SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Kaikkurichi, Pudukkottai -622 303

www.sbec.edu.in

NAAC DOCUMENTS

Quality Indicator Frame Work

Criterion – 2

Teaching-Learning and Evaluation

Submitted by

IQAC

Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women

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Criteria 2	Teaching-Learning and Evaluation	350

Key Indicator- 2.3. Teaching- Learning Process (40)

2022-2023

COMPUTER SCIENCE AND ENGINEERING

PARTICIPATIVE LEARNING

Activity	Number of Students Attended	Page No.
Value Added Course (VAC)	143	3
Symposium and Conference	60	92
TOTAL STUDENTS ATTENDED	203	-

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Criteria 2	Teaching-Learning and Evaluation	350

Key Indicator- 2.3. Teaching- Learning Process (40)

2022-2023

COMPUTER SCIENCE AND ENGINEERING

PARTICIPATIVE LEARNING

VALUE ADDED COURSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Date: 26 / 07 /2022

DEPARTMENT CIRCULAR

A Value added course on **"Internet of Things with Python"** will be conducted by **MECK TECK Research Foundation, Pudukkottai** in the college campus for all Third year and Final year CSE students from 03.08.2022 to 10.08.2022. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Internet of Things With Python	**Resource Person:** 1. Dr.K.Gurunathan M.E Ph.D Master Trainer MECK TECK Research Foundation

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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PUDUKKOTTAI - 622 303

Cc:

- Principal's office
- IQAC Coordinator
- Class In charge-III,IV year
- CSE Students – III,IV year
- Notice Board

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Value Added Course on "INTERNET OF THINGS WITH PYTHON"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN
1	Understanding IoT fundamentals - IOT Architecture and protocols	3	03.08.2022
2	Various Platforms for IoT - Real time Examples of IoT	3	03.08.2022
3	Arduino Uno Architecture - Setup the IDE, Writing Arduino Software - Arduino Libraries	3	04.08.2022
4	Overview of IoT components and IoT Communication Technologies - Challenges in IOT	3	04.08.2022
5	Basics of Embedded C programming for Arduino	3	05.08.2022
6	Interfacing LED, push button and buzzer with Arduino	3	05.08.2022
7	Interfacing Arduino with LCD	3	08.08.2022
8	Overview of Sensors working - Analog and Digital Sensors	3	08.08.2022
9	Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino	3	09.08.2022
10	Interfacing of Actuators with Arduino	3	09.08.2022
11	Interfacing of Relay Switch and Servo Motor with	3	10.08.2022
12	Arduino M2M vs. IOT - Communication Protocols	3	10.08.2022
	Total Periods :	**36**	

VAC Coordinator

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

STUDENTS PARTICIPATION LIST-VAC PROGRAM

INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1.	912620104001	AKALYA S	III/CSE
2.	912620104002	HEMA V	III/CSE
3.	912620104003	ISWARYA R	III/CSE
4.	912620104004	KALAIVANI S	III/CSE
5.	912620104005	KALPANA K	III/CSE
6.	912620104007	MEIYYAMMAL M	III/CSE
7.	912620104008	NANDHINI P	III/CSE
8.	912620104009	PRASANNA DEVI P	III/CSE
9.	912620104010	PRISHIYA E	III/CSE
10.	912620104012	ROSAMMAL M	III/CSE
11.	912620104013	ROSHIKA K	III/CSE
12.	912620104014	SABHA AYSHA S	III/CSE
13.	912620104015	SATHIYASRI P	III/CSE
14.	912620104016	SIVAGAMI D	III/CSE
15.	912620104017	SIVAHARINI S	III/CSE
16.	912620104018	SUBASHINI C	III/CSE
17.	912620104019	SUBASHINI M	III/CSE
18.	912620104020	SWETHA D	III/CSE

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19.	912620104021	VANATHI T	III/CSE
20.	912620104022	VINCIYA MARY S	III/CSE
21.	912620104304	VAISHNAVI R	III/CSE
22.	912619104001	ANNAPOORANI M	IV /CSE
23	912619104003	ARUNNAVAMEENA A	IV/CSE
24	912619104004	DAYANA P	IV/CSE
25	912619104005	DHARSHINI D	IV/CSE
26	912619104007	FAHMIDHA B	IV/CSE
27	912619104009	GULNAS FATHIMA S	IV/CSE
28	912619104010	HELAN J	IV/CSE
29	912619104011	KEERTHANA R	IV/CSE
30	912619104012	MUTHULAKSHMI G	IV/CSE
31	912619104013	MUTHU MEENAKSHI M	IV/CSE
32	912619104014	NIROSHIKA R	IV/CSE
33	912619104017	PARAMESHWARI S	IV/CSE
34	912619104019	RANJANI K	IV/CSE
35	912619104020	RILWANA PARVEEN J	IV/CSE
36	912619104021	ROOPINA R	IV/CSE
37	912619104022	SANDHIYA B	IV/CSE
38	912619104023	SANTHI D	IV/CSE
39	912619104024	SARANYA C	IV/CSE
40	912619104027	SNEHA R	IV/CSE
41	912619104029	SURIYA JOTHI S	IV/CSE
42	912619104301	ABINAYA S	IV/CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

ATTENDANCE SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	DATE: 03.08.22		DATE: 04.08.22		DATE: 05.08.22		DATE: 08.08.22		DATE: 09.08.22		DATE: 10.08.22		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	912620104001	AKALYA S	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
2	912620104002	HEMA V	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
3	912620104003	ISWARYA R	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
4	912620104004	KALAIVANI S	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
5	912620104005	KALPANA K	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
6	912620104007	MEIYYAMMAL M	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
7	912620104008	NANDHINI P	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
8	912620104009	PRASANNA DEVI P	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
9	912620104010	PRISHIYA E	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	
10	912620104012	ROSAMMAL M	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	

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11	912620104013	ROSHIKA K	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	K. Roshika
12	912620104014	SABHA AYSHA S	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	S. Sabha
13	912620104015	SATHIYASRI P	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	P. Sathiya
14	912620104016	SIVAGAMI D	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	D. Shy
15	912620104017	SIVAHARINI S	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	S. Shiv
16	912620104018	SUBASHINI C	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	C. Subas
17	912620104019	SUBASHINI M	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	M. Sub.
18	912620104020	SWETHA D	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	D. Swetha
19	912620104021	VANATHI T	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	T. Vath
20	912620104022	VINCIYA MARY S	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	S. Vinciya Mary
21	912620104304	VAISHNAVI R	III/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	R. Vaish
22	912619104001	ANNAPOORANI M	IV /CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Annapoorani
23	912619104003	ARUNNAVAMEENA A	IV/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Arun.
24	912619104004	DAYANA P	IV/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Dayana.
25	912619104005	DHARSHINI D	IV/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Dharsh.
26	912619104007	FAHMIDHA B	IV/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Fah
27	912619104009	GULNAS FATHIMA S	IV/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Gulnas
28	912619104010	HELAN J	IV/CSE	/	/	/	/	/	/	/	/	/	/	/	/	12	Helan

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29	912619104011	KEERTHANA R	IV/CSE														12		
30	912619104012	MUTHULAKSHMI G	IV/CSE														12		
31	912619104013	MUTHU MEENAKSHI M	IV/CSE														12		
32	912619104014	NIROSHIKA R	IV/CSE														12		
33	912619104017	PARAMESHWARI S	IV/CSE														12		
34	912619104019	RANJANI K	IV/CSE														12		
35	912619104020	RILWANA PARVEEN J	IV/CSE														12		
36	912619104021	ROOPINA R	IV/CSE														12		
37	912619104022	SANDHIYA B	IV/CSE														12		
38	912619104023	SANTHI D	IV/CSE														12		
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40	912619104027	SNEHA R	IV/CSE														12		
41	912619104029	SURIYA JOTHI S	IV/CSE														12		
42	912619104301	ABINAYA S	IV/CSE														12		

VAC Coordintor

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Report on Value Added Course

Title:	Internet of Things With Python
Resource Person:	Dr.K.Gurunathan M.E Ph.D Trainer Meck Teck Research Foundation

Date of conduct from :	**03.08.2022**	To:	**10.08.2022**	Duration:	**30 Hours**
Organized Department :	Computer Science and Engineering				
Participant Year:	**3,4(CSE)**	Semester:	**ODD**	No. of Students Registered :	**42**
Venue:	**Auditorium**				

Outcome of Value Added Course (VAC)

At the end of the VAC course the student can able to

- Explain fundamentals about IoT
- Illustration of IoT Access technologies
- Design methodology and different IoT hardware platforms.
- Identify with the application areas of IOT
- Realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
- Describe the building blocks of Internet of Things and characteristics.

Assessment Process

- Students securing **more than 60% on total score** and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)

VAC Coordinator **HoD / CSE** **Principal**

PRINCIPAL 14/07/22
SRI BHARATHI ENGINEERING
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PUDUKKOTTAI DISTRICT

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MECK TECK RESEARCH FOUNDATION

(Registered Under Ministry of Micro, Small and Medium Enterprises UDYAM-TN-07-0015761)

CERTIFICATE OF COMPLETION

This is to certify that **Ms.K.Kalpana** of III CSE has completed 5 days value added course about **"Internet of things with PYTHON"** from 03.08.2022 to 10.08.2022 during the academic year 2022-2023.

