



One week workshop on Embedded System Basics and 8051 Microcontroller Interfacing



Organized by
Department of Physics

Rayat Shikshan Sanstha's,

Karmaveer Bhaurao

Patil College,

Vashi, Navi Mumbai

Funded by:

“RUSA Autonomy Grant”



Dr. Ashish K. Rewatkar

Objectives :

1. Embedded System has immense importance in the field of automation, hence to know the basic of the automation the certificate course has been designed.
2. The students are trained with hand on practice through designed developer circuit boards.
3. Various methodologies were adopted to impart the knowledge and at the same time students are assessed through online methods.
4. Updated applications also taught through the certificate course.

Outcomes :

1. Know what an embedded system is a basic understanding of General System Theory.
2. Understanding of what an embedded system in R&D project.
3. Experience of embedded system product conceptualization methods.
4. Suggestion of own product concepts with development of prototype circuit on breadboard. (including interfacing to microcontroller, and control from software)
5. Interface to peripherals, knowledge of typical interfacing standards.

19 to 24th January, 2021 at 10am to 1.30pm

Session will be held through Google Meet

Registration Link : <https://forms.gle/Zb2Wls7CAaPouEES8>

Google Meet link : <https://meet.google.com/pbn-zidg-vnm>

TEACHING AND PRACTICAL DEMONSTRATION TIME TABLE

Day 1 (4 Hrs.):-

**Embedded System Basics and Hardware
Description of 8051 :**

Basic of Embedded System, Characteristics of Embedded System, basic building blocks of Embedded System, Difference Between microprocessor and microcontroller and basics about different types of microcontroller available. Basics of 8051 microcontroller; pin architecture of 8051 microcontroller; basic circuit requirement of 8051 microcontroller and Internal and external memory architecture of 8051 Microcontroller.

Day 2 (4 Hrs.):-

Programing in 8051 :

Programing architecture and structure of 8051 microcontroller, discuss about addressing modes, Instruction formats and Instruction Set of 8051 microcontroller.

Day 3 (4 Hrs.):-

LED Interfacing and SSD Interfacing :

Discuss about how to interface peripherals with the 8051 microcontroller and how to interface array of 8 LEDs (Light Emitting Diode) with 8051 microcontroller and develop drivers for it. Interfacing SSD (Seven Segment Display) in simple way as well as multiplexed way with the 8051 microcontroller and develop drivers for it.

Day 4 (4 Hrs.):-

LCD Interfacing :

Interfacing alphanumeric 16 x 2 LCD (Liquid Crystal Display) in 8 bit mode with the 8051 microcontroller and develop drivers for it.

Day 5 (4 Hrs.):-

Keyboard Interfacing :

Interfacing keys as well as Hexadecimal Key-Pad with the 8051 microcontroller and driver develop for it.

Day 6 (4 Hrs.):-

**Serial Communication basics and
Serial Protocol I²C :**

Connecting Computer (PC) with 8051 microcontroller through RS 232 cable using UART (Universal Asynchronous Receiver and Transmitter) and driver develop for it. Discuss about Serial Protocols which are ready to connect with microcontrollers and what is I²C (Intra Integrated Circuit) Bus and features and characteristics of I²C Protocol. Interfacing RTC (Real Time Clock) with 8051 microcontroller using I2C Protocol and develop driver for it.

Convener

Dr. Kamlesh V. Chandekar

HOD

Dr. V.B. Pujari

Principal

Dr. Shubhada Nayak



Estd. : July 1979

I/C Principal
Dr. Shubhada Nayak

NAAC GRADE 'A+'
CGPA 3.53
(SINCE 2017)

DBT-STAR STATUS
GOVERNMENT OF INDIA
(SINCE 2019)

MHRD - RUSA GRANT
GOVERNMENT OF INDIA
(SINCE 2019)

DST-FIST SCHEME
GOVERNMENT OF INDIA
(SINCE 2013)

BEST COLLEGE AWARD
UNIVERSITY OF MUMBAI
(2013-14)

ISO 9001:2015
INTERNATIONAL
ACCREDITATION FORUM
(SINCE 2017)

Rayat Shikshan Sanstha's

KARMAVEER BHOURAO PATIL COLLEGE, VASHI

(AUTONOMOUS COLLEGE)

Sector 15-A, Vashi, Navi Mumbai - 400 703. (Maharashtra)

(O) : 022-2766 1210 (Fax) : 022-2789 1210

Email : principal@kbpcollegevashi.edu.in ■ Web : www.kbpcollegevashi.edu.in

FOUNDER : Padmabhushan Dr. Karmaveer Bhaurao Patil, D. Litt.

