



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



### REPORT ON “One Day workshop on Arduino based Circuit Design”

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|---------------------------|---|--|
| Event Type                | : | Workshop   |
| Date / Duration           | : | 08-10-2021 /One day  |
| Resource Person           | : | Mr.C.Sudhakar Reddy – SRC e solutions  |
| Name of Coordinator       | : | Dr.G.L.N.Murthy  |
| Target Audience           | : | V Semester B.Tech Students   |
| Total no of Participants: | : | V Semester Students-60 Nos.  |
| Objective of the event:   | : | To expose the students to the circuit design environment using Arduino   |
| Outcome of event          | : | By attending the workshop, the students can be able to do Mini as well as major projects, as part of the curriculum. Further, the students will gain knowledge on hardware design related issues that enables them to face interviews confidently. |

#### **Description / Report on Event:**

The one day workshop began with inaugural address by Dr.Y.Amar babu, Head , Department of ECE ,who highlighted the need for getting exposed to latest advancements. The students were told that Reconfigurable Computing Club , the department technical club is organizing various events periodically for exposing the students to latest trends. It was mentioned that either for completing mini or major projects as well as for facing the placement interviews effectively, the students should always get themselves get equipped with latest trends. In particular, even after the completion of the B.Tech programme, the need to deliberate their project on various platforms. It was also suggested not to restrict their projects to simulation levels but to develop working models using hard ware. All the students are advised to actively participate in such events and enhance their skills. In the morning session, resource

person Mr.C. Sudhakar Reddy presented the need for getting exposed to Arduino Platform and asked the students to involve and practice the concepts..

All the students were explained about the basics of embedded systems and its role in solving the real time problems. It was told that with the advent of Internet of things, more areas have under the umbrella of providing solutions to real time issues. This was followed by explaining the students about the differences between a microprocessor and micro controller. Later the basics of Arduino were explained to students. It was told that Arduino is an open source hardware and software platform to develop kits for digital devices. Arduino board designs use a variety of microprocessors and controllers. The boards are equipped with sets of digital and analog input/output (I/O) pins that may be interfaced to various expansion boards ('shields') or breadboards (for prototyping) and other circuits. The boards feature serial communications interfaces, including Universal Serial Bus (USB) on some models, which are also used for loading programs. After the theoretical introduction is over, basic programs to work with Arduino were explained.

In the afternoon session, the students were taken to Systems and Signal Processing laboratory where they have simulated the circuits. Upon completion of the simulation, students are given Arduino boards and asked to implement the same. Mr.M.Chaitanya sai from SRC e-solutions assisted the students in the process.

#### **Feedback / Suggestions:**

1. Duration less and better if it could be more than one day
2. Better to provide individual kits
3. More interaction needed
4. Laboratory sessions should be more effectively dealt by allocation more than a single faculty
5. More applications should be dealt with.

#### **Comments on feedback:**

1. The main objective of the workshop is to introduce the student about the Arduino environment. Being in third year, they should be able to transform the knowledge gained for implementing mini projects. As the Arduino is an open source platform, it will not be difficult to develop circuits later with the help of faculty members.
2. Providing individual kits is expensive to students towards registration fee as the organization with which the event is carried out need to bring more number of kits.
3. When the workshop is organized next time, more number of supporting staff or the faculty members will be made available as the students want to solve more and more practice.

4. Arduino has a broad scope and implementing more or all applications is not possible in one or two days. The students need to get the basic knowledge and practice their individual mini or major projects.

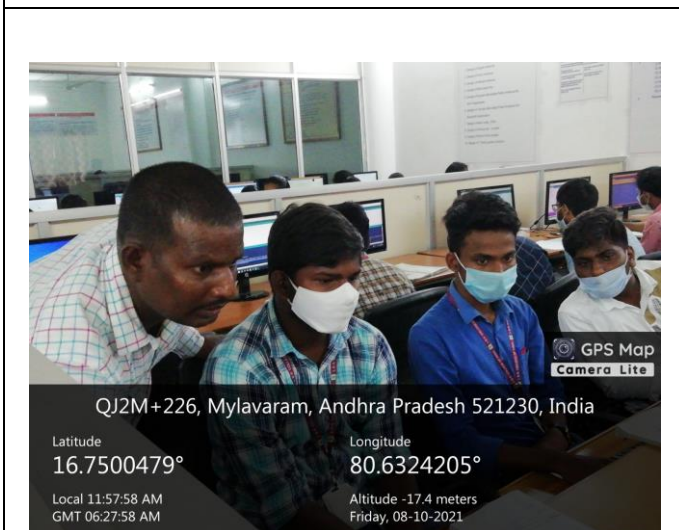
**Photographs :**



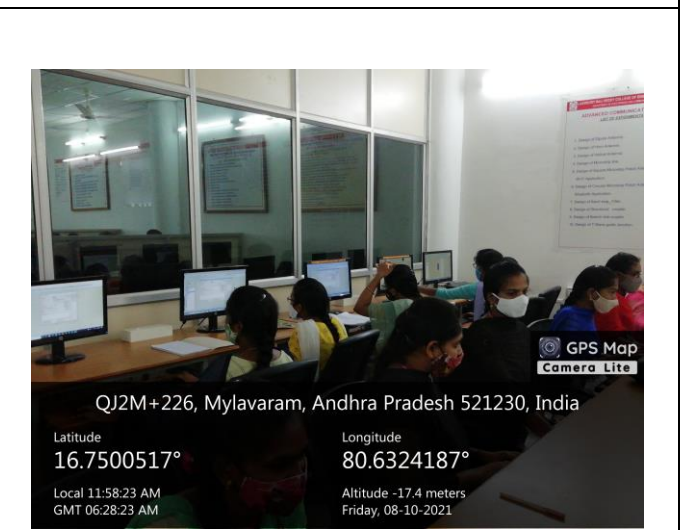
Addressing by Dr.Y.Amar Babu,  
Head , Department of ECE



Addressing by Sri.C.Sudhakar Reddy, SRC  
e solutions, Vijayawada



Hands on sessions in SSP lab assisted by  
Sri.C.Sudhakar Reddy



Students practicing the programming part in SSP lab