CEO
Meck Teck

PRINCIPAL
SBECW

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MECK TECK RESEARCH FOUNDATION

CERTIFICATE OF COMPLETION

This is to certify that **Ms.R.SNEHA** of IV CSE has completed 5 days value added course about **"Internet of things with PYTHON"** from 03.08.2022 to 10.08.2022 during the academic year 2022-2023.

CEO
Meck Teck

PRINCIPAL
SBECW

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Name of the Student : **Year/Sem:**

AU Register Number:

Value Added Course on "**Internet of Things With Python**"

MCQ QUESTIONS (25X1 = 25 Marks)

1. Which of the following is false about IoT devices?
   a) IoT devices use the internet for collecting and sharing data
   b) IoT devices need microcontrollers
   c) IoT devices use wireless technology
   d) IoT devices are completely safe

2. Which of the following is not an IoT platform?
   a) Amazon Web Services
   b) Microsoft Azure
   c) Salesforce
   d) Flipkart

3. Which of the following is not an application of IoT?
   a) BMP280
   b) Smart home
   c) Smart city
   d) Self-driven cars

4. Which of the following is not a fundamental component of an IoT system?
   a) Sensors
   b) Connectivity and data processing
   c) User interface
   d) Transformer

5. Which layer is used for wireless connection in IoT devices?
   a) Application layer
   b) Network layer
   c) Data link layer
   d) Transport layer

6. Which of the following is false about the IoT components?
   a) A light sensor (photoresistor) is an analog sensor
   b) A microphone is a digital sensor
   c) A push button is a digital sensor
   d) A keyboard is a digital sensor

7. Which of the following is used to capture data from the physical world in IoT devices?
   a) Sensors
   b) Actuators
   c) Microprocessors
   d) Microcontrollers

8. Which of the following command is used to trigger the Amazon echo IOT device?
   a) Hello
   b) Suri
   c) Alexa
   d) Hey

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9. Which of the following is false about the MANET IoT network?
   a) It is a self-configuring network
   b) It has a low data rate
   c) It doesn't have any encryption
   d) Power is readily available for complex security

10. Which of the following is not a sensor in IoT?
   a) BMP280
   b) DHT11
   c) Photoresistor
   d) LED

11. Which of the following is not an actuator in IoT?
   a) Stepper motor
   b) A fan
   c) An LED
   d) Arduino

12. What is the use of PWM signals in IoT development boards?
   a) They are used by sensors to have analog input
   b) They are used by sensors to have digital input
   c) They are used by actuators to have analog input
   d) They are used by actuators to have digital input

13. Which of the following is used to reprogram a Bootloader in IoT devices?
   a) VHDL programming
   b) IDE
   c) ICSP
   d) MANET

14. Which of the following is true about Arduino IoT devices?
   a) They are open-source software
   b) They can only read analog inputs
   c) They have their own operating systems
   d) They don't have pre-programmed firmware

15. How many number of elements in the Open IoT Architecture?
   a) 3 elements
   b) 7 elements
   c) 8 elements
   d) 6 elements

16. IoT-A stands for _____
   a) Internet of Things Area
   b) Industrial of things Architecture
   c) Internet of Things Address
   d) Internet of Things Architecture

17. Which of the following is not a feature of the Raspberry PI model B IoT device?
   a) It has 256 MB SDRAM
   b) It has a single USB connector
   c) It has its own operating system
   d) It has an Ethernet port

18. Which of the following processor is used in the Raspberry PI 3 IoT device?
   a) Broadcom BCM2711
   b) Broadcom BCM2837
   c) Broadcom BCM2838
   d) Intel 8085

19. Which library is used to access I2C in Arduino IoT devices?
   a) EEPROM
   b) Wire
   c) DHT11
   d) ArduinoJson

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20. Which of the following is not related to Arduino IDE IoT software?

a) Serial monitor
b) Verify
c) Upload
d) Terminate

21. Which of the following is a complete line of home IoT devices that include smart switches?

a) Belkin's WeMo
b) Cinder
c) Awair
d) Canary

22. IoT gateway must provide _____

a) Protocol abstraction
b) Data storage
c) Security with hardware
d) Simple and fast installation

23. What IoT collects?

a) Device data
b) Machine generated data
c) Sensor data
d) Human generated data

24. Which of the following protocol is used to link all the devices in the IoT?

a) HTTP
b) UDP
c) Network
d) TCP/IP

25. Which service permits the changes to the IoT services?

a) Update
b) Registered service status
c) Enable from suspension
d) Enable

VAC Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Value Added Course on **"Internet of Things With Python"**

ANSWER KEY

1	d	**6**	b	**11**	d	**16**	d	**21**	a
2	d	**7**	a	**12**	c	**17**	a	**22**	a
3	a	**8**	c	**13**	c	**18**	b	**23**	b
4	d	**9**	d	**14**	a	**19**	b	**24**	d
5	c	**10**	d	**15**	b	**20**	d	**25**	a

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VAC Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Name of the Student : R. Vaishnavi **Year/Sem:** III / 05

AU Register Number: 912620104304

23/25

Value Added Course on **"Internet of Things With Python"**

MCQ QUESTIONS (25X1 = 25 Marks)

1. Which of the following is false about IoT devices?
   a) IoT devices use the internet for collecting and sharing data
   b) IoT devices need microcontrollers
   c) IoT devices use wireless technology
   d) IoT devices are completely safe

2. Which of the following is not an IoT platform?
   a) Amazon Web Services
   b) Microsoft Azure
   c) Salesforce
   d) Flipkart

3. Which of the following is not an application of IoT?
   a) BMP280
   b) Smart home
   c) Smart city
   d) Self-driven cars

4. Which of the following is not a fundamental component of an IoT system?
   a) Sensors
   b) Connectivity and data processing
   c) User interface
   d) Transformer

5. Which layer is used for wireless connection in IoT devices?
   a) Application layer
   b) Network layer
   c) Data link layer
   d) Transport layer

6. Which of the following is false about the IoT components?
   a) A light sensor (photoresistor) is an analog sensor
   b) A microphone is a digital sensor
   c) A push button is a digital sensor
   d) A keyboard is a digital sensor

7. Which of the following is used to capture data from the physical world in IoT devices?
   a) Sensors
   b) Actuators
   c) Microprocessors
   d) Microcontrollers

8. Which of the following command is used to trigger the Amazon echo IOT device?
   a) Hello
   b) Suri
   c) Alexa
   d) Hey

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9. Which of the following is false about the MANET IoT network?
   a) It is a self-configuring network
   b) It has a low data rate
   c) It doesn't have any encryption
   d) Power is readily available for complex security

10. Which of the following is not a sensor in IoT?
   a) BMP280
   b) DHT11
   c) Photoresistor
   d) LED

11. Which of the following is not an actuator in IoT?
   a) Stepper motor
   b) A fan
   c) An LED
   d) Arduino

12. What is the use of PWM signals in IoT development boards?
   a) They are used by sensors to have analog input
   b) They are used by sensors to have digital input
   c) They are used by actuators to have analog input
   d) They are used by actuators to have digital input

13. Which of the following is used to reprogram a Bootloader in IoT devices?
   a) VHDL programming
   b) IDE
   c) ICSP
   d) MANET

14. Which of the following is true about Arduino IoT devices?
   a) They are open-source software
   b) They can only read analog inputs
   c) They have their own operating systems
   d) They don't have pre-programmed firmware

15. How many number of elements in the Open IoT Architecture?
   a) 3 elements
   b) 7 elements
   c) 8 elements
   d) 6 elements

16. IoT-A stands for _____
   a) Internet of Things Area
   b) Industrial of things Architecture
   c) Internet of Things Address
   d) Internet of Things Architecture

17. Which of the following is not a feature of the Raspberry PI model B IoT device?
   a) It has 256 MB SDRAM
   b) It has a single USB connector
   c) It has its own operating system
   d) It has an Ethernet port

18. Which of the following processor is used in the Raspberry PI 3 IoT device?
   a) Broadcom BCM2711
   b) Broadcom BCM2837
   c) Broadcom BCM2838
   d) Intel 8085

19. Which library is used to access I2C in Arduino IoT devices?
   a) EEPROM
   b) Wire
   c) DHT11
   d) ArduinoJson

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20. Which of the following is not related to Arduino IDE IoT software?
a) Serial monitor
b) Verify
c) Upload
d) Terminate

21. Which of the following is a complete line of home IoT devices that include smart switches?
a) Belkin's WeMo
b) Cinder
c) Awair
d) Canary

22. IoT gateway must provide _____
a) Protocol abstraction
b) Data storage
c) Security with hardware
d) Simple and fast installation

23. What IoT collects?
a) Device data
b) Machine generated data
c) Sensor data
d) Human generated data

24. Which of the following protocol is used to link all the devices in the IoT?
a) HTTP
b) UDP
c) Network
d) TCP/IP

25. Which service permits the changes to the IoT services?
a) Update
b) Registered service status
c) Enable from suspension
d) Enable

