ECE has come forward to share their knowledge in the IoT. K.BINDUMADHAVI(19131A0491),P.SAIMANOHAR(19131A04J4),G.PRAVEEN(19131 A0475),K.K.S.KESAVA(19131A04C6),P.I.SOUJANYA(19131A04J8),G.HARITHA(19131 A0471), K.PRIYA REDDY(19131A0488) and P. THRINADH SAI(19131A04J5).

ORGANIZING PLAN OF ACTION:

1.23rd September 2022:

☐ Volunteers from the Techwiki and Yantralaya clubs of the IETE Student Forum have developed several ideologies, such as teaching students how to use the tinkercad software tool and the basics of arduino board along with arduino related projects.

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2. 26th September 2022:

- We went to our faculty Smt. Dr. B. Keerthi Priya and Smt. U. Divya Sree to discuss our ideas. They responded positively and encouraged us to organize workshop on the topics of both the tinkercad software tool and the fundamentals of Arduino that we had proposed.

3. 27th September 2022:

- To organise the workshop, we split the tasks among ourselves and created a 5-day plan of action.

4. 29th September 2022:

- The plan of action was prepared, following the acceptance from Honourable HOD Dr. N. Deepika Rani and Professor Dr. N. Bala Subrahmanyam under the guidance of faculty coordinators Smt. Dr. B. Keerthi Priya and Smt. U. Divya Sree.

4. 30th September 2022:

- After verification of all details the acceptance from Honourable HOD Dr. N. Deepika Rani was obtained.

5. 4th December 2022:

- We have designed the Brochure of IoT workshop. The brochure contains all the details of workshop and Registration process to workshop.

6. 7th December 2022:

- The designed brochure was launched and a campaign was taken place to acknowledge the students of ECE about the workshop.

7. 8th December 2022:

- A google form link has been generated and students are directed to fill out the form.

8. 10th December 2022:

- The responses were kept open for two days. After two days the responses have been closed. A total of 200 responses were received.
- The total registered students have been divided into two batches.
- All the registered students were asked to join the WhatsApp group and all the details regarding events have been posted in that group.

9. 22nd December 2022:
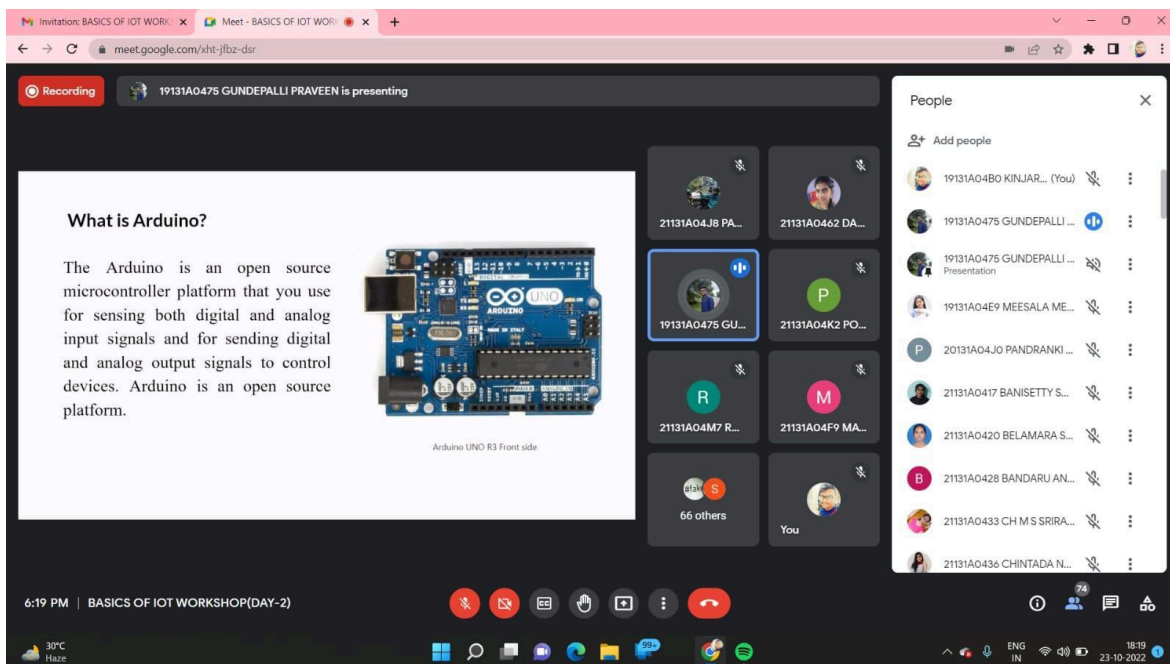
☐ The Workshop on Basics of IoT has started.

