PRABODHAN SHIKSHAN PRASARAK SANSTHA'S (Regd.No. E-697 Ratnagiri)
RAJENDRA MANE COLLEGE OF ENGINEERING AND TECHNOLOGY
Approved by AICTE, Recognised by D.T.E & Affiliated to University of Mumbai
Accredited by NAAC with 'B+' Grade

Office: At & Po – Ambav (Devrukh) Tal – Sangmeshwar, Dist – Ratnagiri, Pin – 415804 (Maharashtra)
☎: (02354) 269400/269401 • Email: info@rmcet.com • Website: www.rmcet.com • DTE Code: **3202**

Report on Four days workshop on
"Microcontroller & ARM programing using embedded C"
Academic Year 2017-18

Resource person: Mr. Rajesh Ragase and Mr. Anand A. Raut
Prolific system & Technologies Private Limited, Pune

Coordinator   : Mr. M. C. Pawaskar (Assistant Professor, RMCET)

About workshop:

The four days intensive workshop on embedded systems conducted by Prolific system & Technologies Private Limited to involve students in a cohesive drive with the academia and industry towards excellence in embedded systems technology. This workshop is an attempt to cover material relevant to giving students necessary knowledge and skill set to appreciate the rapid changing scenario in embedded systems and take advantage of this in furthering their career. Practical/laboratory sessions are held, which will supplement the knowledge disseminated during the lecture sessions with adequate hands on experience.

Workshop is instructor-led, lab-intensive courses focused on the practical application of technologies through the facilitation of a project-related lab. More than 80% time was utilized for laboratory session.

Duration:
It was four days workshop (From 9th to 12th March 2018). In these 4-days, student gained valuable hands-on experience.

Numbers of beneficiary
Totally 49 students of third year EXTC have attended this work shop.
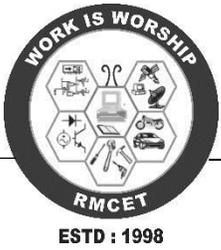
Software Tools: Keil IDE
Flash Magic

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Course content:

Micro-controller design using C:

1) Pin Diagram, Block Diagram 8051, Timing and Clock, Reset circuit

2) Memory Architecture

3) Addressing Modes

4) LED interfacing, Multiplexing 7-segment Display

5) Keypad Scanning without interrupt

6) Timer, Counter and serial communication

7) LCD interfacing,

8) UART and RS232 Interfacing

ARM [Advanced Risk Machine]

1) Features in RISC Architecture: - From hardware Point of view.

2) ARM Processor architecture

3) ARM Organization and implementation,

4) 3-Stage Pipeline, ARM Organization, Memory format, Memory Management,

5) Use of ARM based IDE Project creation, Compilation, Debugging,

6) Downloading code hex file into the ARM based Philips microcontrollers

7) Use of port and serial interface provided into the chip

8) ARM processor core ARM7TDMI

9) Instruction set, Interfacing of LED

10) Interfacing LCD, Timer, serial communication, RTC, Interrupt

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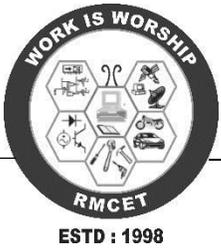
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Hands on Experience

Workshop's participant

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Expert delivering session

Expert guiding students during practical session