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

MARK SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	ATTENDANCE DETAILS		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	912620104001	AKALYA S	III/CSE	12	100	22	88	94
2	912620104002	HEMA V	III/CSE	12	100	23	92	96
3	912620104003	ISWARYA R	III/CSE	12	100	24	96	98
4	912620104004	KALAIVANI S	III/CSE	12	100	20	80	90
5	912620104005	KALPANA K	III/CSE	12	100	18	72	86
6	912620104007	MEIYYAMMAL M	III/CSE	12	100	19	76	88
7	912620104008	NANDHINI P	III/CSE	12	100	21	84	92

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8	912620104009	PRASANNA DEVI P	III/CSE	12	100	20	80	90
9	912620104010	PRISHIYA E	III/CSE	12	100	21	84	92
10	912620104012	ROSAMMAL M	III/CSE	12	100	21	84	92
11	912620104013	ROSHIKA K	III/CSE	12	100	22	88	94
12	912620104014	SABHA AYSHA S	III/CSE	12	100	23	92	96
13	912620104015	SATHIYASRI P	III/CSE	12	100	22	88	94
14	912620104016	SIVAGAMI D	III/CSE	12	100	23	92	96
15	912620104017	SIVAHARINI S	III/CSE	12	100	21	84	92
16	912620104018	SUBASHINI C	III/CSE	12	100	22	88	94
17	912620104019	SUBASHINI M	III/CSE	12	100	23	92	96
18	912620104020	SWETHA D	III/CSE	12	100	23	92	96
19	912620104021	VANATHI T	III/CSE	12	100	22	88	100
20	912620104022	VINCIYA MARY S	III/CSE	12	100	21	84	92
21	912620104304	VAISHNAVI R	III/CSE	12	100	23	92	96

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22	912619104001	ANNAPOORANI M	IV /CSE	12	100	20	80	90
23	912619104003	ARUNNAVAMEENA A	IV/CSE	12	100	18	72	86
24	912619104004	DAYANA P	IV/CSE	12	100	21	84	92
25	912619104005	DHARSHINI D	IV/CSE	12	100	23	92	96
26	912619104007	FAHMIDHA B	IV/CSE	12	100	19	76	88
27	912619104009	GULNAS FATHIMA S	IV/CSE	12	100	19	76	88
28	912619104010	HELAN J	IV/CSE	12	100	24	96	98
29	912619104011	KEERTHANA R	IV/CSE	12	100	21	84	92
30	912619104012	MUTHULAKSHMI G	IV/CSE	12	100	22	88	94
31	912619104013	MUTHU MEENAKSHI M	IV/CSE	12	100	23	92	96
32	912619104014	NIROSHIKA R	IV/CSE	12	100	21	84	92
33	912619104017	PARAMESHWARI S	IV/CSE	12	100	21	84	92
34	912619104019	RANJANI K	IV/CSE	12	100	20	80	90
35	912619104020	RILWANA PARVEEN J	IV/CSE	12	100	23	92	96

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36	912619104021	ROOPINA R	IV/CSE	12	100	22	88	94
37	912619104022	SANDHIYA B	IV/CSE	12	100	21	84	92
38	912619104023	SANTHI D	IV/CSE	12	100	19	76	88
39	912619104024	SARANYA C	IV/CSE	12	100	18	72	86
40	912619104027	SNEHA R	IV/CSE	12	100	19	76	88
41	912619104029	SURIYA JOTHI S	IV/CSE	12	100	23	92	96
42	912619104301	ABINAYA S	IV/CSE	12	100	21	84	92

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Date : 16 / 08 / 2022

DEPARTMENT CIRCULAR

A Value added course on **"Internet of Things with Python"** will be conducted by **GALWIN Technology,Trichy** in the college campus for all Second year from 22.08.2022 to 26.08.2022. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Internet of Things With Python	**Resource Person:** Mr.Kamalakannan Trainer GALWIN Technology

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Cc:

- Principal's office
- IQAC Coordinator
- Class In charge-II year
- CSE Students – II year
- Notice Board.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Value Added Course on "INTERNET OF THINGS WITH PYTHON"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN
1	Understanding IoT fundamentals - IOT Architecture and protocols	3	22.08.2022
2	Various Platforms for IoT - Real time Examples of IoT	3	22.08.2022
3	Arduino Uno Architecture - Setup the IDE, Writing Arduino Software - Arduino Libraries	3	23.08.2022
4	Overview of IoT components and IoT Communication Technologies - Challenges in IOT	3	23.08.2022
5	Basics of Embedded C programming for Arduino	3	24.08.2022
6	Interfacing LED, push button and buzzer with Arduino	3	24.08.2022
7	Interfacing Arduino with LCD	3	25.08.2022
8	Overview of Sensors working - Analog and Digital Sensors	3	25.08.2022
9	Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino	3	26.08.2022
10	Interfacing of Actuators with Arduino	3	26.08.2022
	Total Periods :	**30**	

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DEPARTMENT OF COMPUTER SCENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

STUDENTS PARTICIPATION LIST-VAC PROGRAM

INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1.	912621104001	ABINAYA K	II /CSE
2.	912621104002	AMEERA N	II /CSE
3.	912621104003	ANJUGAM C	II /CSE
4.	912621104004	ARUNDATHI S	II /CSE
5.	912621104005	ASHIKA B	II /CSE
6.	912621104006	DIVYA T	II /CSE
7.	912621104007	ELACKIYA G	II /CSE
8.	912621104008	GAYATHRI K	II /CSE
9.	912621104009	GEETHA M	II /CSE
10.	912621104010	HARSHITHA P	II /CSE
11.	912621104011	ISHWARYA S	II /CSE
12.	912621104012	JANANI R	II /CSE
13.	912621104015	LAVANYA S	II /CSE
14.	912621104016	MAHASREE P	II /CSE
15.	912621104018	PRIYA M	II /CSE
16.	912621104019	RABIKA R	II /CSE
17.	912621104021	SAHEENA BEGAM A	II /CSE
18.	912621104022	SASIPRIYA R	II /CSE

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19.	912621104023	SHAMIMA P	II /CSE
20.	912621104024	SHEERA BANU A	II /CSE
21.	912621104025	SIVAJOTHIKA S	II /CSE
22.	912621104026	SIVAPRIYA R	II /CSE
23.	912621104027	SUBHA DHARSHINI S	II /CSE
24.	912621104028	SUBIKSHA S	II /CSE
25.	912621104029	VINITHA K	II /CSE
26.	912621104030	VISALATCHI S	II /CSE
27.	912621104301	VISHNAVI B	II /CSE
28.	912621104302	VISHNUPRIYA A	II /CSE
29.	912621104701	AARTHI S	II /CSE
30.	912621104702	SWATHI A.R	II /CSE

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DEPARTMENT OF COMPUTER SCENECE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

ATTENDANCE SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	DATE: 22.08.22		DATE: 23.08.22		DATE: 24.08.22		DATE: 25.08.22		DATE: 26.08.22		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1.	912621104001	ABINAYA K	II /CSE	/	/	/	/	/	/	/	/	/	/	10	K. Abinaya
2.	912621104002	AMEERA N	II /CSE	/	/	/	/	/	/	/	/	/	/	10	Ameera
3.	912621104003	ANJUGAM C	II /CSE	/	/	/	/	/	/	/	/	/	/	10	C. Anju.
4.	912621104004	ARUNDATHI S	II /CSE	/	/	/	/	/	/	/	/	/	/	10	S. Arun.
5.	912621104005	ASHIKA B	II /CSE	/	/	a	a	/	/	/	/	/	/	08	Aashika.
6.	912621104006	DIVYA T	II /CSE	/	/	/	/	/	/	/	/	a	a	08	T. Divya
7.	912621104007	ELACKIYA G	II /CSE	/	/	/	/	/	/	/	/	/	/	10	G. Elac.
8.	912621104008	GAYATHRI K	II /CSE	/	/	/	/	/	/	/	/	/	/	10	K. Gayathri.
9.	912621104009	GEETHA M	II /CSE	/	/	/	/	/	/	/	/	/	/	10	M. Geetha.
10.	912621104010	HARSHITHA P	II /CSE	/	/	/	/	/	/	/	/	/	/	10	P. Harshitha.
11.	912621104011	ISHWARYA S	II /CSE	/	/	/	/	/	/	/	/	/	/	10	S. Ishwarya

