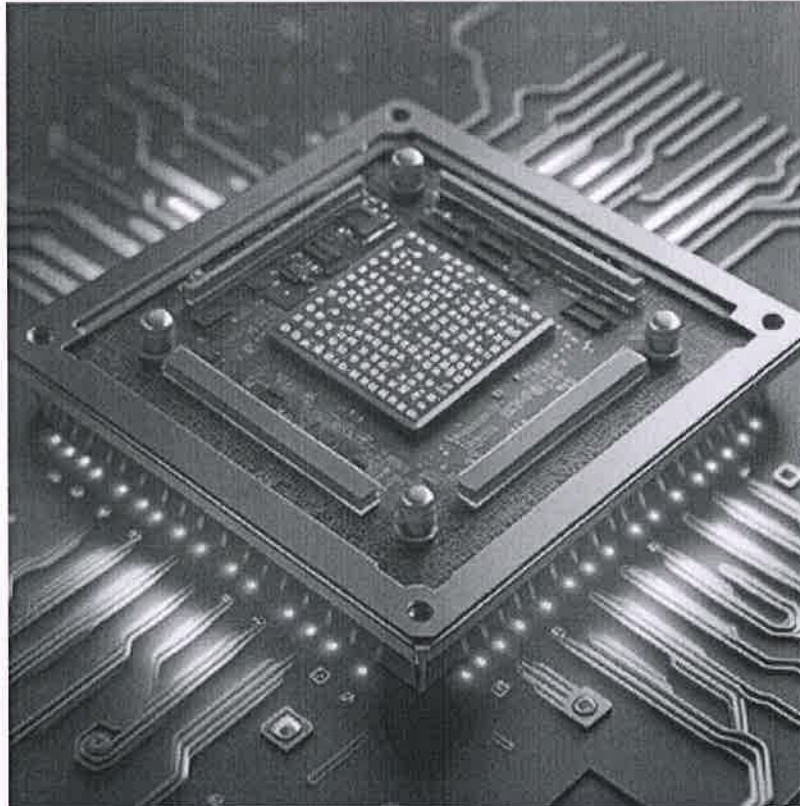




SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL.

DEPARTMENT OF ECE



Technology Training Report

EMBEDDED SYSTEMS

11-02-2019 to 15-02-2019

Department of Electronics and Communication Engineering

2018 -2019

Event Coordinators: Mr.R.Carol Praveen,AP/ECE

Mr.S.Karthik,AP/ECE



Dr.D.SENTHIL KUMARAN, M.B., Ph.D., (MUS).,
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Circular

Department of ECE planned to conduct value added course for third year students on “Embedded Systems” scheduled to be conducted between 11-02-2019 to 15-02-2019. The main focus of the program is to learn basics of Embedded Systems. Students are encouraged to attend this program.

Trainer’s Details:

Mr.Madavapandian

Technical Head
Embedded System Design
Tessolve Semiconductor Pvt.Ltd.
Coimbatore

R. C. S. 8/2/2019

Faculty In charge



Dr.D.Senthil Kumar

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S. K. S. 8/2/2019
HoD/ECE

SYLLABUS

Introduction To Embedded Application, Introduction To Energia IDE, Tools, Embedded C, I/O Port Output Interference, Serial Monitor Interference, ADC Interfacing, Sensor Interface, Peripheral-I/O Port Led Interface, Peripheral-I/O Port, Keypad Interface, Peripheral-I/O Port Lcd, Peripheral-Timer- Peripheral-ADC, Comparator, Peripheral-UART, Peripheral-Spi, I2c, RTOS, IOT Introduction- IOT- Thingspeak Login- IoT-Upload Thingspeak- IoT-Data Acquisition



A handwritten signature in green ink, appearing to read 'Dh', is positioned above the printed name of the Principal.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Value Added Course Summary 2018-2019

Course Name: Embedded system

Course Duration: 35 hours

Year Offered: 2018-2020

Course Instructors: Mr.Madhavapandian
Tessolve Semiconductor Pvt. Ltd
Coimbatore

Course Outcome:

On completion of the course, students will be able to understand the basics of real-time operating systems used in embedded systems and their role in managing tasks and resources.

