



(Approved by AICTE, New Delhi, Affiliated to JNTU Kakinada)

Work shop Report

DATE : 14th to 16th December 2017

VENUE : E-CAD LAB

ORGANIZED BY : ECE dept., EEE Dept. And APSSDC

FACULTY INCHARGE: Mr.E. Venkata Narayana



EVENT DESCRIPTION:

The ECE department and EEE department in association with **Andhra Pradesh State Skill Development Corporation** conducted a three day event **“Hands On workshop Embedded Systems fundamentals for basic Microcontroller 8051 and Arduino”** on 14th December 2017 to 16th December 2017 in the E-CAD Lab. This program is targeted to Electronics students with some knowledge on Embedded Systems Concepts and Microcontrollers. This course is based on the Arduino Nano board and its implementation using Arduino IDE.



About APSSDC

Andhra Pradesh State Skill Development Corporation (APSSDC) is a unique organization formed as a Public–Private Partnership (PPP) corporation to promote skill-development & entrepreneurship in the state of Andhra Pradesh. The objective of APSSDC is To Implement a structured and pragmatic solution to skill and upskill the workforce in the state of A.P. and to increase employability, and promote entrepreneurship in sync with Industrial growth of the State.

SESSION ACTIVITIES:

As per the given instructions by the Principal faculty in charge **Mr. E.V.Narayana** made proper arrangements for the work shop. **Mr.G. Chandra Shekar Babu ,Mr.Sk.Zubear, C.Vijay Kumar, J.Siva Nagaraju and U.Samanth** are Resource persons for the work shop. Exactly at 10.00 AM the workshop is started by is APSSDC members with the explanation of Embedded system. Total 150 students participate in the workshop. They explained how Arduino is better compared to Micro Controller.

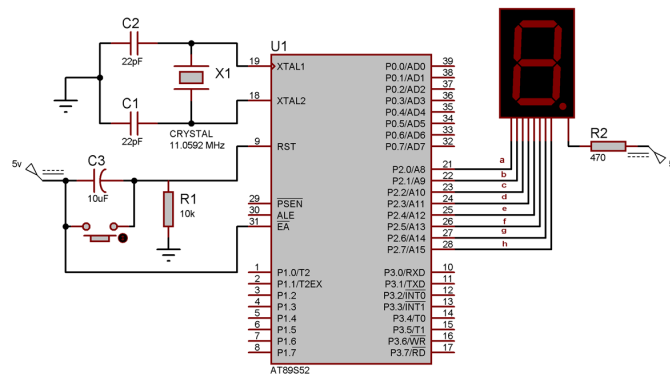
The basic objective of the program is

- To gain the Hands-on workshop
- To improve the Ideas on ES projects
- To enhance Employability Skills

Day 01 (14th December 2017)

On first day the resource person shared the knowledge on embedded system. He explained “An embedded system is some combination of computer hardware and software, either fixed in capability or programmable, that is designed for a specific function or for specific functions within a larger system. Industrial machines, agricultural and process industry devices, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines and toys as well as mobile devices are all possible locations for an embedded system.”

On first day few programs are implemented with the Keil software like LED display , Blinking of LEDs, Seven segment display etc.....

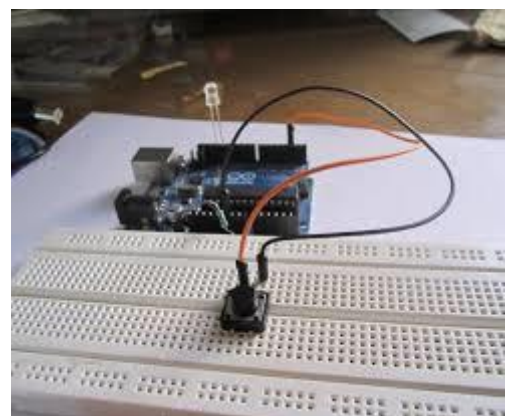


Day 02 (15th December 2017)

The resource person said “Arduino is an open source computer hardware and software company, project, and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world”

On the second the following contents are discussed with hands on experience

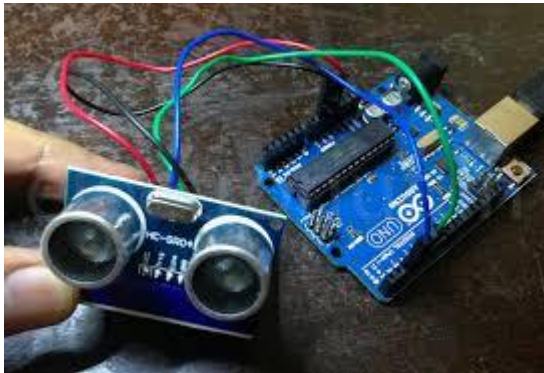
- Arduino Programming
- Introduction to Digital Pins & Inputs- LED Based Projects.
- Interfacing of switches with Arduino
- LCD Based Projects
- Motor Based Projects