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12.	912621104012	JANANI R	II /CSE	/	/	/	/	/	/	/	/	/	/	10	R. Janani
13.	912621104015	LAVANYA S	II /CSE	a	a	/	/	/	/	/	/	/	/	08	S. Lavanya
14.	912621104016	MAHASREE P	II /CSE	/	/	/	/	/	/	/	/	/	/	10	P. Mahasree
15.	912621104018	PRIYA M	II /CSE	/	/	/	/	/	/	/	/	/	/	10	M. Priya
16.	912621104019	RABIKA R	II /CSE	/	/	/	/	/	/	/	/	/	/	10	R. Rabika
17.	912621104021	SAHEENA BEGAM A	II /CSE	/	/	/	/	/	/	/	/			10	Saheena begam A
18.	912621104022	SASIPRIYA R	II /CSE	/	/	/	/	/	/	/	/	/	/	10	P. Sasipriya
19.	912621104023	SHAMIMA P	II /CSE	/	/	a	a	/	/	/	/	/	/	08	R. Shamima
20.	912621104024	SHEERA BANU A	II /CSE	/	/	/	/	/	/	/	/	/	/	10	A. Sheera banu
21.	912621104025	SIVAJOTHIKA S	II /CSE	/	/	/	/	/	/	/	/	/	/	10	Sivajothika S
22.	912621104026	SIVAPRIYA R	II /CSE	/	/	/	/	/	/	/	/	/	/	10	R. Sivapriya
23.	912621104027	SUBHA DHARSHINI S	II /CSE	/	/	/	/	/	/	a	a	/	/	08	S. Subha
24.	912621104028	SUBIKSHA S	II /CSE	/	/	/	/	/	/	/	/			10	S. Subiksha
25.	912621104029	VINITHA K	II /CSE	/	/	/	/	/	/	/	/	/	/	10	K. Vinitha
26.	912621104030	VISALATCHI S	II /CSE	/	/	/	/	/	/	/	/	/	/	10	S. Viji
27.	912621104301	VISHNAVI B	II /CSE	/	/	/	/	/	/	/	/	/	/	10	B. Vishnavi
28.	912621104302	VISHNUPRIYA A	II /CSE	/	/	/	/	/	/	/	/	/	/	10	A. Vishnupriya
29.	912621104701	AARTHI S	II /CSE	/	/	/	/	/	/	/	/	/	/	10	S. Aarthi

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30.	912621104702	SWATHI A.R	II /CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	Swathiar

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Report on Value Added Course

Title:	Internet of Things with Python
Resource Person:	**Resource Person :** Mr.M.Kamalakannan Trainer Galwin Technology

Date of conduct from :	22.08.2022	To:	26.08.2022	Duration:	30 Hours
Organized Department :	Computer Science and Engineering				
Participant Year:	2	Semester:	ODD	No. of Students Registered :	30
Venue:	Auditorium				

Outcome of Value Added Course (VAC)

At the end of the VAC course the student can able to

- Explain fundamentals about IoT
- Illustration of IoT Access technologies
- Design methodology and different IoT hardware platforms.
- Identify with the application areas of IOT
- Realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
- Describe the building blocks of Internet of Things and characteristics.

Assessment Process

- Students securing **more than 60% on total score** and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 *Attendance in VAC out of 100 percentage + 0.5 *Test mark in VAC out of 100 marks)

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Certificate of completion

VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. AARTHI.S of II CSE has successfully completed Value Added Course on "Internet of Things with Python" organized by the Department of Computer Science And Engineering in association with Galwin Technology from 22.08.2022 to 26.08.2022 during the academic year 2022-2023 [5 Days].

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Galwin Technology

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SBECW

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Certificate of completion

VALUE ADDED PROGRAM

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Managing Director
Galwin Technology

HoD/CSE
SBECW

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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Name of the Student : **Year/Sem:**

AU Register Number:

Value Added Course on "**Internet of Things With Python**"

MCQ QUESTIONS (25X1 = 25 Marks)

1. Which of the following is false about IoT devices?
   a) IoT devices use the internet for collecting and sharing data
   b) IoT devices need microcontrollers
   c) IoT devices use wireless technology
   d) IoT devices are completely safe

2. Which of the following is not an IoT platform?
   a) Amazon Web Services
   b) Microsoft Azure
   c) Salesforce
   d) Flipkart

3. Which of the following is not an application of IoT?
   a) BMP280
   b) Smart home
   c) Smart city
   d) Self-driven cars

4. Which of the following is not a fundamental component of an IoT system?
   a) Sensors
   b) Connectivity and data processing
   c) User interface
   d) Transformer

5. Which layer is used for wireless connection in IoT devices?
   a) Application layer
   b) Network layer
   c) Data link layer
   d) Transport layer

6. Which of the following is false about the IoT components?
   a) A light sensor (photoresistor) is an analog sensor
   b) A microphone is a digital sensor
   c) A push button is a digital sensor
   d) A keyboard is a digital sensor

7. Which of the following is used to capture data from the physical world in IoT devices?
   a) Sensors
   b) Actuators
   c) Microprocessors
   d) Microcontrollers

8. Which of the following command is used to trigger the Amazon echo IOT device?
   a) Hello
   b) Suri
   c) Alexa
   d) Hey

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9. Which of the following is false about the MANET IoT network?
   a) It is a self-configuring network
   b) It has a low data rate
   c) It doesn't have any encryption
   d) Power is readily available for complex security

10. Which of the following is not a sensor in IoT?
   a) BMP280
   b) DHT11
   c) Photoresistor
   d) LED

11. Which of the following is not an actuator in IoT?
   a) Stepper motor
   b) A fan
   c) An LED
   d) Arduino

12. What is the use of PWM signals in IoT development boards?
   a) They are used by sensors to have analog input
   b) They are used by sensors to have digital input
   c) They are used by actuators to have analog input
   d) They are used by actuators to have digital input

13. Which of the following is used to reprogram a Bootloader in IoT devices?
   a) VHDL programming
   b) IDE
   c) ICSP
   d) MANET

14. Which of the following is true about Arduino IoT devices?
   a) They are open-source software
   b) They can only read analog inputs
   c) They have their own operating systems
   d) They don't have pre-programmed firmware

15. How many number of elements in the Open IoT Architecture?
   a) 3 elements
   b) 7 elements
   c) 8 elements
   d) 6 elements

16. IoT-A stands for _____
   a) Internet of Things Area
   b) Industrial of things Architecture
   c) Internet of Things Address
   d) Internet of Things Architecture

17. Which of the following is not a feature of the Raspberry PI model B IoT device?
   a) It has 256 MB SDRAM
   b) It has a single USB connector
   c) It has its own operating system
   d) It has an Ethernet port

18. Which of the following processor is used in the Raspberry PI 3 IoT device?
   a) Broadcom BCM2711
   b) Broadcom BCM2837
   c) Broadcom BCM2838
   d) Intel 8085

19. Which library is used to access I2C in Arduino IoT devices?
   a) EEPROM
   b) Wire
   c) DHT11
   d) ArduinoJson

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20. Which of the following is not related to Arduino IDE IoT software?

a) Serial monitor
b) Verify
c) Upload
d) Terminate

21. Which of the following is a complete line of home IoT devices that include smart switches?

a) Belkin's WeMo
b) Cinder
c) Awair
d) Canary

22. IoT gateway must provide _____

a) Protocol abstraction
b) Data storage
c) Security with hardware
d) Simple and fast installation

23. What IoT collects?

a) Device data
b) Machine generated data
c) Sensor data
d) Human generated data

24. Which of the following protocol is used to link all the devices in the IoT?

a) HTTP
b) UDP
c) Network
d) TCP/IP

25. Which service permits the changes to the IoT services?

a) Update
b) Registered service status
c) Enable from suspension
d) Enable

VAC Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Value Added Course on "**Internet of Things With Python**"

ANSWER KEY

1	d	**6**	b	**11**	d	**16**	d	**21**	a
2	d	**7**	a	**12**	c	**17**	a	**22**	a
3	a	**8**	c	**13**	c	**18**	b	**23**	b
4	d	**9**	d	**14**	a	**19**	b	**24**	d
5	c	**10**	d	**15**	b	**20**	d	**25**	a

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Name of the Student : G. Keerthiga **Year/Sem:** II / 03

AU Register Number: 912621104007

Value Added Course on **"Internet of Things With Python"**

24/25

MCQ QUESTIONS (25X1 = 25 Marks)

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DEPARTMENT OF COMPUTER SCEIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

MARK SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	ATTENDANCE DETAILS		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	912621104001	ABINAYA K	II /CSE	10	100	22	88	94
2	912621104002	AMEERA N	II /CSE	10	100	23	92	96
3	912621104003	ANJUGAM C	II /CSE	10	100	21	84	92
4	912621104004	ARUNDATHI S	II /CSE	10	100	19	76	88
5	912621104005	ASHIKA B	II /CSE	8	80	20	80	80
6	912621104006	DIVYA T	II /CSE	8	80	21	84	82
7	912621104007	ELACKIYA G	II /CSE	10	100	24	96	98

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8	912621104008	GAYATHRI K	II /CSE	10	100	21	84	92
9	912621104009	GEETHA M	II /CSE	10	100	22	88	94
10	912621104010	HARSHITHA P	II /CSE	10	100	21	84	92
11	912621104011	ISHWARYA S	II /CSE	10	100	23	92	96
12	912621104012	JANANI R	II /CSE	10	100	24	96	98
13	912621104015	LAVANYA S	II /CSE	8	80	21	84	82
14	912621104016	MAHASREE P	II /CSE	10	100	22	88	94
15	912621104018	PRIYA M	II /CSE	10	100	24	96	98
16	912621104019	RABIKA R	II /CSE	10	100	19	76	88
17	912621104021	SAHEENA BEGAM A	II /CSE	10	100	24	96	98
18	912621104022	SASIPRIYA R	II /CSE	10	100	19	76	88
19	912621104023	SHAMIMA P	II /CSE	8	80	23	92	86
20	912621104024	SHEERA BANU A	II /CSE	10	100	23	92	96
21	912621104025	SIVAJOTHIKA S	II /CSE	10	100	20	80	90