Course Type: Self Framed/Collaboration with industry.

Assessment Mode

Attendance: 35 hours

Number of Participants: 92

Scheme of Exam: MCQ




Course Co-ordinators


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HoD/ECE

Tessolve Semiconductor Pvt. Ltd.

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Coimbatore – 641005,
Tamilnadu, India. Tel:
+91 422 2221188, +91
422 2221199

Email: sales@tessolve.com

Tessolve:

Technological innovation has accelerated at an unprecedented pace in recent years, and so have the disruptions in the sector of Silicon engineering – complex IC development, increasing failures, and inadequate facilities for design, development, and testing. At Tessolve, we address these disruptions by partnering with OEMs and semiconductor companies for end-to-end innovation and productization of silicon and systems solutions.



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S.NO.	REGISTER NUMBER	NAME OF THE STUDENT	Signature of the Student
1	922116106001	AASHA BANU R	A.B.B.
2	922116106002	ABINAYA D	D. Abinaya
3	922116106003	AJITHA G	G. Ajitha
4	922116106004	AJITHA J	J. Ajitha
5	922116106005	AKSHAYA DHARSHINI G	Akshaya dharshini G
6	922116106006	ANGURAJ N	Anguraj. N
7	922116106008	AROCKIA JARA A	Arockia Jara. A
8	922116106009	BALAJI K.G	Balaji. K.G
9	922116106010	BARANI G	Barani
10	922116106012	BRINDHA M	Brindha M
11	922116106013	CHANDRASEKAR B	Chandrasekar. B
12	922116106014	CHELLAPRABU A	Chella prabu. A
13	922116106016	DEEPA T	Deepa
14	922116106017	DEEPIKA R	Deepika R
15	922116106018	DEVA SHRUTHI R	Deva shruthi. R
16	922116106019	DEVI SRINIDHI R	Devi srinidhi. R.
17	922116106020	DHAMODHARAN A	Dhamodharan. A
18	922116106021	DHARANI S	Dharani. S
19	922116106022	FAMITHA A	Famitha
20	922116106023	GEETHA J	Geetha. J
21	922116106024	GOWTHAM KRISHNAN P	Gowtham Krishnan
22	922116106025	HARINI D	Harini
23	922116106026	HEMALATHA K	Hemalatha. K
24	922116106027	ISHWARYA V	Ishwarya. V.
25	922116106028	JAYALAKSHMI G	Jayalakshmi G.
26	922116106029	JEGADHEESAN L	Jegadheesan
27	922116106031	KANMANI S	Kanmani. S
28	922116106032	KEERTHANA S	Keerthana. S
29	922116106033	KEERTHIKA K	Keerthika. S
30	922116106034	KISHOR M	Kishor. M
31	922116106035	KOKILA T	Kokila
32	922116106036	KRISHNA PRABHA M	Krishna prabha. M.