Ref. No.: 540/2020-21

Date : 16/01/2021

To,

Dr. Ashish K. Rewatkar

Assistant Professor, Dept. of Electronics


Kamla Nehru Mahavidyalaya, Nagpur

Respected Sir,

On behalf of organizing committee, we request you to give your consent as a resource person for invited talk for one week work shop on **"Embedded System Basics and 8051 Microcontroller Interfacing"** during Jan 19-25, 2021. This workshop is sponsored by RUSA. We are sure about your definite academic contribution in this workshop. Waiting eagerly for your favorable reply.

Thanking you,

Yours sincerely,


Dr. S. Nayak
Principal
KBP College, Vashi,
Navi Mumbai.

Curriculum Vitae

Plot No. 75,
Gayatri Nagar,
Nagpur - 440022
Mobile no.: +919096254823
email: ashishrewatkar@gmail.com

Dr. ASHISH K. REWATKAR (M.Sc. Electronics, Ph. D, SET)

Career Objective

To apply my education, experience and knowledge within an organization that provides growth and further opportunities and to be part of team

Educational Qualification

- a) Qualified SET [Electronics Science] Sept. 2015
- b) Ph. D. Awarded from R. T. M. Nagpur University, topic is "Development of Luminescence Instrumentation using Embedded Techniques" under the guidance of Dr. P. B. Dahikar, Vice Principal & Head of Electronics Department, Kamla Nehru Mahavidyalaya, Nagpur (June 2015)
- c) M. Sc. [Electronics] from Kamla Nehru Mahavidyalaya Sakkardara Nagpur affiliated to RTM, Nagpur University - 62.1% (2005)
- d) B. Sc. [Physics, Math & Electronics] from Dr. Ambedkar College, Deeksha Bhoomi, Nagpur affiliated to RTM, Nagpur University - 52.66% (2003)

Experience

Having total 11 Year Experience

(7 Year 6 Months teaching and 3 Year 6 Months Industrial Experience)

- 1) Presently working as an Approved (Non Granted) Assistant Professor in Kamla Nehru Mahavidyalaya Sakkardara Nagpur (from Oct. 2015)
- 2) Four years teaching experience as an adhoc basis Assistant Professor for B. E. & Poly (Electronics & Telecommunication), M. C. A. & M. Tech. (VLSI) in Nuva College of Engineering & Technology, Kalmeshwar, Nagpur (From July 2011 to Sept. 2015)
- 3) Approximately One year embedded system developer experience as an R & D Embedded Engineer in ilabs, Nagpur (From Oct. 2010 to June 2011)
- 4) Two and half year training & project designing experience as an Embedded Engineer in Prolific Systems and Technology Pvt. Ltd. (From March 2008 to Sept. 2010)
- 5) Three academic years teaching experience as an adhoc Lecturer in Kamla Nehru Mahavidyalaya Sakkardara Nagpur (from Aug. 2005 to March 2008)

Project Undertaken

- Automatic Thermoluminescence Temperature Controlling and Monitoring System
- Motion Sensing Wireless Camera System using PIC microcontroller
- Adaptive Headlight System with Black box using PIC microcontroller
- Advance Wireless Patient Monitoring System using Xbee & PIC microcontroller with Display ECG pulse on Graphic LCD
- Agro Engineering System Programmable fixed distance Seed Planting System
- Sun Tracking System using Microcontroller
- Obstacle Tracking Robotic Vehicle using Microcontroller
- Programmable College Bell using Microcontroller
- Temperature monitoring and controlling system using Microcontroller
- Digital Speedo Meter on Graphic LCD using Microcontroller
- Line Following Robotic Vehicle using microcontroller
- Remote Operated Robotic Vehicle with wireless Camera System
- Wireless Meter Billing with Loop Control and Short circuit protection using GPS & GSM for bidirectional SMS Controlled System using ARM Controller
- And so on.