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22	912621104026	SIVAPRIYA R	II /CSE	10	100	22	88	94
23	912621104027	SUBHA DHARSHINI S	II /CSE	8	80	23	92	86
24	912621104028	SUBIKSHA S	II /CSE	10	100	21	84	92
25	912621104029	VINITHA K	II /CSE	10	100	19	76	88
26	912621104030	VISALATCHI S	II /CSE	10	100	18	72	86
27	912621104301	VISHNAVI B	II /CSE	10	100	19	76	88
28	912621104302	VISHNUPRIYA A	II /CSE	10	100	21	84	92
29	912621104701	AARTHI S	II /CSE	10	100	18	72	86
30	912621104702	SWATHI A.R	II /CSE	10	100	19	76	88

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Date: 24 / 1 /2023

DEPARTMENT CIRCULAR

Certificate Course offered by the Department of CSE will be conducted for all final year CSE students on **"Building Scalable Web application using Node JS"** in our College campus. The classes will be held as per the schedule mentioned in the class time table. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	**Building Scalable Web application using Node JS**	**Resource Person 1:** Mrs.Parveen Banu AP/CSE

HoD/CSE

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CC:

- Principal's office
- IQAC Coordinator
- Class In charges –IV Year
- CSE Students - IV Year
- Notice Board

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN
1	Introduction to web programming-Introduction to HTML	2	03.02.2023
2	HTML Basic Formatting Tags- -HTML Images-HTML	2	10.02.2023
3	Hyperlink-HTML Tables-HTML iFrame- HTML Form	2	17.02.2023
4	HTML Headers-HTML Miscellaneous.	2	24.02.2023
5	Getting Started with Angular - Angular Development Environment Setup	2	03.03.2023
6	Creating Components and Modules - Templates – Directives	2	10.03.2023
7	Data Binding – Pipes - Nested Components – Forms - Services – Routing	2	17.03.2023
8	Node.js: Why and What Node.js - How to use Node.js - Create a web server in Node.js -Node Package Manager	2	24.03.2023
9	Modular programming in Node.js - Restarting Node Application - File Operations	2	31.03.2023
10	Express Development Environment - defining a route - Handling Routes - Route and Query Parameters - How Middleware works	2	15.04.2023
11	Chaining of Middleware's - Types of Middleware's - connecting to MongoDB with Mongoose -	2	21.04.2023
12	Validation Types and Defaults – Models	2	28.04.2023
13	MongoDB: Introduction Module Overview- Document Database Overview- Understanding JSON	2	29.04.2023
14	MongoDB Structure and Architecture- MongoDB Remote Management-	2	05.05.2023
15	Installing MongoDB on the local computer (Mac or Windows)	2	12.05.2023
	Total Hours :	**30**	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Cerificate course on "Building scalable web application using Node js"

STUDENTS PARTICIPATION LIST- CC PROGRAM

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1.	912619104001	ANNAPOORANI M	IV / CSE
2.	912619104003	ARUNNAVAMEENA A	IV / CSE
3.	912619104004	DAYANA P	IV / CSE
4.	912619104005	DHARSHINI D	IV / CSE
5.	912619104007	FAHMIDHA B	IV / CSE
6.	912619104009	GULNAS FATHIMA S	IV / CSE
7.	912619104010	HELAN J	IV / CSE
8.	912619104011	KEERTHANA R	IV / CSE
9.	912619104012	MUTHULAKSHMI G	IV / CSE
10.	912619104013	MUTHU MEENAKSHI M	IV / CSE
11.	912619104014	NIROSHIKA R	IV / CSE
12.	912619104017	PARAMESHWARI S	IV / CSE
13.	912619104019	RANJANI K	IV / CSE
14.	912619104020	RILWANA PARVEEN J	IV / CSE
15.	912619104021	ROOPINA R	IV / CSE
16.	912619104022	SANDHIYA B	IV / CSE
17.	912619104023	SANTHI D	IV / CSE
18.	912619104024	SARANYA C	IV / CSE

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19.	912619104027	SNEHA R	IV / CSE
20.	912619104029	SURIYA JOTHI S	IV / CSE
21.	912619104301	ABINAYA S	IV / CSE

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S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	3.2.23	10.2.23	17.2.23	24.2.23	3.3.23	10.3.23	17.3.23	24.3.23	31.3.23	NO OF HRS ATTENDED	SIGNATURE OF THE STUDENT
				2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs		
1	912619104001	ANNAPOORANI M	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Aanja
2	912619104003	ARUNNAVAMEENA A	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Arunya
3	912619104004	DAYANA P	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Dayay
4	912619104005	DHARSHINI D	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Dhy.
5	912619104007	FAHMIDHA B	IV / CSE	✓	✓	✓	a	✓	a	✓	✓	a	12	B. Rahya
6	912619104009	GULNAS FATHIMA S	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Gany
7	912619104010	HELAN J	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Helan
8	912619104011	KEERTHANA R	IV / CSE	✓	✓	✓	✓	✓	✓	✓	✓	✓	18	Keyn

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9	912619104012	MUTHULAKSHMI G	IV / CSE										18	
10	912619104013	MUTHU MEENAKSHI M	IV / CSE										18	
11	912619104014	NIROSHIKA R	IV / CSE										18	
12	912619104017	PARAMESHWARI S	IV / CSE										18	
13	912619104019	RANJANI K	IV / CSE										18	
14	912619104020	RILWANA PARVEEN J	IV / CSE										18	
15	912619104021	ROOPINA R	IV / CSE										18	
16	912619104022	SANDHIYA B	IV / CSE										18	
17	912619104023	SANTHI D	IV / CSE	a				a				a	12	
18	912619104024	SARANYA C	IV / CSE										18	
19	912619104027	SNEHA R	IV / CSE										18	
20	912619104029	SURIYA JOTHI S	IV / CSE										18	
21	912619104301	ABINAYA S	IV / CSE										18	

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ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	15.4.23	21.4.23	28.4.23	29.4.23	5.05.23	12.5.23	NO OF SESSION ATTENDED	SIGNATURE OF THE STUDENT
				2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs		
1	912619104001	ANNAPOORANI M	IV / CSE	/	/	/	/	/	/	12	Anna
2	912619104003	ARUNNAVAMEENA A	IV / CSE	/	/	/	/	/	/	12	Arunya
3	912619104004	DAYANA P	IV / CSE	/	/	/	/	/	/	12	Dayana
4	912619104005	DHARSHINI D	IV / CSE	/	/	/	/	/	/	12	Dha
5	912619104007	FAHMIDHA B	IV / CSE	/	/	/	/	/	/	12	B'Rahya
6	912619104009	GULNAS FATHIMA S	IV / CSE	/	/	/	/	/	/	12	Gul
7	912619104010	HELAN J	IV / CSE	/	/	/	/	/	/	12	Helan
8	912619104011	KEERTHANA R	IV / CSE	/	/	/	/	/	/	12	Keer

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9	912619104012	MUTHULAKSHMI G	IV / CSE	/	/	/	/	/	/	12	
10	912619104013	MUTHU MEENAKSHI M	IV / CSE	/	/	/	/	/	/	12	
11	912619104014	NIROSHIKA R	IV / CSE	/	/	/	/	/	/	12	
12	912619104017	PARAMESHWARI S	IV / CSE	/	/	/	/	/	/	12	
13	912619104019	RANJANI K	IV / CSE	/	/	/	/	/	/	12	
14	912619104020	RILWANA PARVEEN J	IV / CSE	/	/	/	/	/	/	12	
15	912619104021	ROOPINA R	IV / CSE	/	/	/	/	/	/	12	
16	912619104022	SANDHIYA B	IV / CSE	/	/	/	/	/	/	12	
17	912619104023	SANTHI D	IV / CSE	/	/	/	/	/	/	12	
18	912619104024	SARANYA C	IV / CSE	/	/	/	/	/	/	12	
19	912619104027	SNEHA R	IV / CSE	/	/	/	/	/	/	12	
20	912619104029	SURIYA JOTHI S	IV / CSE	/	/	/	/	/	/	12	
21	912619104301	ABINAYA S	IV / CSE	/	/	/	/	/	/	12	

CC Coordinator

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Report on Certificate Course

Title:	**Building scalable web application using Node js"**
Resource Person:	**Resource Person :** Mrs.Parveen Banu AP/CSE

Date of conduct from :	03.02.2023	To:	12.05.2023	Duration:	30 Hours
Organized Department :	COMPUTER SCIENCE AND ENGINEERING				
Participant Year:	4 (CSE)	Semester:	EVEN	No. of Students Registered :	21
Venue:	Lecture Hall 65				

Outcome of Certificate Course (CC)

At the end of the CC course the student can able to

- Develop algorithmic solutions to simple computational problems.
- Develop and execute simple Full stack framework.
- Write simple Python programs using conditionals and loops for solving problems.
- Decompose a Python program into functions.

