Report on Robo Feast (Raspberry-Pi)Workshop 2016

(Even Sem 2015-16)

Krishna Engineering College was the Zonal Centre of Raspberry-Pi Workshop. It Is a National Level Workshops cum Championship with different development platforms jointly being organized by ***Revert Technology Pvt. Ltd. & The Entrepreneurship Development Cell of IIT-Roorkee***. Two researchers **Mr. N.Sundaresan** and **Mr. Pankaj** were invited for the purpose from Revert Technology Pvt. Ltd .This workshop was organised by the **ECE department** in P2P Hall on 20th and 21st February for all branches and colleges. **Dr. A N Mishra** (HOD) , **Mrs. Renu Dubey** (AP ECE Dept.) and **Mr. Ajay Kumar** (AP ECE Dept.) were the coordinators for the workshop. And student coordinators were **Mr. Ankit Sharma**, **Mr. Chakshu Sharma** and **Mr. Vidit Kumar**.

It was a **two day** workshop and the purpose was to make the students what basically is **Raspberry Pi**, how it can change the modern day computer system, what all are the developments that are been taking place in this field.

The schedule of the workshop is that, in two days the **1st day** will be devoted to introduce the topic to the students and **2nd day** will be the practical day where the students will be making some real time project on Raspberry Pi.

DAY-1

On the first day of the workshop the students were taught the introduction to Microcontroller, Introduction to programming, Introduction to Python programming language. There were several topics which were covered inside the main topics stated above & those are as follows:-

Introduction to Microcontroller

- Difference between Microcontroller & Microprocessor
- Introduction to Raspberry Pi
- Architecture to ARM
- GPIOs

Introduction to Programming

- Introduction to Scratch Programming
- History & basic of Scratch
- My First Program on Scratch
- LED blinking using Scratch

Introduction to Python programming language

- History & basic of Python

- H&s on coding of Python

Students were divided in to groups of 4. Day 1 of the workshop was focused on the theoretical aspect of the Raspberry Pi. Also the basic concept of electronics & coding language were given importance as well. The students were briefly explained about the latest technology that is been developing around Raspberry Pi. Students were provided with the Raspberry Pi kit by **Mr. N.Sundaresan** and **Mr. Pankaj**.

DAY-2

Day 2 session was included with the practical utilization of the Raspberry Pi kit. Students were taught the technical part of the Raspberry Pi & also the made live real time projects on Raspberry Pi. Following are the events that occurred on second day:-

H&s-on session

- Setting up Raspberry Pi
- Flashing the SD card with the OS
- Booting the OS
- Introduction of items on the desktop (Debian Linux/Wheezy)
- Enabling GPIO pins
- LED interfacing using the GPIO

Interrupts

- Interrupt concept
- NVIC on Arm Cortex M4
- Edge triggered &SysTick Interrupt
- Writing Interrupt Service Routine

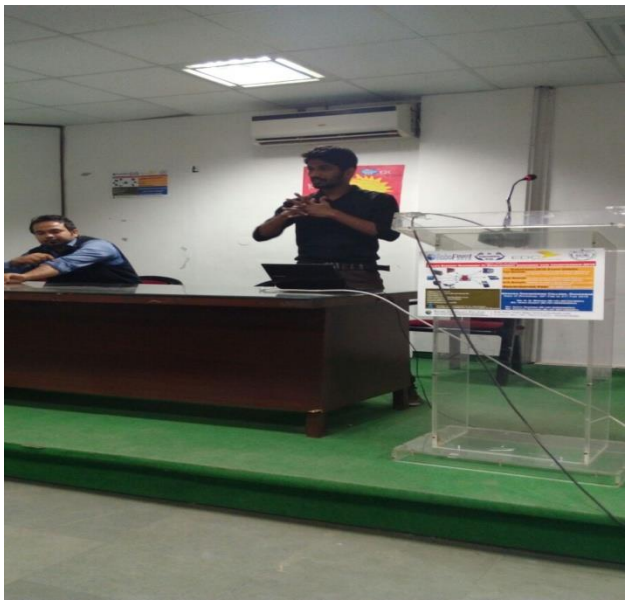
External peripheral interface programming

- Programming for on board RGB(tri-color) LED & Switches
- LED & Switches Interface using Breadboard

Ms. RENU DUBEY

Hod ECE:-

Director:-




Introduction to Raspberry pi
(RPi)