33	922116106037	LOGANATHAN K.B	Loganathan K.B
34	922116106038	MADHU PHARKAVI B	Madhu Pharkavi B
35	922116106039	MAHAPRABU K	Mahaprabu K.
36	922116106040	MARIA VIMALA A	Maria Vimala A.
37	922116106041	MEENATCHI SUNDARAM P	Meenatchi Sundaram P.
38	922116106042	MUNIYAPPAN C	Muniyappan C
39	922116106043	NAGESWARI R	Nageswari R.
40	922116106044	NANDHINI S	Nandhini S.
41	922116106045	NANDHINI DEVI S	Nandhini Devi S.
42	922116106046	NANDHINI USHA S	Nandhini Usha S.
43	922116106047	NARMMETHA R	Narmmetha R.
44	922116106048	NAVEEN KUMAR N	Naveen Kumar N.
45	922116106049	NISHANTHI S	Nishanthi S.
46	922116106050	PONJEEVITHA G	Ponjeevitha G.
47	922116106051	PRASANTH T	Prasanth T.
48	922116106052	PRASHANTHI R	Prashanthi R.
49	922116106053	PRIYANKA M	Priyanka M.
50	922116106054	PRIYANKA P	Priyanka P.
51	922116106056	PRIYA VENKATESHWARI M	Priya Venkateshwari M.
52	922116106057	RAGUL R	Ragul R.
53	922116106059	RASHIKA L	Rashika L.
54	922116106060	RESHMA S	Reshma S.
55	922116106062	SABARI NARAYANAN V	Sabari Narayanan V.
56	922116106063	SANDHIYA D	Sandhiya D.
57	922116106064	SANGEETHA M	Sangeetha M.
58	922116106065	SANTHOSHKUMAR R	Santhosh Kumar R.
59	922116106066	SASIREKA C	Sasireka C.
60	922116106067	SELVAKUMAR G	Selvakumar G.
61	922116106068	SELVAMEENAKSHI V	Selvameenakshi V.
62	922116106069	SHANKAR S	Shankar S.
63	922116106070	SHANMUGAPRIYA S	Shanmugapriya S.
64	922116106071	SHANMUGA PRIYA K	Shanmuga Priya K.
65	922116106072	SHANMUGA PRIYA V	Shanmuga Priya V.
66	922116106073	SHIFANA S	Shifana S.
67	922116106074	SHOBANAPANDI S	Shobanapandi S.
68	922116106075	SHOBIGA N	Shobiga N.
69	922116106076	SHOFIA NASHRIN M	Shofia Nashrin M.
70	922116106077	SHREYA B	Shreya B.
71	922116106078	SIDDHARTH S	Siddharth S.



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72	922116106079	SINDHUJA S	S. Sindhuja
73	922116106080	SIPRIYA R	Sipriya R.
74	922116106081	SIYAMALA K T G	T. Siyamala
75	922116106082	SOUNDHARYA T	T. Soundharya
76	922116106083	SOWMIYA J	J. Sowmiya
77	922116106084	SRUTHI S	Sruthi
78	922116106085	STEPHY PRABA I	I. Stephy Praba
79	922116106086	SUBHIKSHA R.S	Subhiksha R. S.
80	922116106087	SUMITHRA R	Sumithra R.
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84	922116106091	VAN MATHI M	Vanathi M
85	922116106092	VASANTH KANNA S	Vasanth Kanna S
86	922116106093	VINITHA T	Vinitha
87	922116106094	VINOTH V	V. Vinoth
88	922116106095	VINOTHINI M	M. Vinothini
89	922116106096	VISHNU PRIYA B	B. Vishnu Priya
90	922116106097	WATHSALYA P	P. Wathsalya
91	922116106098	YUVENTHA D	D. Yuventha
92	922116106501	KINGSTON SACHIN A	A. K.




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EVENT REPORT

Technology training program for third year students has been arranged by Department of ECE. The main focus of the program includes knowledge sharing in Embedded Systems domain. There are 92 students participated and benefitted from this training. Expert Mr.Madhavapandian shared his experience in Embedded System domain. He also shared the challenges in real time embedded field. He mentioned about recent trends in Embedded System domain. The third ECE students were benefitted .At the end ,Assessment has been done. Students were evaluated.

Tasks performed by Students

- Switch Negative Logic - Led Positive Logic
- Positive & Negative Logic
- Push button Led glow in kit
- Switch Positive Logic - Led Negative Logic
- 2 Led glow in kit
- Traffic light with extra 8 Led
- Traffic Light
- Brightness of Led control using kit



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1	922116106001	AASHA BANU R	/	/	/	/	/
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(Handwritten Signature)

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Q & A.



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Dindigul – Palani Highway, Dindigul – 624 002

Name of the Student:

Year/Sec:

1) Which design allows the reuse of the software and the hardware components?

