KINGS
COLLEGE OF ENGINEERING
Recognised under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.

B++ NAAC

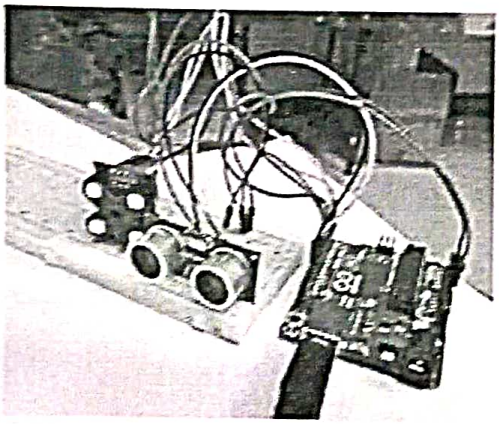
A REPORT

on

Two Day National Level Workshop on

"Real Time Project Design using arduino"

23rd February 2023 & 24th February 2023.



organized by

Department of Electronics and Communication Engineering

in Association with

IEEE Student Branch – STB16621

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

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ABOUT THE WORKSHOP:

The two day National Level Workshop on "Real Time Project Design using Arduino" was organized for the benefit of students community those who are interested to implement their innovative ideas using the arduino Kit. The workshop conducted from 23rd February & 24th February. Totally 56 students have enthusiastically participated in this workshop.

The workshop started with Tamil Thaai Vaalthu. Ms.U.Jeyamalar, Assistant Professor / ECE welcomes the gathering. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the Inaugural address. In her speech, she motivates the students towards innovation and how the workshop helps the students to do their ideas in implementation. Ms. K.Jayashree, III year ECE, introduced the Resource persons. The resource person details were as follows:

Day-1-Session -1 : Mr.P.Raja Pirian, Assistant Professor, Kings College of Engineering.

Day-1-Session -2 : Mr.T.Pasupathi , Assistant Professor, Kings College of Engineering.

Day-2-Session -3 : Dr.P.Narasimman, Assistant Professor, Kings College of Engineering.

Day-2–Session-4 : Mr.T.Jeyaseelan, Assistant Professor, Kings College of Engineering.

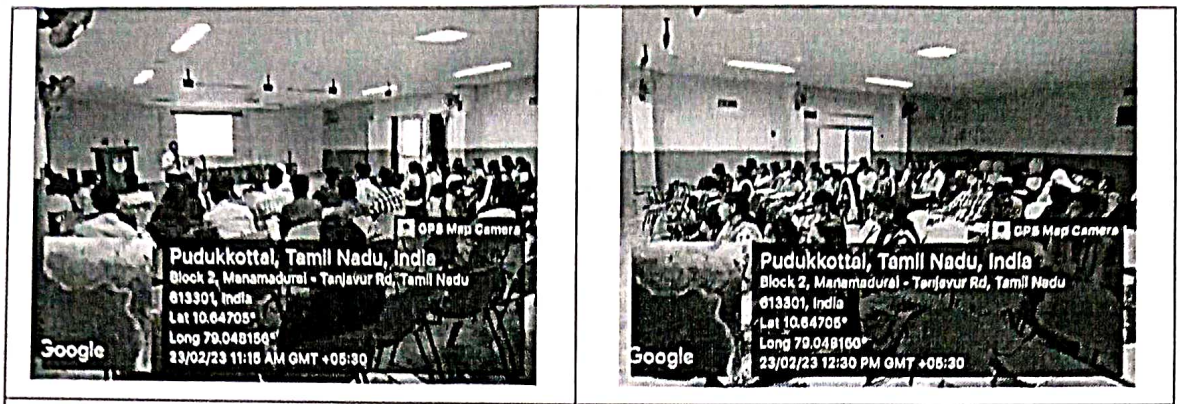
Welcome Address by Mrs.U.Jeyamalar Assistant Professor/ECE

Inaugural address Delivered by Mrs.N.Mangaiyarkarasi, HOD/ECE

OBJECTIVE:

The main objective of this workshop is to train the students to do simple projects by interfacing LED's, Switches, Stepper motor and various sensors with arduino kit and programming to do various functionalities.

DAY 1 - Session 1: The resource person Mr.P.Raja Pirian, Assistant Professor/ECE presented a brief technical note on the fundamentals of embedded system, features of Microprocessors, Microcontrollers and interfacing devices. He also explained how to develop applications in the industry based on embedded system. During the session, he demonstrated how arduino development platform is used for a typical embedded application. From the session the students have learned how to implement their ideas into projects in a simplest way of using arduino.