Assessment Process

- Students securing **more than 60% on total score** and secured more than 75% in attendance is eligible to receive the certificate for the CC course conducted
- Total Score = (0.5 *Attendance in CC out of 100 percentage + 0.5 *Test mark in CC out of 100 marks)

CC Coordinator | **HoD / CSE** | **Principal**

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PUDUKKOTTAI - 622 303

PRINCIPAL
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KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT

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Certificate of Completion

This certificate is awarded to Ms.R.ROOPINA of **IV CSE** in recognition of their successful completion o f certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

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Certificate of Completion

This certificate is awarded to **Ms.S.ABINAYA** of **IV CSE** in recognition of their successful completion o f certificate course on **BUILDING SCALABLE WEB APPLICATION USING NODE JS** during the academic year 2022-2023 even semester.

Course Coordinator

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Certificate of Completion

This certificate is awarded to Ms.D.SANTHI of **IV CSE** in recognition of their successful completion o f certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on **"Building Scalable Web application using Node JS"**

Name of the Student : **Year/Sem:**

AU Register Number:

MCQ QUESTIONS (25X1 = 25 Marks)

1. Node.js is written in

A. JavaScript B. C

C. C++ D. All of the above

2. Which of the following statement is correct?

A. js is Server Side Language. B. js is the Client Side Language.

C. js is both Server Side and Client Side Language. D. None of the above

3. What does the REPL stand for?

A. REPL stands for "Read Eval Print Loop." B. REPL stands for "Research Eval Program Learn."

C. REPL stands for "Read Earn Point Learn." D. REPL stands for "Read Eval Point Loop."

4. How modules in Node.js can be connected from one component to another ?

A.Expose B.Module

C.Exports D.All of the above

5. Which of the below modules is not a built-in module in Node.js ?

A.zlib B.HTTPS

C.dgram D.fsread

6 Which of the below command will show all the modules installed locally ?

A. npm ls –g B .npm ls

C .node ls –g D .node ls

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7. Which of the below fs module is used to truncate a file ?

A. fs.delete(fd, len, callback)

B.fs.remove(fd, len, callback)

C.fs.ftruncate(fd, len, callback)

D.None of the above.

8. How do we return a path string from the given path object in Node.js ?

A.path.get()

B.path.set()

C.path.format()

D.path.return()

9. What is the default scope in the Node.js application ?

A.Global

B.Local

C.Global Function

D.Local to object

10. Which of the below method is used to return the current working directory of the process ?

A.cwd();

B .cmd();

C.pwd();

D .None of the above

11. What does the fs module stand for?

A.FileStore

B .FileService

C.File System

D .None of the above

12. Which of the below options is correct about package.json in the node.js application?

A.It is present in the root directory of any Node application.

B.It is used to define the properties of a package.

C.It is used to update the dependencies of an application.

D.All of the above.

13. Which of the below is the correct syntax for installing the Nodemon in the Node.js application ?

A. npm install -g nodemon

B. node install -g nodemon

C. node install node

D. node install -l nodemon

14. Which of the following command is used to start a REPL session?

A.$ node

B.$ node start

C.$ node repl

D.$ node console

15. In which language is Node.js written?

A. JavaScript

B. C

C. C++

D. CoffeeScript

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E. All of the above

16 Which of the following command is used to install the Node.js express module?

A.$ npm install express
B.$ node install express
C.$ install express
D. None of the above

17. What is Callback?

A. The callback is a technique in which a method calls back the caller method.

B. The callback is an asynchronous equivalent for a function.

C. Both of the above.

D. None of the above.

18. Which of the following extension is used to save the Node.js files?

A. .js
B. .node
C. .java
D. .txt

19 The Node.js modules can be exposed using:

A.expose
B.module
C.exports
D. All of the above

20. Which of the following module is not a built-in node module?

A. zlib
B. https
C. dgram
D. fsread

21. Which node module is used to handle binary data?

A. binary
B. buffer
C. Cyrpto
D. dgram

22. How many node objects methods are available?

A. 21
B. 18
C. 19
D. 20

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23. Which of the following operations can we do with the NodeJS events module?

A. Create

B. Listen for

C. Fire

D. All of the above

24. Which of the following is a valid HTTP method?

A. get

B. put

C. post

D. All of the above

25. Which of the following NodeJS modules is used for file uploads?

A. formidable

B. fs

C. express

D. files

CC Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building scalable web application using Node js"

ANSWER KEY

1	d	**6**	b	**11**	c	**16**	a	**21**	b
2	a	**7**	c	**12**	d	**17**	b	**22**	b
3	a	**8**	c	**13**	a	**18**	a	**23**	d
4	c	**9**	b	**14**	a	**19**	c	**24**	d
5	d	**10**	a	**15**	c	**20**	d	**25**	b

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building scalable web application using Node js"

Name of the Student : D. Dhasshini **Year/Sem:** IV/08

AU Register Number: 912619104005

24/25.

MCQ QUESTIONS (25X1 = 25 Marks)

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8. How do we return a path string from the given path object in Node.js ?

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b) .node
c) .java
d) .txt

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a) expose
b) module
c) exports
d) All of the above

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b) 18
c) 19
d) 20

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b) put
c) post
d) All of the above

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a) formidable
b) . fs
c) express
d) files

CC Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building scalable web application using Node js"

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	ATTENDANCE DETAILS		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No of HRS Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	912619104001	ANNAPOORANI M	IV / CSE	30	100	24	96	98
2	912619104003	ARUNNAVAMEENA A	IV / CSE	30	100	23	92	96
3	912619104004	DAYANA P	IV / CSE	30	100	22	88	94
4	912619104005	DHARSHINI D	IV / CSE	30	100	24	96	98
5	912619104007	FAHMIDHA B	IV / CSE	24	80	20	80	80
6	912619104009	GULNAS FATHIMA S	IV / CSE	30	100	23	92	96

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7	912619104010	HELAN J	IV / CSE	30	100	21	84	92
8	912619104011	KEERTHANA R	IV / CSE	30	100	22	88	94
9	912619104012	MUTHULAKSHMI G	IV / CSE	30	100	24	96	98
10	912619104013	MUTHU MEENAKSHI M	IV / CSE	30	100	23	92	96
11	912619104014	NIROSHIKA R	IV / CSE	30	100	25	100	100
12	912619104017	PARAMESHWARI S	IV / CSE	30	100	22	88	94
13	912619104019	RANJANI K	IV / CSE	30	100	23	92	96
14	912619104020	RILWANA PARVEEN J	IV / CSE	30	100	20	80	90
15	912619104021	ROOPINA R	IV / CSE	30	100	20	80	90
16	912619104022	SANDHIYA B	IV / CSE	30	100	21	84	92
17	912619104023	SANTHI D	IV / CSE	24	80	22	88	84
18	912619104024	SARANYA C	IV / CSE	30	100	23	92	96
19	912619104027	SNEHA R	IV / CSE	30	100	24	96	98
20	912619104029	SURIYA JOTHI S	IV / CSE	30	100	22	88	94

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21	912619104301	ABINAYA S	IV / CSE	30	100	25	100	100

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Date: 24 / 01 /2023

DEPARTMENT CIRCULAR

Certificate Course offered by the Department of CSE will be conducted for all Second year and Third year CSE students on **"Building Scalable Web application using Node JS"** from 30.01.2023 to 03.02.2023 . Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	**Building Scalable Web application using Node JS**	**Resource Person 1:** Ms. EL.Thanga Uma AP / CSE **Resource Peron 2:** Ms.G.Rajalakshmi AP/CSE

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CC:

- Principal's office
- IQAC Coordinator
- Class In charges – II, III Year
- CSE Students - II, III Year
- Notice Board

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building Scalable web applications using Node js"

SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN	Resource Person
1	Introduction to web programming-Introduction to HTML-HTML Basic Formatting Tags- -HTML Images-HTML	3	30.01.2023	EL.Thanga Uma
2	Hyperlink-HTML Tables-HTML iFrame-HTML Form-HTML Headers-HTML Miscellaneous.	3	30.01.2023	G.Rajalakshmi
3	Getting Started with Angular - Angular Development Environment Setup - Creating Components and Modules	3	31.01.2023	EL.Thanga Uma
4	Templates – Directives - Data Binding – Pipes - Nested Components – Forms -Services – Routing	3	31.01.2023	G.Rajalakshmi
5	Node.js: Why and What Node.js - How to use Node.js - Create a web server in Node.js - Node Package Manager	3	01.02.2023	EL.Thanga Uma
6	Modular programming in Node.js - Restarting Node Application - File Operations	3	01.02.2023	G.Rajalakshmi
7	Express Development Environment - defining a route - Handling Routes - Route and Query Parameters - How Middleware works	3	02.02.2023	EL.Thanga Uma
8	Chaining of Middleware's - Types of Middleware's - connecting to MongoDB with Mongoose - Validation Types and Defaults – Models	3	02.02.2023	G.Rajalakshmi
9	MongoDB: Introduction Module Overview-Document Database Overview- Understanding JSON	3	03.02.2023	EL.Thanga Uma
10	MongoDB Structure and Architecture- MongoDB Remote Management- Installing MongoDB on the local computer (Mac or Windows)	3	03.02.2023	G.Rajalakshmi
	Total Hours :	**30**		

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ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