Taking Workshops under topics

- ❖ Microcontrollers like 8051/89C51 (Family), PIC (Peripheral Interface Controller), ARM (Advance RISC Machine) microcontroller
- ❖ Cypress PSoC (Programmable System on Chip)
- ❖ Interfacing (128 x 64 dots) Graphical LCD, (16 x 2) alphanumeric LCD, Seven Segment Display, LED, Hyper-Terminal using UART (Universal Asynchronous Receiver and Transmitter), Hex-Keypad, ADC, DAC, Relay
- ❖ Robotics (Interfacing DC, Stepper, Servo motors and different types of sensors)
- ❖ Serial protocols like RS232, I2C (Intra Integrated Circuit), SPI (Serial Peripheral Interface), CAN (Control Area Network) and RS485 with MODBUS
- ❖ Wireless communication modules like Xbee, CC2500 and RF (PSK type) transmitter and receiver modules, GPS & GSM (Messages & data sending - receiving using GPRS (Global Packet Receiving and sending))
- ❖ RTOS (Real Time Operating System) concept

Paper Publication

- ✓ Paper published in International Journal entitled “RS485 Data Transmitter through GSM Service to Server Database Logger” in IOSR Journal of Computer Engineering (IOSR-JCE) e-ISSN: 2278-0661, p-ISSN: 2278-8727 (PP 22-27)
- ✓ Presented and participated paper on “RS485 Data Transmitter through GSM Service to Server Database Logger” in the National Conference on Recent Trends in Computer Science Information Technology (NCRTCSIT 2016) held on 7th April 2016
- ✓ Paper published in International Journal entitled “Precise and Low Cost Thermoluminescence Instrumentation Using Embedded Techniques” in IJERGS Journal, Vol3, 2015 Edition. ISSN 2091-2730 Impact Factor 3.843
- ✓ Paper published in International Journal entitled “Smart Wireless Datalogger” in IJERGS Journal, Vol3, and 2015 Edition. ISSN 2091-2730 Impact Factor 3.843
- ✓ Certificate awarded for presenting a Paper on the topic “Design of an Embedded System for Monitoring & Controlling temp. & light” in National Conference Aspire held by GHRCCST College, Nagpur in 2012.
- ✓ Certificate awarded for presenting a Paper on the topic “Development of Luminescence instrumentation using Embedded Techniques” in National Conference Aspire held by GHRCCST College, Nagpur in 2012.
- ✓ Paper publication in National Symposium on Instrumentation (NSI-30) at Cochin on the topic “Automatic Temperature Controlling and Monitoring System” University of Science and Technology, Department of Instrumentation and Sophisticated Test and Instrumentation center - STIC. 2009 (ISO/NSI-30/CUSAT/KOCHI/2005/139)

Extra Activities

- ✓ National Cadet Corps ‘C’ certificate passed in Army Wing “20 MAH BN NCC Nagpur” with rank CSM in July 2004
- ✓ Typewriting Certificate passed in ‘B’ Grade for speed 30 wpm in Nov 2004
- ✓ Attended and Represented Oral and Poster presentation in “National Symposium on Instrumentation” (NSI-30) at Cochin University of Kerala on paper “Automatic Thermoluminescence Temperature Controlling and Monitoring System” in Dec 2005
- ✓ e-Diploma in Advanced Software Technology (e-DAST) in May 2006
- ✓ MS-CIT Course Passed with 94% in March 2011
- ✓ Attended one day National Workshop on Reconfigurable Hardware conducted by Virtual Labs (Electronics), IIT Bombay and organized by Dept. of Electronics YCCE, Nagpur (27th Aug. 2011)
- ✓ Appointed as Consultant Project Developer in Auto Power Tech, Nagpur (Dec. 2015)

Software Skills

- **Languages:** Assembly Language for 8051 μ C, 8085 μ P & 8086 μ C and Embedded C for 8051, ARM LPC2148, PIC 18F8255 Series and AVR Atmega 8/16
- **Software :** Keil microvision 4 for 8051 & ARM Microcontroller, Flash Magic, MP Lab & CCSC Compilers for PIC Microcontroller, AVR Studio for AVR microcontroller, Chad soft Eagle PCB Designing