- a) Memory Design
- b) Input design
- c) Platform-based design
- d) Peripheral design

2) Which design considers both the hardware and software during the embedded design?

- a. Memory Design
- b. Software/ hardware co design
- c. Platform-based design
- d. Peripheral design

3) What does API stand for?

- a) Application Programming Interface
- b) Address Programming Interface
- c) Accessing peripheral through the interface
- d) None of them

4) Which design activity can be used for the mapping operation to hardware?

- a. High-level transformation
- b. Scheduling
- c. Compilation
- d. Hardware / Software partitioning

5) Which process can be used in analyzing the set of possible designs?



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Dr. D. Senthil Kumaran

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a) Scheduling

c) Hardware / Software partitioning

d) Compilation

6) What does FRIDGE stand for?

a. the floating-point programming design environment

b. the fixed-point programming design environment

c. floating-point programming decoding

d. fixed-point programming decoding

7) Which of the following tool can replace floating-point arithmetic with fixed-point arithmetic?

a) FAT

b) SDS

c) FRIDGE

d) VFAT

8) Which model is based on precise measurements using real hardware?

a. First power model

b. Encc energy-aware compiler

c. Second Power Model

d. Third power model

9) Which statement replaces all occurrences of the identifier with string?

a) # include

b) # define identifier string

c) # ifdef

d) # define MACRO()

10) Which command takes the object file and searches library files to find the routine calls?



- a. Emulator
- b. Simulator
- c. Compiler
- d. Debugger

11) Which of the following language can describe the hardware?

- a) C++
- b) C
- c) VHDL
- d) JAVA

12) Which simulator/ debugger is capable of displaying output signal waveform resulting from stimuli applied to the inputs?

- a. VHDL emulator
- b. VHDL simulator
- c. VHDL locator
- d. VHDL debugger

13) How many types of wait statements are available in the VHDL design?

- a) 4
- b) 3
- c) 6
- d) 5

14) Which of the following have flip-flops which are connected to form shift registers?

- a. test pattern
- b. scan design
- c. CRC
- d. bit pattern

15) What is the purpose of the memory refresh register of Z80?

- a) To control on-chip SRAM




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- c) To clear cache
- d) To control ROM

16) What supports multitasking in 80386?

- a. External paging memory management unit
- b. Read mode
- c. On-chip paging memory management unit
- d. Paging and segmentation

17) How are negative numbers stored in a coprocessor?

- a) Decimal
- b) Gray
- c) 1's complement
- d) 2's complement

18) Which of the following processors can perform exponential, logarithmic, and trigonometric functions?

- a. 8087
- b. 8088
- c. 8086
- d. 8080

19) Which memory storage is widely used in PCs and Embedded Systems?

- a) EEPROM
- b) Flash memory
- c) SRAM
- d) DRAM

20) Which type of memory is suitable for low volume production of embedded systems?

- a) Non-volatile
- b) RAM
- c) Volatile
- d) ROM





SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY
Department of ECE

(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)
Dindigul – Palani Highway, Dindigul – 624 002

Name of the Student: S. Shobanapandi

Year/Sec: III-ECE-C

1) Which design allows the reuse of the software and the hardware components?

- a) Memory Design
- b) Input design
- ☒ c) Platform-based design
- d) Peripheral design

16
20
R.C.B.

2) Which design considers both the hardware and software during the embedded design?

- a) Memory Design
- ☒ b) Software/ hardware co design
- c) Platform-based design
- d) Peripheral design

3) What does API stand for?


- ☒ a) Application Programming Interface
- b) Address Programming Interface
- c) Accessing peripheral through the interface
- d) None of them

4) Which design activity can be used for the mapping operation to hardware?

- a) High-level transformation
- b) Scheduling
- c) Compilation
- ☒ d) Hardware / Software partitioning

5) Which process can be used in analyzing the set of possible designs?