Day 1:

On the first day of workshop, definition of IoT, the need and scope was explained by discussing some of the examples and along with sensor, actuators, transducers and their working was introduced.
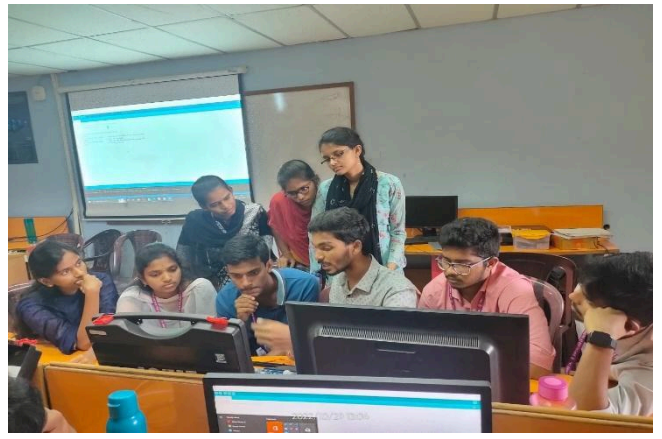

Day 2:

Difference between microcontroller and microprocessor, Arduino microcontroller basic diagram, interfacing of Arduino, types of Arduino models and introduction to shields and their applications using Arduino were introduced. Besides, installation of ARDUINO IDE and basic programs such as blinking LED were explained. The session was taken in online mode.

Day 3:

Software tool TINKERCAD was introduced. This included the account creation and while

implementing the circuit the coding part and the functions involved in such as void loop, void setup etc. were discussed in detail. After acknowledgement about the software tool, Hardware projects like LED blinking, Servo Motor, Stepper Motor, Ultrasonic Sensor were designed.

Day 4:

The approach for building Arduino code in Tinkercad has been discussed in this session. The technique for handling a real-world project has been detailed, and even a few different topics related to Arduino programming have been taught. Even the method for handling complicated coding for real-world applications has been addressed.

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Day 5:

The projects had been reviewed during this session. The projects that students do in groups were reviewed with the assistance of mentors. The same timetable is performed for the other batch since there are two batches.

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SUMMARY:

In total, 35 batches consisting of 168 students were participated in the workshop "Basics of IoT" and completed the workshop successfully. Speakers were actively engaged listeners and provided many insights on IoT. As students progressed through the series of days of events, they learned more about IoT. Simultaneously, they also had hands-on experience with simulations. The workshop was deemed useful for students in their future careers as well. The ISF team is grateful to the principal and management for their timely advice and cooperative efforts, as well as for the ease with which the event was hosted.

EVENT	DETAILS
Event Date	22nd October 2022 to 10th December 2022
Organized By	Techwiki and Yantralaya club of IETE Student Forum (ISF), Electronics and Communications Engineering, GVPCOE(A)
Teams	Designing Team Technical Team Marketing & Promotions Team Editorial & Documentation Team
Faculty Coordinators	Smt. Dr. B. Keerthi Priya (Assistant Professor, Department of ECE) Smt. U. Divya Sree (Assistant Professor, Department of ECE)
Student Coordinators	K. Durga Prasad (President T&Y) G. Praveen (Secretary T&Y) M. Jaswanth Naidu (Vice President T&Y) M. Meghana Krishna Sai (Vice President T&Y)