Job responsibilities

- ✓ I was a direct second year admission in-charge for academic session 2013-14 to 2015-16 of B. E. Third SEM. students in Nuva College of Engineering & Technology, Kalmeshwar, Nagpur
- ✓ I was a project in-charge of B. E. Final Year students in Nuva College of Engineering & Technology, Kalmeshwar, Nagpur
- ✓ I was a part of working committee in NAAC work 2017 - 18 in Kamla Nehru Mahavidyalaya, Nagpur.
- ✓ Currently I am the part of IQAC for Criteria 3 for fourth cycle of NAAC in Kamla Nehru Mahavidyalaya, Nagpur.
- ✓ I have appointed as paper setter for UG and PG at RTM Nagpur University
- ✓ I have appointed as Moderator for PG in Electronics Science
- ✓ I have appointed for valuation at RTM Nagpur University for UG as well as PG Electronics and Computer Science.

Community /Social Work

- Incharge of “Awareness about mobile usage” activity done by UG & PG students of Electronics Department of Kamla Nehru Mahavidyalaya Nagpur

Personal Profile

Name	:	Dr. Ashish Krishnarao Rewatkar
Date of Birth	:	5 th Aug 1980
Gender	:	Male
Nationality	:	Indian
Religion	:	Hindu
Marital Status	:	Married
Languages Known	:	English, Hindi and Marathi
Hobbies	:	Electronic circuit designing and programming, Playing Outdoor games and watering the plants

References:

2) Dr. P. B. Dahikar
Vice Principal & Head of Dept. (Elect.)
Kamla Nehru Mahavidyalaya,
Sakkardara, Nagpur -09 (Call: 9421084398)

1) Dr. V. V. Rangari
Associate Professor & Head of Dept. (Elect.)
M. P. Deo Memorial Dharampeth Science
College, Nagpur (Call: 9890364522)

I hereby declare that the aforesaid information is true to best of my knowledge & belief.

Place : Nagpur

Date :

(Dr. Ashish K. Rewatkar)

Timestamp	Username	Full Name	Contact Nu	Quality of F	The use of	How pleas	How releva	How satisfi
2021/02/0:	ashishrewa	Dr. Ashish I	9.1E+09	5	5	5	5	5
2021/02/0:	ashishrewa	ASHISH RE	9.19E+11	5	5	5	5	5
2021/02/0:	chandekar.	Mr. Kamles	7.5E+09	5	5	5	5	5
2021/02/0:	kvchandek	Mr. Kamles	7.5E+09	5	5	5	5	5
2021/02/0:	mayursaun	Mr. Mayur	8.11E+09	4	4	4	4	4
2021/02/0:	Amanm56	Aman Mish	9.89E+09	3	3	3	3	3
2021/02/0:	amrutashil	Mrs.shilim	9.14E+09	5	4	5	4	3
2021/02/0:	rajeshree1	Ms.GALANI	9.65E+09	4	4	4	5	5
2021/02/0:	sharvarimo	Ms.More S	8.38E+09	5	4	4	5	4
2021/02/0:	ydhundle3	Yogesh sah	8.79E+09	5	4	3	3	4
2021/02/0:	akshataam	Ms. Akshat	9.14E+09	5	5	5	5	5
2021/02/0:	sudarshank	Mr. Sudars	9.37E+09	4	3	4	5	5
2021/02/0:	pranavcha	PRANAV PF	7.04E+09	5	4	4	5	4
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2021/02/0:	tsb199420	Mr. Trupti I	7.06E+09	5	5	4	4	4
2021/02/0:	akanshachi	Ms.Akansh	9.65E+09	5	5	5	5	5
2021/02/0:	mayurkhoc	Khodade N	8.77E+09	5	4	4	5	4
2021/02/0:	srkalambe1	Mr SHUBH	9.08E+09	4	4	3	3	3
2021/02/0:	surajsk310	Mr. Suraj s	9.82E+09	5	5	5	5	4
2021/02/0:	nikitapawa	Nikita Prak	8.43E+09	3	5	4	5	5
2021/02/0:	ompadale3	Mr. Om ar	9.89E+09	3	3	3	4	4
2021/02/0:	samruddhi	Miss. Samr	9.83E+09	5	5	5	5	5
2021/02/0:	maheshma	Mr.mahesh	8.45E+09	4	4	4	3	3
2021/02/0:	ajitvichare	Mr.shrikan	9.59E+09	5	4	5	5	5
2021/02/0:	manisha.s.	Dr Manisha	7.02E+09	4	4	4	4	4
2021/02/0:	sonone110	Ms.Shubha	8.66E+09	4	3	5	4	3
2021/02/0:	ankitphage	Ankit vasu	9.08E+09	4	4	3	3	4
2021/02/0:	rutulondhe	Miss.Londh	9.89E+09	4	4	4	5	5
2021/02/0:	mushoonn	Ms. Ansari	8.17E+09	4	4	4	4	4
2021/02/0:	ashitoshgh	GHADGE A	7.71E+09	5	5	5	5	5
2021/02/0:	aabhasobu	Mr. AABAS	8.1E+09	5	5	5	5	5
2021/02/0:	vaibhavim	Mahajan V	8.38E+09	5	5	5	5	5
2021/02/0:	ashishabgu	Mr. Ashish	9.14E+09	4	4	3	4	5
2021/02/0:	madhavivr	Ms. Madha	8.45E+09	5	5	5	5	5
2021/02/0:	shwetama	Ms. Shwet	9.32E+09	5	5	5	5	5
2021/02/0:	shubhamk	Kawade Sh	8.65E+09	5	5	5	5	5
2021/02/0:	snehachor	Charge sne	9.7E+09	4	4	3	3	4
2021/02/0:	manedatta	Mr.DATTA	9.89E+09	4	4	4	3	4
2021/02/0:	kshirsagarr	Ms.Nandini	8.77E+09	4	4	4	4	5
2021/02/0:	surajukse8	SURAJ NAN	8.65E+09	4	4	4	4	4
2021/02/0:	ashwinidet	Mrs. Ashwi	7.04E+09	5	3	5	4	4
2021/02/0:	agreshivani	Ms shivani	8.1E+09	5	5	5	5	5
2021/02/0:	suryawansl	Mr.suyog b	7.21E+09	4	4	4	4	4
2021/02/0:	kunalhund	Mr Kunal S	8.45E+09	4	3	4	4	3
2021/02/0:	nikhilshind	NIKHIL DIL	9.32E+09	5	5	4	4	5
2021/02/0:	sujatashibe	Ms.sujata i	9.32E+09	3	2	4	4	5

2021/02/0: aanchalupε Aanchal B	9.99E+09	4	4	3	4	5
2021/02/0: 98poojashε Mrs.Pooja	9.59E+09	5	5	5	5	5
2021/02/0: azmathsidε SIDDHIAZM	9.17E+09	4	4	4	5	5
2021/02/0: vedantbho: Vedant Gar	8.45E+09	5	5	5	5	5
2021/02/0: akashkapε Akash Bajir	9.97E+09	4	3	4	5	4
2021/02/0: shaikhsoha MR.SHAIKH	9.08E+09	3	3	3	3	3
2021/02/0: vinayakma: Maskar Vin	8.69E+09	5	5	5	5	5
2021/02/0: pranalij234 Miss JADH/	9.33E+09	4	4	4	5	5
2021/02/0: shitalsanga Ms.Shital B	9.32E+09	4	4	4	4	4
2021/02/0: mohiteanu Ms. Anuja	9.59E+09	5	5	5	5	5
2021/02/0: atishdafale Mr. DAPHA	8.83E+09	4	3	4	4	4
2021/02/0: supriyakha supriya Sar	7.72E+09	4	5	3	4	3
2021/02/0: wakdesaksi Ms. Sakshi	9.59E+09	4	4	3	3	4
2021/02/0: shaistaansε Ms. Shaista	9E+09	4	5	5	5	5
2021/02/0: surajharalε Suraj Vasar	9.6E+09	4	4	5	5	5
2021/02/0: sawantaish Aishwarya	9.97E+09	5	5	4	4	5
2021/02/0: harshagogε Ms.Harsha	7.39E+09	5	5	5	4	5
2021/02/0: abhijit01@ Mr.Abhijit	8.36E+09	5	5	5	5	5
2021/02/0: prakashind Mr. PRAKA	7.72E+09	4	3	3	4	3
2021/02/0: akashrajagε Mr. Akash	9.99E+09	5	5	5	5	5
2021/02/0: jwelnit67@ Jwelnith Ni	9.08E+09	4	4	4	5	5
2021/02/0: rushishindε Mr. Rushiki	9.08E+09	5	5	5	5	5
2021/02/0: aditigavaliε Gavali Aditi	9.32E+09	4	4	4	5	5
2021/02/0: sarjeraoyac Dr. Yadav S	9.97E+09	5	5	5	5	5
2021/02/0: ujwalagawε Ms .Ujwala	8.77E+09	5	5	4	5	5
2021/02/0: shubpowar Mr.Shubha	7.05E+09	5	5	5	5	5
2021/02/0: poojashind Ms.pooja n	9.32E+09	3	2	3	3	3
2021/02/0: swatisanto SWATI SAN	9.37E+09	5	5	5	5	5
2021/02/1: sonupawar Ms .Arti (A	7.04E+09	4	4	5	5	4
2021/02/1: aldarswatiε SWATI BAB	9.32E+09	4	4	5	3	5