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a) Scheduling

b) Design space exploration

c) Hardware / Software partitioning

d) Compilation

6) What does FRIDGE stand for?

a) the floating-point programming design environment

b) the fixed-point programming design environment

c) floating-point programming decoding

d) fixed-point programming decoding

7) Which of the following tool can replace floating-point arithmetic with fixed-point arithmetic?

a) FAT

b) SDS

c) FRIDGE

d) VFAT

8) Which model is based on precise measurements using real hardware?

a) First power model

b) Encc energy-aware compiler

c) Second Power Model

d) Third power model

9) Which statement replaces all occurrences of the identifier with string?

a) # include


b) # define identifier string

c) # ifdef

d) # define MACRO()

10) Which command takes the object file and searches library files to find the routine calls?




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- a) Emulator
- b) Simulator
- ☒ c) Linker
- d) Debugger

11) Which of the following language can describe the hardware?

- a) C++
- b) C
- ☒ c) VHDL
- d) JAVA

12) Which simulator/ debugger is capable of displaying output signal waveform resulting from stimuli applied to the inputs?

- ☒ a) VHDL emulator
- b) VHDL simulator
- c) VHDL locator
- d) VHDL debugger

13) How many types of wait statements are available in the VHDL design?

- ☒ a) 4
- b) 3
- c) 6
- d) 5

14) Which of the following have flip-flops which are connected to form shift registers?

- a) test pattern
- b) scan design
- ☒ c) CRC
- d) bit pattern

15) What is the purpose of the memory refresh register of Z80?

- a) To control on-chip SRAM




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b) To control on-chip DRAM

c) To clear cache

d) To control ROM

16) What supports multitasking in 80386?

a) External paging memory management unit

b) Read mode

c) On-chip paging memory management unit

d) Paging and segmentation

17) How are negative numbers stored in a coprocessor?

a) Decimal

b) Gray

c) 1's complement

d) 2's complement

18) Which of the following processors can perform exponential, logarithmic, and trigonometric functions?

a) 8087

b) 8088

c) 8086

d) 8080

19) Which memory storage is widely used in PCs and Embedded Systems?

a) EEPROM

b) Flash memory

c) SRAM

d) DRAM

20) Which type of memory is suitable for low volume production of embedded systems?

a) Non-volatile

b) RAM

c) Volatile

d) ROM




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S.NO.	REGISTER NUMBER	NAME OF THE STUDENT	Marks (20)
1	922116106001	AASHA BANU R	18
2	922116106002	ABINAYA D	15
3	922116106003	AJITHA G	16
4	922116106004	AJITHA J	14
5	922116106005	AKSHAYA DHARSHINI G	17
6	922116106006	ANGURAJ N	19
7	922116106008	AROCKIA JARA A	15
8	922116106009	BALAJI K.G	15
9	922116106010	BARANI G	18
10	922116106012	BRINDHA M	19
11	922116106013	CHANDRASEKAR B	17
12	922116106014	CHELLAPRABU A	19
13	922116106016	DEEPA T	15
14	922116106017	DEEPIKA R	15
15	922116106018	DEVA SHRUTHI R	17
16	922116106019	DEVI SRINIDHI R	19
17	922116106020	DHAMODHARAN A	15
18	922116106021	DHARANI S	16
19	922116106022	FAMITHA A	17
20	922116106023	GEETHA J	18
21	922116106024	GOWTHAM KRISHNAN P	19
22	922116106025	HARINI D	20
23	922116106026	HEMALATHA K	17
24	922116106027	ISHWARYA V	18
25	922116106028	JAYALAKSHMI G	19
26	922116106029	JEGADHEESAN L	17
27	922116106031	KANMANI S	18
28	922116106032	KEERTHANA S	19
29	922116106033	KEERTHIKA K	20
30	922116106034	KISHOR M	20
31	922116106035	KOKILA T	14
32	922116106036	KRISHNA PRABHA M	15