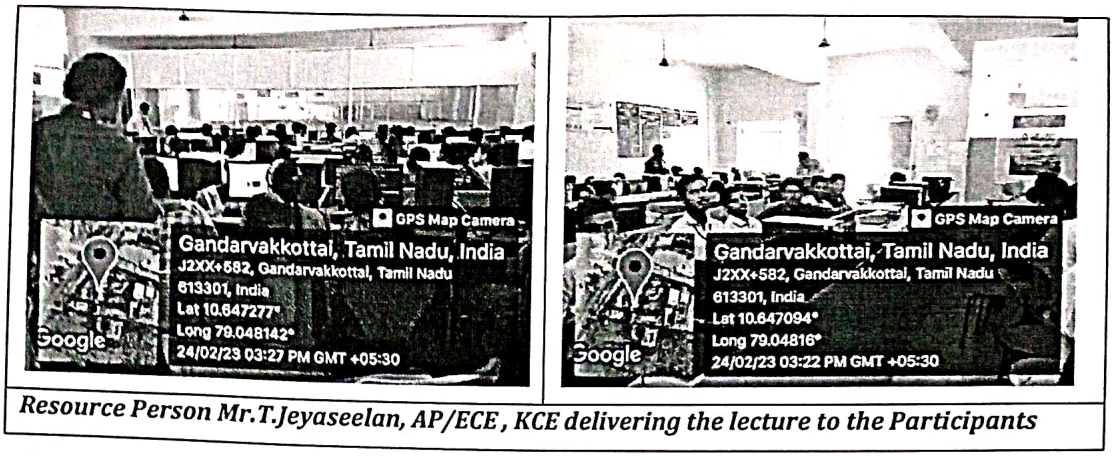


Resource Person Mr.P.Raja Pirian, AP/ECE , KCE delivering the lecture to the Participants

DAY 1 - Session 2: The resource person Mr.T.Pasupatthi, Assistant Professor/ ECE, delivered a complete description about the arduino pin configuration, architecture and interfacing methods. He explained various blocks in the arduino development kit, he also trained the students about embedded C Programming using arduino IDE, which is freely available for the students. The session continues with hands on mode, the students are formed with small groups and were trained to do simple projects like LED interfacing, buzzer interfacing and switch interfacing. The participants actively performed their assigned work in an enthusiastic manner.

Resource Person Mr.T.Pasupathi, AP/ECE , KCE delivering the lecture to the Participants

DAY 2 - Session 3: Mr.T.Jeyaseelan, Assistant Professor/ECE, demonstrate the students with LCD interfacing. He takes 2 x 16 LCD and explains the pin details and interfacing methodology and also trained the students, how to read temperature and humidity data from DHT11 sensor and display the sensor data's in the LCD display. In this session students had shown their interest to get the data from the sensor given to them and displayed the values in the LCD display. Finally he demonstrated how analog to digital data conversion is used in temperature and humidity monitoring applications.

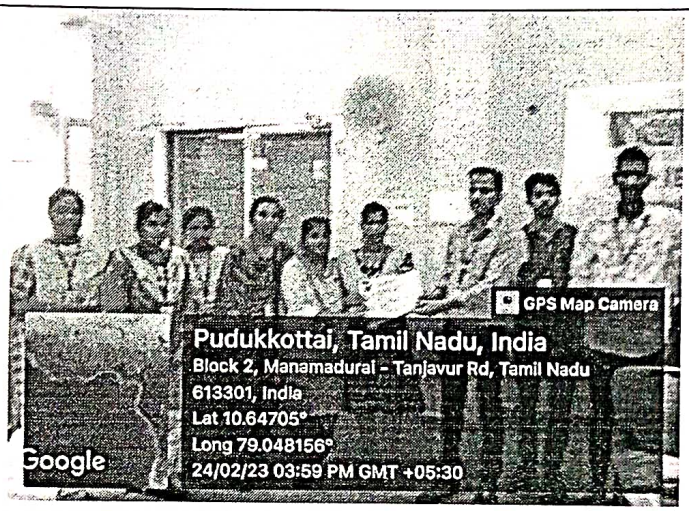


Resource Person Mr.T.Jeyaseelan, AP/ECE , KCE delivering the lecture to the Participants

DAY 2 - Session 4: Dr.P.Narasasimman, Assistant Professor /EEE, delivered about the wireless connectivity interface for arduino. He explained the pin details of ESP8266 and the specifications of wifi module. During this session he created a small android based application and demonstrated the on and off control of LED and motor. Finally he outlined typical project ideas and explained the methods for implementing these ideas. The students were interactive during the sessions and asked their queries.

Resource Person Dr.P.Narasimman, AP/EEE , KCE delivering the lecture to the Participants

Finally the session ends with valedictory. Mrs.U.Jeyamalar, Assistant Professor / ECE, delivered the Vote of Thanks. The certificates were distributed by Mrs.N.Mangaiyarkarasi, HoD/ECE. Thus the workshop was successfully ended.



Certificate Distribution

Outcomes:

At the end of this workshop the students can able to

- Gained more knowledge on Arduino components and IDE.
- Do the small projects based on Embedded C Programming.
- Interfacing their projects using Analog and digital converter.
- Interfacing with sensor and wireless connectivity to arduino.
- Design the Mini projects using arduino.