How much	How much	How much	How much	How much	How much	The speaker	Any additional comments
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	no
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Excellent presentation
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Excellent
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	Nope
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Relevant	Very relevant	Relevant	Very relevant	Relevant	Yes	No
Very relevant	Relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Relevant	Very relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No thanks
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	No	No
Relevant	Not relevant	Relevant	Relevant	Not relevant	Not relevant	Yes	No comment
Relevant	Relevant	Relevant	Very relevant	Relevant	Relevant	No	No
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	-
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No.
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Very relevant	Relevant	Relevant	Relevant	Did not attend	Did not attend	No	No
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Very relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Relevant	Relevant	Relevant	Not relevant	Did not attend	Yes	No Any suggestion in the
Relevant	Relevant	Relevant	Very relevant	Very relevant	Very relevant	No	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Fabulously explained the
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Not relevant	Relevant	Not relevant	Not relevant	Relevant	Not relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Very useful
Relevant	Very relevant	Relevant	Not relevant	Not relevant	Relevant	Yes	All good
Did not attend	Relevant	Did not attend	Not relevant	Did not attend	Relevant	Yes	No
Relevant	Relevant	Relevant	Relevant	Did not attend	Did not attend	Yes	No
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Very nice information the
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No suggestions
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Very nice lecture sir....
Relevant	Not relevant	Relevant	Not relevant	Relevant	Very relevant	Yes	No any suggestion
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Very nice
Relevant	Not relevant	Very relevant	Relevant	Very relevant	Relevant	Yes	.
Relevant	Relevant	Very relevant	Very relevant	Very relevant	Relevant	Yes	No
Relevant	Relevant	Very relevant	Relevant	Relevant	Relevant	Yes	No any suggestion
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	1
Very relevant	Relevant	Relevant	Very relevant	Relevant	Relevant	No	No
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Not relevant	Relevant	Not relevant	Relevant	Not relevant	Yes	Improve video quality
Very relevant	Very relevant	Relevant	Very relevant	Very relevant	Very relevant	Yes	very helpful
Relevant	Very relevant	Relevant	Very relevant	Very relevant	Very relevant	Yes	Not

Relevant	Relevant	Very relevant	Relevant	Relevant	Relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Very very nice seminar
Very relevant	Relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Such workshop should
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	None
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	Decrease the time limit
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Ok
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	-
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No any suggestion
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Very relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Relevant	Very relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No comment
Very relevant	Relevant	Very relevant	Relevant	Very relevant	Very relevant	Yes	No it's enough
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Nice Workshop.
Very relevant	Relevant	Very relevant	Very relevant	Relevant	Very relevant	Yes	Nice workshop
Very relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Very relevant	Very relevant	Relevant	Relevant	Very relevant	Relevant	Yes	.
Relevant	Very relevant	Relevant	Very relevant	Relevant	Relevant	Yes	No thanks, it's good ðŸ˜ƒ
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	No	No
Relevant	Not relevant	Relevant	Relevant	Relevant	Relevant	Yes	Good
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Basic information give
Relevant	Very relevant	Relevant	Very relevant	Relevant	Very relevant	Yes	Nothing
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Everything is good.
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	Very nice sessions.
Relevant	Not relevant	Relevant	Not relevant	Very relevant	Relevant	Yes	Best workshop
Relevant	Relevant	Relevant	Relevant	Relevant	Relevant	Yes	No
Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Very relevant	Yes	No
Relevant	Relevant	Very relevant	Very relevant	Very relevant	Relevant	Yes	No,
Relevant	Relevant	Relevant	Not relevant	Did not attend	Not relevant	Yes	No

nt or suggestion?

he work shop because all information is very helpful in future study.

everything.

this webinar. I would like to thank you for all organising committee.Thanks again.