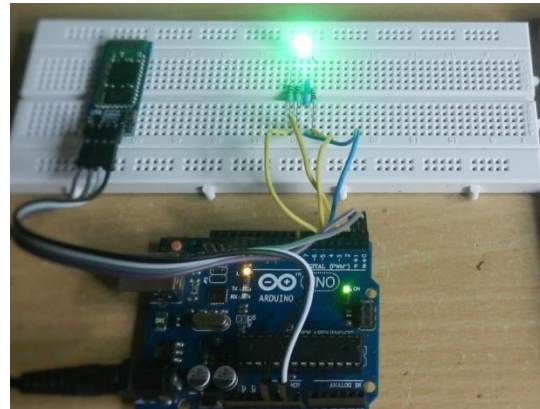
Day 03 (16th December 2017)

On the third day the APSSDC members more concentrated on sensor based projects. The explained the Interfacing of Sensors in real time. The third day provides better view on programming aspects of Arduino Microcontrollers. Students actively Participated in this session. The following Projects are implemented using Arduino

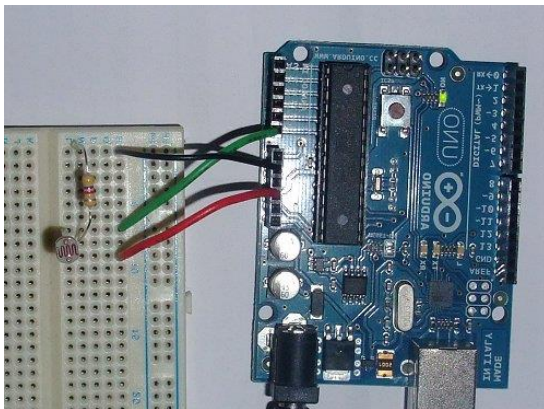
- Interfacing of sensors with Arduino- LDR,
- Interfacing of sensors with Arduino- Humidity sensor,
- Interfacing of sensors with Arduino- IR sensor,
- Interfacing of sensors with Arduino- Ultrasonic sensor
- Interfacing of RGB LED with Bluetooth



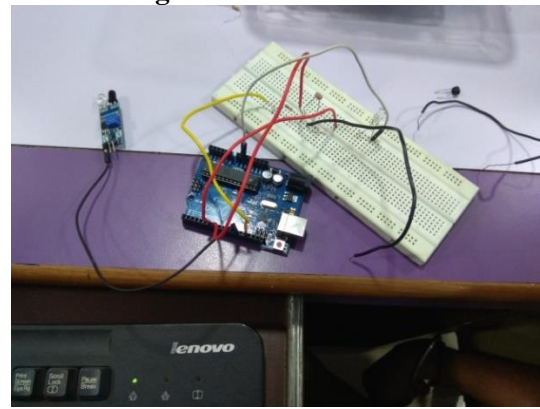
Interfacing of Ultra Sonic sensors with Arduino



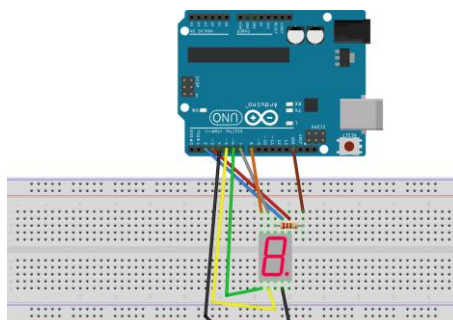
Interfacing of RGB LED with Arduino



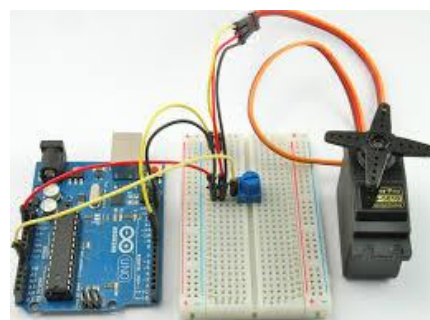
Interfacing of LDR with Arduino



Interfacing of IR sensors with Arduino



Interfacing of 7 Segment display with Arduino



Interfacing of Servo motor with Arduino

With the great patience all the APSSDC members explained each and every line of programs. They explained the programs and implementation parallel. So many students got the attention to implement the interfacing of sensors with Arduino. Many Students said “I like the Work shop” due to the inspiration. They expressed thanks to the management of APSSDC and KITS College who permitted them to participate in the workshop. After the examination the workshop ended with National Anthem.

Photos:

