KINGS COLLEGE OF ENGINEERING
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B++ NAAC

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2022-23 EVEN
Internal Seminar– Report

Title of the seminar : "System Design Using Microcontroller"

Date : 01.04.2023

Resource Person : Mr.S.R.Karthikeyan, AP/EEE, KCE

Beneficiaries : II-EEE - 26

Venue :135 - EEE Smart Classroom

The Department of EEE organized an Internal Seminar on **"**System Design Using Microcontroller**"** for second year EEE students on 01.04.2023. The main objective of the internal seminar is:

- To impart knowledge to students on the basics of microcontroller.
- To provide adequate knowledge on various processors and its applications in different domains of Engineering.
- To facilitate the use of system design in their final year projects and seminar presentations.

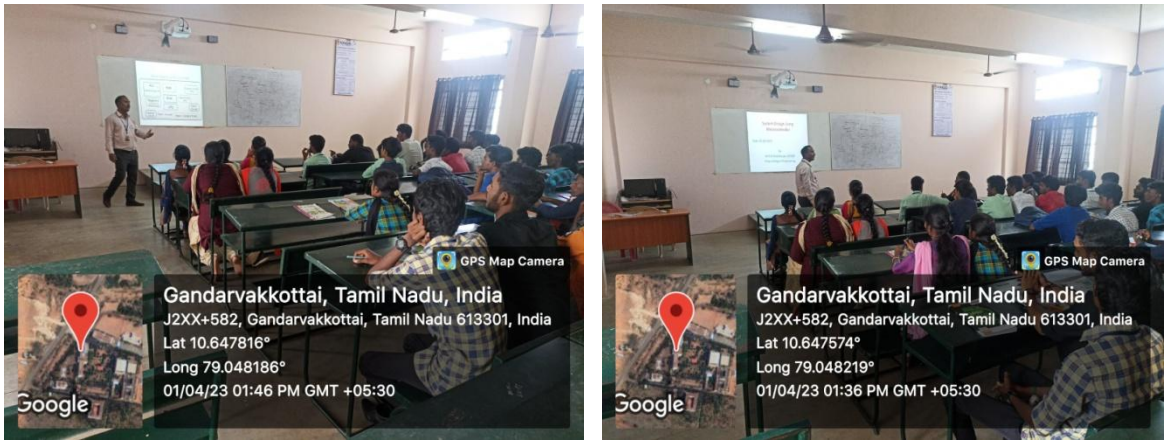
The following points were discussed during the session:

- Different types of Microcontroller Programming used in Embedded Systems
    - PIC Microcontroller
    - ARM Microcontroller
    - 8051 Microcontroller
    - AVR Microcontroller
    - MSP Microcontroller
- The microcontroller must also satisfy the five basic elements of input, calculation, storage, output, and control. These are called five elements of microcontrollers.
- Comparison of PIC and 8051 microcontrollers.
- Various series and version of PIC microcontroller.
- System development life cycle.
- Comparison of harvard and von neumann architecture.

- Examples of Microcontroller
    - Altera.
    - Analog Devices.
    - Atmel.
    - Espressif Systems.
    - Freescale Semiconductor.
    - Cypress Semiconductor.
    - ELAN Microelectronics Corp.
    - EPSON Semiconductor
- Designing a Microcontroller Development Board
    - Step 1: Think About Component Packaging
    - Step 2: Choose Your Microcontroller
    - Step 3: Choose Your USB to Serial Converter
    - Step 4: Choose Your Regulator
    - Step 5: Choose Your Power OR-ing Scheme
    - Step 6: Choose Your Peripheral Chips (if Any)
    - Step 7: Circuit Design

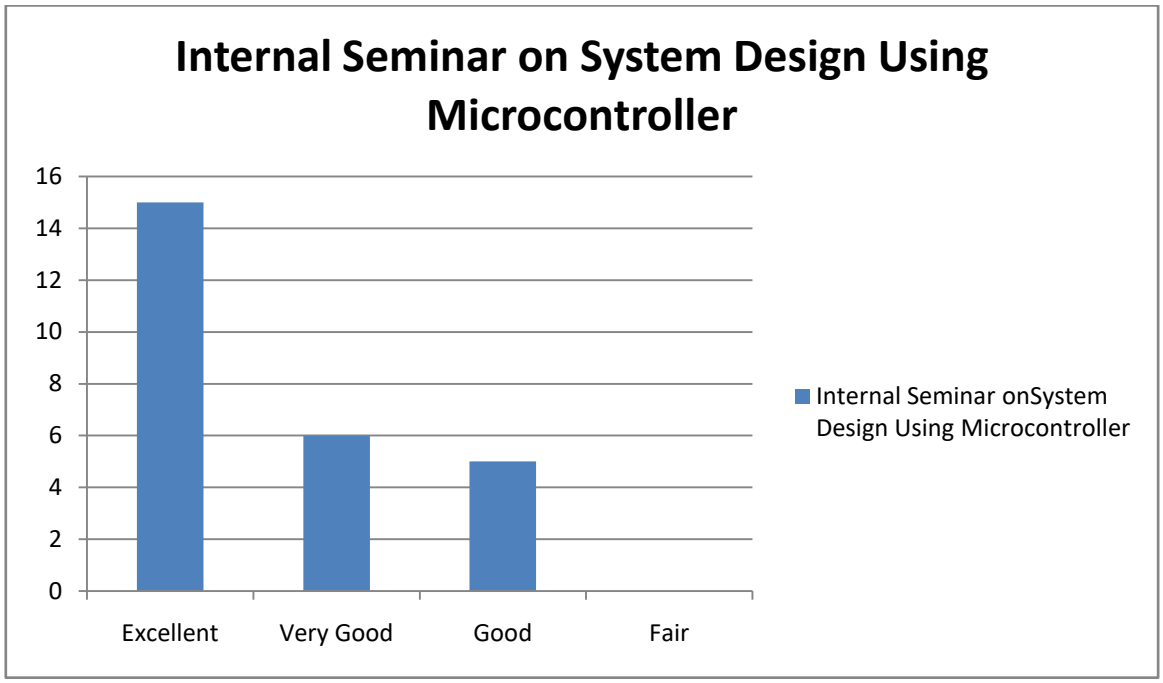
Outcome:

- Students can realize the impact of different processors in our real life.
- Students can understand the importance of microcontrollers in recent technologies.
- Students can select controller for their project work.



Snapshot from Seminar

Feedback Analysis:



References:

[1] https://www.tutorialspoint.com/system-design-using-microcontroller
[2] https://www.intel.in/content/www/in/en/products/details/embedded-processors.html
[3] Introduction to Embedded Systems a Cyber-Physical Systems Approach, Second Edition, Version 2.2 ISBN: 978-0-262-53381-2, MIT Press, 2017
[4] https://www.tescaglobal.com/blog/what-is-a-microcontrollers-and-how-does-it-work/

Faculty In-Charge

6/4/23

6/4/23

6/4/2023

(Mr.S.R.Karthikeyan, AP/EEE) **HOD/EEE** **Principal**