I understood all topics and queries

be conducted regularly

t or change the time table!

'[

.Then it is easy to understand

Brief Report of Students Training Program on

“One week workshop on Embedded System Basics and 8051 Microcontroller Interfacing”

Embedded System has immense importance in the field of automation, hence to know (i) the basic of the automation the certificate course has been designed. (ii) The students are trained with hand on practice through designed developer circuit boards. (iii) Various methodologies were adopted to impart the knowledge and at the same time students are assessed through online methods. (iv) Updated applications also taught through the certificate course.

Outcomes:

It provides an environment to the students of the institute as follows

- (i) Knowing an embedded system is a basic understanding of General System Theory.
- (ii) Understanding of an embedded system in R&D project.
- (iii) Experienced of embedded system for product conceptualization methods.
- (iv) Suggestion of own product concepts with development of prototype circuit on breadboard. (including interfacing to microcontroller, and control from software)
- (v) Interface to peripherals, knowledge of typical interfacing standards.

Links:

- 1) Registration form link: <https://forms.gle/Zb2WLS7CAaPouEES8>
- 2) Google meet link: <https://meet.google.com/pbn-zidg-vnm>
- 3) Feedback form link: <https://forms.gle/3b8LRQCKnW2eGbgC7>

No of Beneficiaries: **75**



Dr. Kamlesh V. Chandekar

Convener

Workshop on Embedded System and 8051 Microcontroller Interfacing (2021-01-21 at 20_54 GMT-8)

Meet - uhi-gafp-0ha

meet.google.com/uhj-gafp-0ha

REC You are presenting

10:47 AM

You're presenting to everyone

Stop presenting

Mid Ashraf Ali has left the meeting

Meeting details

22:47

9:19 PM 23/06/2021

Workshop on Embedded System and 8051 Microcontroller Interfacing (2021-01-21 at 20_54 GMT-8)

SSD (SEVEN SEGMENT DISPLAY) INTERFACING

meet.google.com is sharing your screen. Stop sharing

G F Com A B

A B C D E F G DP

7 6 4 2 1 9 10 5

3,8 Com

E D Com C DP

Ashish Rewatkar

35:22

9:20 PM 23/06/2021

Workshop on Embedded System and 8051 Microcontroller Interfacing (2021-01-21 at 20_54 GMT-8)

```
01 ;simple counter
02 ;0 to 9
03 ;-----
04 ;Define byte variables...
05 #d1 EQU 30h ;/location for displaying value on display
06
07
08 dcount_1 EQU 34h ;variable for generating delay
09 dcount_2 EQU 35h ;variable for generating delay
10 dcount_3 EQU 36h ;variable for generating delay
11 ;-----
12
13 org 0000h
14 main:
15 mov ds1,#00h ;data for ds1
16
17 l10:
18 call display
19 call delay_1sec
20 inc ds1
21 mov a,ds1
22 cjne a,#0Ah,l10
```

Ashish Rewatkar

9:22 PM 23/06/2021

Workshop on Embedded System and 8051 Microcontroller Interfacing (2021-01-21 at 20_54 GMT-8)

LCD Interfacing

Ashish Rewatkar

9:22 PM 23/06/2021



Rayat Shikshan Sanstha's

**Karmaveer Bhaurao Patil College,
Vashi, Navi Mumbai - 400703.**



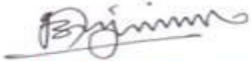
**One week workshop on
Embedded System Basics and 8051 Microcontroller
Interfacing**

19 - 24, Jan. 2021

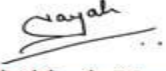
Certificate

This is to Certify that, *Vedant Ganesh Bhosle* has actively participated in, **one week workshop on, “Embedded System Basics and 8051 Microcontroller Interfacing”** organised by **Department of Physics** under the aegis of **RUSA** of our college from **19 to 24 January 2021**.


Dr. Kamlesh V. Chandekar
Convener


Dr. V. B. Pujari
Head of Physics Department


Mr. Sarang Bhagwat
RUSA, Co-ordinator


Dr. Shubhada Nayak
Principal, KBPC, Navi Mumbai