STUDENT PARTICIPATION LIST-CC PROGRAM

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1	912620104001	AKALYA S	III / CSE
2	912620104002	HEMA V	III / CSE
3	912620104004	KALAIVANI S	III / CSE
4	912620104005	KALPANA K	III / CSE
5	912620104007	MEIYYAMMAL M	III / CSE
6	912620104008	NANDHINI P	III / CSE
7	912620104009	PRASANNA DEVI P	III / CSE
8	912620104010	PRISHIYA E	III / CSE
9	912620104012	ROSAMMAL M	III / CSE
10	912620104013	ROSHIKA K	III / CSE
11	912620104014	SABHA AYSHA S	III / CSE
12	912620104015	SATHIYASRI P	III / CSE
13	912620104016	SIVAGAMI D	III / CSE
14	912620104017	SIVAHARINI S	III / CSE
15	912620104018	SUBASHINI C	III / CSE
16	912620104019	SUBASHINI M	III / CSE
17	912620104020	SWETHA D	III / CSE
18	912620104021	VANATHI T	III / CSE
19	912620104022	VINCIYA MARY S	III / CSE
20	912620104304	VAISHNAVI R	III / CSE

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21	912621104001	ABINAYA K	II / CSE
22	912621104002	AMEERA N	II / CSE
23	912621104003	ANJUGAM C	II / CSE
24	912621104004	ARUNDATHI S	II / CSE
25	912621104005	ASHIKA B	II / CSE
26	912621104006	DIVYA T	II / CSE
27	912621104007	ELACKIYA G	II / CSE
28	912621104008	GAYATHRI K	II / CSE
29	912621104009	GEETHA M	II / CSE
30	912621104010	HARSHITHA P	II / CSE
31	912621104011	ISHWARYA S	II / CSE
32	912621104012	JANANI R	II / CSE
33	912621104015	LAVANYA S	II / CSE
34	912621104016	MAHASREE P	II / CSE
35	912621104018	PRIYA M	II / CSE
36	912621104019	RABIKA R	II / CSE
37	912621104021	SAHEENA BEGAM A	II / CSE
38	912621104022	SASIPRIYA R	II / CSE
39	912621104023	SHAMIMA P	II / CSE
40	912621104024	SHEERA BANU A	II / CSE
41	912621104025	SIVAJOTHIKA S	II / CSE
42	912621104026	SIVAPRIYA R	II / CSE
43	912621104027	SUBHA DHARSHINI S	II / CSE
44	912621104028	SUBIKSHA S	II / CSE
45	912621104029	VINITHA K	II / CSE
46	912621104030	VISALATCHI S	II / CSE
47	912621104301	VAISHNAVI .B	II / CSE

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48	912621104302	VISHNU PRIYA. A	II / CSE
49	912621104701	AARTHI. S	II / CSE
50	912621104702	SWATHI. A.R	II / CSE

CC Coordinator

HoD / CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building Scalable web application using Node js"

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	DATE 30.01.23		DATE 31.01.23		DATE 01.02.23		DATE 02.02.23		DATE 03.02.23		NO OF SESSIONS ATTENDED	SIGNATURE OF THE STUDENT
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN		
1	912620104001	AKALYA S	III / CSE	/	/	/	/	/	/	/	/	/	/	10	S. Akalya
2	912620104002	HEMA V	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Hema
3	912620104004	KALAIVANI S	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Kalaivani
4	912620104005	KALPANA K	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Kalpana
5	912620104007	MEIYYAMMAL M	III / CSE	/	/	a	a	/	/	/	/	/	/	08	Meiyyammal
6	912620104008	NANDHINI P	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Nandhini
7	912620104009	PRASANNA DEVI P	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Prasanna
8	912620104010	PRISHIYA E	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Prishiya
9	912620104012	ROSAMMAL M	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Rosamma
10	912620104013	ROSHIKA K	III / CSE	/	/	/	/	/	/	/	/	/	/	10	Roshika

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11	912620104014	SABHA AYSHA S	III / CSE												10	
12	912620104015	SATHIYASRI P	III / CSE												10	
13	912620104016	SIVAGAMI D	III / CSE												10	
14	912620104017	SIVAHARINI S	III / CSE												10	
15	912620104018	SUBASHINI C	III / CSE												10	
16	912620104019	SUBASHINI M	III / CSE												10	
17	912620104020	SWETHA D	III / CSE	a	a										08	
18	912620104021	VANATHI T	III / CSE												10	
19	912620104022	VINCIYA MARY S	III / CSE												10	
20	912620104304	VAISHNAVI R	III / CSE												10	
21	912621104001	ABINAYA K	II / CSE												10	
22	912621104002	AMEERA N	II / CSE												10	
23	912621104003	ANJUGAM C	II / CSE												10	
24	912621104004	ARUNDATHI S	II / CSE												10	
25	912621104005	ASHIKA B	II / CSE												10	
26	912621104006	DIVYA T	II / CSE												10	
27	912621104007	ELACKIYA G	II / CSE												10	
28	912621104008	GAYATHRI K	II / CSE												10	

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29	912621104009	GEETHA M	II / CSE	/	/	/	/	/	/	/	/	/	/	10	Geetha.
30	912621104010	HARSHITHA P	II / CSE	/	/	/	/	/	/	/	/	/	/	10	P.Harsh.
31	912621104011	ISHWARYA S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	S.Ishw.
32	912621104012	JANANI R	II / CSE	/	/	/	/	/	/	/	/	/	/	10	Janani.R
33	912621104015	LAVANYA S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	S.Lavanya
34	912621104016	MAHASREE P	II / CSE	/	/	a	a	/	/	/	/	/	/	08	Mahasreep.
35	912621104018	PRIYA M	II / CSE	/	/	/	/	/	/	/	/	/	/	10	Priy.
36	912621104019	RABIKA R	II / CSE	/	/	/	/	/	/	/	/	/	/	10	Rab.
37	912621104021	SAHEENA BEGAM A	II / CSE	/	/	/	/	/	/	/	/	/	/	10	Saha
38	912621104022	SASIPRIYA R	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]
39	912621104023	SHAMIMA P	II / CSE	/	/	/	/	/	/	/	/	/	/	10	S.Sha.
40	912621104024	SHEERA BANU A	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]
41	912621104025	SIVAJOTHIKA S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	S
42	912621104026	SIVAPRIYA R	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]
43	912621104027	SUBHA DHARSHINI S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]
44	912621104028	SUBIKSHA S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]
45	912621104029	VINITHA K	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]
46	912621104030	VISALATCHI S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	[illegible]

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47	912621104301	VAISHNAVI .B	II / CSE	/	/	/	/	/	/	/	/	/	/	10	
48	912621104302	VISHNU PRIYA. A	II / CSE	/	/	/	/	/	/	/	/	/		10	
49	912621104701	AARTHI. S	II / CSE	/	/	/	/	/	/	/	/	/	/	10	
50	912621104702	SWATHI. A.R	II / CSE	/	/	/	/	/	/	/	/	/	/	10	

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Report on Certificate Course

Title:	**Building Scalable web application using Node js**				
Resource Person:	**Resource Person 1:** Ms. EL.Thanga Uma AP / CSE		**Resource Peron 2:** Ms.G.Rajalakshmi AP/CSE		
Date of conduct from :	**30.01.2023**	To:	**03.02.2023**	Duration:	**30 Hours**
Organized Department :	**COMPUTER SCIENCE AND ENGINEERING**				
Participant Year:	**2,3 (CSE)**	Semester:	**EVEN**	No. of Students Registered :	**50**
Venue:	**Auditorium, II Floor**				

Outcome of Cetificate Course (CC)

At the end of the Certificate course the student can able to

- Develop algorithmic solutions to simple computational problems.
- Develop and execute simple Full stack framework.
- Write simple Python programs using conditionals and loops for solving problems.
- Decompose a Python program into functions.

Assessment Process

- Student securing **more than 60% on total score** and secured more than 75% in attendance is eligible to receive the certificate for the **CC** course conducted
- Total Score = (0.5 *Attendance in **CC** out of 100 percentage + 0.5 *Test mark in **CC** out of 100 marks)

VAC Coordinator **HoD / CSE** **Principal** 07/02/23

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KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Certificate of Completion

This certificate is awarded to Ms.D.SWETHA of **III CSE** in recognition of their successful completion o f certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

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Certificate of Completion

This certificate is awarded to Ms.M.GEETHA of **II CSE** in recognition of their successful completion o f certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on **"Building Scalable Web application using Node JS"**

Name of the Student : **Year/Sem:**

AU Register Number:

MCQ QUESTIONS (25X1 = 25 Marks)

1. Node.js is written in

A. JavaScript B. C

C. C++ D. All of the above

2. Which of the following statement is correct?

A. js is Server Side Language. B. js is the Client Side Language.

C. js is both Server Side and Client Side Language. D. None of the above

3. What does the REPL stand for?

A. REPL stands for "Read Eval Print Loop." B. REPL stands for "Research Eval Program Learn."

C. REPL stands for "Read Earn Point Learn." D. REPL stands for "Read Eval Point Loop."

4. How modules in Node.js can be connected from one component to another ?

A.Expose B.Module

C.Exports D.All of the above

5. Which of the below modules is not a built-in module in Node.js ?

A.zlib B.HTTPS

C.dgram D.fsread

6 Which of the below command will show all the modules installed locally ?

A. npm ls –g B .npm ls

C .node ls –g D .node ls

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7. Which of the below fs module is used to truncate a file ?