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33	922116106037	LOGANATHAN K.B	17
34	922116106038	MADHU PHARKAVI B	18
35	922116106039	MAHAPRABU K	19
36	922116106040	MARIA VIMALA A	17
37	922116106041	MEENATCHI SUNDARAM P	18
38	922116106042	MUNIYAPPAN C	19
39	922116106043	NAGESWARI R	20
40	922116106044	NANDHINI S	17
41	922116106045	NANDHINI DEVI S	19
42	922116106046	NANDHINI USHA S	15
43	922116106047	NARMMETHA R	15
44	922116106048	NAVEEN KUMAR N	18
45	922116106049	NISHANTHI S	19
46	922116106050	PONJEEVITHA G	17
47	922116106051	PRASANTH T	19
48	922116106052	PRASHANTHI R	15
49	922116106053	PRIYANKA M	15
50	922116106054	PRIYANKA P	17
51	922116106056	PRIYA VENKATESHWARI M	19
52	922116106057	RAGUL R	14
53	922116106059	RASHIKA L	15
54	922116106060	RESHMA S	15
55	922116106062	SABARI NARAYANAN V	16
56	922116106063	SANDHIYA D	16
57	922116106064	SANGEETHA M	17
58	922116106065	SANTHOSHKUMAR R	18
59	922116106066	SASIREKA C	16
60	922116106067	SELVAKUMAR G	18
61	922116106068	SELVAMEENAKSHI V	17
62	922116106069	SHANKAR S	15
63	922116106070	SHANMUGAPRIYA S	14
64	922116106071	SHANMUGA PRIYA K	15
65	922116106072	SHANMUGA PRIYA V	14
66	922116106073	SHIFANA S	15
67	922116106074	SHOBANAPANDI S	16
68	922116106075	SHOBIGA N	18
69	922116106076	SHOFIA NASHRIN M	16
70	922116106077	SHREYA B	19
71	922116106078	SIDDHARTH S	17




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72	922116106079	SINDHUJA S	18
73	922116106080	SIPRIYA R	15
74	922116106081	SIYAMALA K T G	14
75	922116106082	SOUNDHARYA T	18
76	922116106083	SOWMIYA J	19
77	922116106084	SRUTHI S	16
78	922116106085	STEPHY PRABA I	17
79	922116106086	SUBHIKSHA R.S	18
80	922116106087	SUMITHRA R	15
81	922116106088	SURENDHAR BALAJI B	14
82	922116106089	THOUFEEK AHAMED N	15
83	922116106090	THULASI PRABHA S	16
84	922116106091	VAN MATHI M	13
85	922116106092	VASANTH KANNA S	18
86	922116106093	VINITHA T	19
87	922116106094	VINOTH V	14
88	922116106095	VINOTHINI M	16
89	922116106096	VISHNU PRIYA B	17
90	922116106097	WATHSALYA P	18
91	922116106098	YUVENTHA D	19
92	922116106501	KINGSTON SACHIN A	17



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STUDENT NAME:

N. Anguraj

Year:

III

REGISTER NUMBER:

922116106006

Section:

A

1. The program was effectively designed and organized

a. Strongly agree



b. Agree

c. Disagree

2. This program helped me to understand about Embedded Systems

a. Strongly agree

b. Agree



c. Disagree

3. Information, advice and guidance provided by the trainer was appropriate

a. Strongly agree



b. Agree

c. Disagree

4. The program express about industry expectation

a. Strongly agree



b. Agree

c. Disagree

5. The trainer expressed about recent trend in embedded systems/

a. Strongly agree



b. Agree

c. Disagree

6. The special lectures provided by the resource persons were useful

a. Strongly agree

b. Agree



c. Disagree

7. Trainer shared his work experience in embedded domain

a. Strongly agree



b. Agree

c. Disagree

8. The hands on training was useful

a. Strongly agree



b. Agree

c. Disagree



2021
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Sample Certificates



Sample Certificate 1



Sample Certificate 2



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[Signature]
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CERTIFICATE OF COMPLETION

This certificate is proudly presented to

S. HANUMANTH

Participating in "EMBEDDED SYSTEMS" given this during 11.2.2019 to 15.2.2019



PRINCIPAL

Sample Certificate 3



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