1. 15/3/23 2. 15/3/23
Coordinator(s)

15/3/2023
HOD/ECE

15/3/20
PRINCIPAL

Annexure: I (Brochure)

Chief Patron

Dr. R.Rajendren,
Secretary

Mr.T.R.S.Muthukumaar,
CEO.

Patron
Dr.J.Arputha Vijaya Selvi,
Principal

Convener
Mrs.N.Mangaiyarkarasi,
HOD/ECE

Coordinators
1. Mr.P.Raja Pirian, AP/ECE
2. Mrs.U.Jeyamalar, AP/ECE

For Queries: 9994009225

REGISTRATION:

Participants are requested to apply via online using the link or QR code given below. Registration fee includes workshop kit, lunch and refreshment.

REGISTRATION LINK:
https://shorturl.ac/kingsarduino

IMPORTANT DATE :
Last date for Registration : 21-02-2023

FEE DETAILS :
Registration Fee : Rs. 600/-
(GPay No : 9994009225)

ADDRESS FOR COMMUNICATION :

Kings College of Engineering,
Department of ECE,
Punalkulam, Gandarvakkottai Taluk,
Pudukkottai Dist.
Pin-613 303,
TamilNadu.

KINGS COLLEGE OF ENGINEERING

IEEE STB16521

Two Day National Level Workshop on " Real Time Project Design Using Arduino"

on

23-02-2023 & 24-02-2023

Organised by

Department of
Electronics & Communication Engineering
Kings College of Engineering ,
Punalkulam,
Near Thanjavur,
Tamilnadu.

ABOUT OUR INSTITUTION:

Kings College of Engineering (KCE) was born out of a dream and vision to provide education with unparallel quality to the young and enthusiastic students of our nation. The College is approved by AICTE, New Delhi and affiliated to Anna University, Chennai and accredited by NAAC. The drives from our management and dedication of the faculty have seen KCE to rise to the status as one of the most prestigious institutions in this part of the country.

KCE, run by Raj Educational Trust (RET), Chennai, is a fast growing technical institution in the state of Tamil Nadu with a great promise to cater the educational demands of engineering aspirants in and around Thanjavur from 2001. Our institution offers five UG programmes namely CIVIL, CSE, ECE, EEE and Mechanical Engineering and four PG programmes namely CSE, VLSI Design, PED and Thermal Engineering. Department of ECE and Mechanical Engineering are have approved research centers for pursuing research (Ph.D) under Anna University.

ABOUT THE DEPARTMENT:

The Department was established in the year 2001. The academic activities of the department encompass practically all major sub-disciplines of Electronics and Communication Engineering. The department offers B.E degree in Electronics and Communication Engineering with an intake of 120 students per year and M.E in VLSI Design. Department is an approved research centre for pursuing Ph.D. under Anna University, Chennai.

The department is being driven jointly by dedicated staff and interested students towards achieving center of excellence on VLSI and Communication. Further, the department has been sanctioned with several research projects from government and non-government funding sectors namely, MC & IT-New Delhi, DRDO- New Delhi, AICTE- New Delhi, Texas Instruments-USA, TNSCST-Chennai and etc.

International conference, Faculty Development Programmes, Value Added Courses, seminars, visiting faculty talks and etc., are organized periodically towards knowledge exchange and skilled human resource development under ECE community network. Department also conducts workshops and symposia regularly for improving the teaching and learning process. Students are exposed to best learning environment and provided with in-depth knowledge to make them competitive and industry ready.

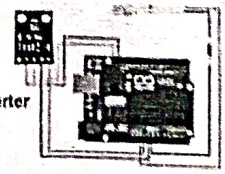
ABOUT THE WORKSHOP

Arduino is an open source platform used for building electronic projects. Arduino consists of both a physical programmable circuit board or microcontroller and a software, IDE (Integrated Development Environment) that runs on the computer. It is used to write and upload computer code to the physical board.

Day 1:
Forenoon Session :
- Introduction to Arduino
- Arduino components and IDE

Afternoon Session :
- Introduction to Arduino Program
- Arduino with Tricolor LED and Push button
- Display & counter using Arduino
- Seven Segment Display
- Pulse Width Modulation

Day 2 :
Forenoon Session :
- Arduino with LCD
- Analog Digital Converter
- Sensor Interfacing



Afternoon Session :
- Wireless connectivity to Arduino
- Mini Project Design Using Arduino

RESOURCE PERSONS

Mr.P.Raja Pirian
Assistant Professor /ECE

Mr.T.Jeyaseelan
Assistant Professor /ECE

Mr.T.Pasupathi
Assistant Professor /ECE

Dr.P.Narasimman
Assistant Professor /EEE

Technical Partner

Armada Industrial Automation
Thanjavur,