Report

On

"Introduction to Arduino and Raspberry PI microcontroller and their application"

Workshop

23rd July 2016

Organized by

Prarambh Club

G.H. PATEL COLLEGE OF ENGINEERING & TECHNOLOGY

(A CHARUTAR VIDYA MANDAL INSTITUTION)

Faculty Convener (Prarambh):

Prof. Saurin Sheth

Faculty Coordinator (Prarambh, EC Dept):
Prof. Arpan Desai

Prof. Parthesh Mankodi

⬍ About Prarambh:

PRARAMBH, The GCET Project Club working under the roof of GCET was started on 18th July, 2007. The main aim of PRARAMBH is to provide technical guidance to students for participating in various technical events. Prarambh has helped students to participate in various events and tech fest at Zonal and National levels. Prarambh club is conducting technical workshops, expert talks, skill development programs and seminars on regular basis throughout the semester for overall development of students in technical domain.

⬍ About the Workshop:

The objective of the workshop was to introduce **2nd year students of EC, MC, IT, CP, EE** branches to the microcontrollers (such as **Arduino and Raspberry PI**) and to give them a brief about Arduino/Raspberry PI along with their applications which can help them in design engineering related projects.

The speakers who delivered the lecture in workshop were the students from 4th year EC and MC department:

Bharat Mundhara, EC department
Shivang Patel, MC department

- **Session 1:**

Speaker: **Bharat Mundhara**

Topic covered: Introduction and application of Arduino

The session was conducted from 2:30 pm to 4:10 pm which mainly focused on basics and prerequisites to work with an Arduino board. The difference between microprocessor and microcontroller, major advantages/disadvantages of both, Arduino programming followed by applications of the same in various areas was discussed. It included demonstration of interfacing various sensors with Arduino, introduction to various electronic sensors, related to robotics and electronics, available in market. The Arduino IDE, its structure and how to program in this environment was briefed to the students.

Between both sessions, students were provided with refreshment and students were given time to interact with speakers where they got guidance for future projects using this board.

- **Session 2:**

Speaker: **Shivang Patel**

Topic covered: Introduction and application of Raspberry PI

The session was from 4:30 to 6. In this session, selection of which controller to use from Raspberry PI's family according to their usage was taught. Overview was given for the different boards of PI's family, their advantages and disadvantages, operating system, applications of microcontroller in IoT and projects which can be done using Raspberry PI.

After the sessions were over, a general question and answer session was kept for students to ask questions and to solve their doubts regarding the microcontrollers. Feedback was taken from students regarding future workshops which can be helpful to them. The workshop was concluded by Prof. Saurin Sheth.

Student Coordinators:

- Chintan Kathrecha, MC Dept
- Bharat Mundhara, EC Dept
- Shivang Patel, MC Dept
- Subham Sutaria, MC Dept
- Nirmal Dawda, MC Dept