A. fs.delete(fd, len, callback)

B.fs.remove(fd, len, callback)

C.fs.ftruncate(fd, len, callback)

D.None of the above.

8. How do we return a path string from the given path object in Node.js ?

A.path.get()

B.path.set()

C.path.format()

D.path.return()

9. What is the default scope in the Node.js application ?

A.Global

B.Local

C.Global Function

D.Local to object

10. Which of the below method is used to return the current working directory of the process ?

A.cwd();

B .cmd();

C.pwd();

D .None of the above

11. What does the fs module stand for?

A.FileStore

B .FileService

C.File System

D .None of the above

12. Which of the below options is correct about package.json in the node.js application?

A.It is present in the root directory of any Node application.

B.It is used to define the properties of a package.

C.It is used to update the dependencies of an application.

D.All of the above.

13. Which of the below is the correct syntax for installing the Nodemon in the Node.js application ?

A. npm install -g nodemon

B. node install -g nodemon

C. node install node

D. node install -l nodemon

14. Which of the following command is used to start a REPL session?

A.$ node

B.$ node start

C.$ node repl

D.$ node console

15. In which language is Node.js written?

A. JavaScript

B. C

C. C++

D. CoffeeScript

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E. All of the above

16 Which of the following command is used to install the Node.js express module?

A.$ npm install express
B.$ node install express
C.$ install express
D. None of the above

17. What is Callback?

A. The callback is a technique in which a method calls back the caller method.

B. The callback is an asynchronous equivalent for a function.

C. Both of the above.

D. None of the above.

18. Which of the following extension is used to save the Node.js files?

A. .js
B. .node
C. .java
D. .txt

19 The Node.js modules can be exposed using:

A.expose
B.module
C.exports
D. All of the above

20. Which of the following module is not a built-in node module?

A. zlib
B. https
C. dgram
D. fsread

21. Which node module is used to handle binary data?

A. binary
B. buffer
C. Cyrpto
D. dgram

22. How many node objects methods are available?

A. 21
B. 18
C. 19
D. 20

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23. Which of the following operations can we do with the NodeJS events module?

A. Create

B. Listen for

C. Fire

D. All of the above

24. Which of the following is a valid HTTP method?

A. get

B. put

C. post

D. All of the above

25. Which of the following NodeJS modules is used for file uploads?

A. formidable

B. fs

C. express

D. files

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CC Coordinator

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

ANSWER KEY

1	d	**6**	b	**11**	c	**16**	a	**21**	b
2	a	**7**	c	**12**	d	**17**	b	**22**	b
3	a	**8**	c	**13**	a	**18**	a	**23**	d
4	c	**9**	b	**14**	a	**19**	c	**24**	d
5	d	**10**	a	**15**	e	**20**	d	**25**	b

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

Name of the Student : K. Kalpana **Year/Sem:** III / 06.

AU Register Number: 912620104005

MCQ QUESTIONS (25X1 = 25 Marks)

1. Node.js is written in

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d) None of the above.

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8. How do we return a path string from the given path object in Node.js ?

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b) Local
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b) https
c) dgram
d) fsread

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b) buffer
c) Cyrpto
d) dgram

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b) 18
c) 19
d) 20

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b) Listen for
c) Fire
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c) post
d) All of the above

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a) formidable
b) fs
c) express
d) files

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Kaikkurchi - 622 303, Pudukkottai Dt.

CC Coordinator

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	ATTENDANCE DETAILS		VAC-MCQ TEST		OVERALL MARK(100) (50% of A + 50% of B)
				No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	
1	912620104001	AKALYA S	III / CSE	10	100	21	84	92
2	912620104002	HEMA V	III / CSE	10	100	18	72	86
3	912620104004	KALAIVANI S	III / CSE	10	100	19	76	88
4	912620104005	KALPANA K	III / CSE	10	100	20	80	90
5	912620104007	MEIYYAMMAL M	III / CSE	8	80	21	84	82
6	912620104008	NANDHINI P	III / CSE	10	100	23	92	96
7	912620104009	PRASANNA DEVI P	III / CSE	10	100	24	96	98
8	912620104010	PRISHIYA E	III / CSE	10	100	22	88	94

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9	912620104012	ROSAMMAL M	III / CSE	10	100	24	96	98
10	912620104013	ROSHIKA K	III / CSE	10	100	19	76	88
11	912620104014	SABHA AYSHA S	III / CSE	10	100	22	88	94
12	912620104015	SATHIYASRI P	III / CSE	10	100	23	92	96
13	912620104016	SIVAGAMI D	III / CSE	10	100	24	96	98
14	912620104017	SIVAHARINI S	III / CSE	10	100	21	84	92
15	912620104018	SUBASHINI C	III / CSE	10	100	19	76	88
16	912620104019	SUBASHINI M	III / CSE	10	100	17	68	84
17	912620104020	SWETHA D	III / CSE	8	80	24	96	88
18	912620104021	VANATHI T	III / CSE	10	100	22	88	94
19	912620104022	VINCIYA MARY S	III / CSE	10	100	24	96	98
20	912620104304	VAISHNAVI R	III / CSE	10	100	21	84	92
21	912621104001	ABINAYA K	III / CSE	10	100	20	80	90
22	912621104002	AMEERA N	III / CSE	10	100	24	96	98
23	912621104003	ANJUGAM C	II / CSE	10	100	25	100	100

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24	912621104004	ARUNDATHI S	II / CSE	10	100	18	72	86
25	912621104005	ASHIKA B	II / CSE	10	100	23	92	96
26	912621104006	DIVYA T	II / CSE	10	100	17	68	84
27	912621104007	ELACKIYA G	II / CSE	10	100	24	96	98
28	912621104008	GAYATHRI K	II / CSE	10	100	23	92	96
29	912621104009	GEETHA M	II / CSE	10	100	24	96	98
30	912621104010	HARSHITHA P	II / CSE	10	100	24	96	98
31	912621104011	ISHWARYA S	II / CSE	10	100	23	92	96
32	912621104012	JANANI R	II / CSE	10	100	24	96	98
33	912621104015	LAVANYA S	II / CSE	10	100	21	84	92
34	912621104016	MAHASREE P	II / CSE	8	80	22	88	84
35	912621104018	PRIYA M	II / CSE	10	100	23	92	96
36	912621104019	RABIKA R	II / CSE	10	100	22	88	94
37	912621104021	SAHEENA BEGAM A	II / CSE	10	100	21	84	92
38	912621104022	SASIPRIYA R	II / CSE	10	100	23	92	96

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39	912621104023	SHAMIMA P	II / CSE	10	100	24	96	98
40	912621104024	SHEERA BANU A	II / CSE	10	100	19	76	88
41	912621104025	SIVAJOTHIKA S	II / CSE	10	100	18	72	86
42	912621104026	SIVAPRIYA R	II / CSE	10	100	24	96	98
43	912621104027	SUBHA DHARSHINI S	II / CSE	10	100	21	84	92
44	912621104028	SUBIKSHA S	II / CSE	10	100	22	88	94
45	912621104029	VINITHA K	II / CSE	10	100	22	88	94
46	912621104030	VISALATCHI S	II / CSE	10	100	23	92	96
47	912621104301	VAISHNAVI .B	II / CSE	10	100	24	96	98
48	912621104302	VISHNU PRIYA. A	II / CSE	10	100	21	84	92
49	912621104701	AARTHI. S	II / CSE	10	100	24	96	98
50	912621104702	SWATHI. A.R	II / CSE	10	100	24	96	98

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Criteria 2	Teaching-Learning and Evaluation	350

Key Indicator- 2.3. Teaching- Learning Process (40)

2022-2023

COMPUTER SCIENCE AND ENGINEERING

PARTICIPATIVE LEARNING

CONFERENCE AND SYMPOSIUM

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PARTICIPATIVE LEARNING (SYMPOSIUM/WORKSHOP/SEMINAR)

ACADEMIC YEAR (2022 - 2023)

S.No	Register No	Student Name	Year/Sem	Name of the Participative Learning Method
1.	912620104018	C.Subhashini	III/V	Symposium - Paper Presentation (KRCE)
2.	912620104017	S.Sivaharini		
3.	912620104016	D.Sivagami	III/V	
4.	912620104010	E.Prishiya		
5.	912620104014	S.Sabha Aysha	III/V	Symposium – Capture Flag (SEC)
6.	912620104005	K.Kalpana	III/V	Symposium - Paper Presentation (SEC)
7.	912620104019	M.Subashini		
8.	912620104022	S.Vinciya Mary		
9.	912620104009	P.Prasanna Devi		
10.	912620104019	M.Subashini	III/V	Symposium – Clear the Red (SEC)
11.	912620104022	S.Vinciya Mary		
12.	912620104002	V.Hema		
13.	912620104009	P.Prasanna Devi		
14.	912620104005	K.Kalpana		
15.	912620104018	C.Subashini	III/ VI	Symposium - Superficio (ACGCET)
16.	912620104009	P.Prasanna Devi	III/V	Symposium – Cyber Ethnicity (MZCET)
17.	912620104014	S.Sabha Aysha	III/ VI	Symposium – Poster Presentation (SEC)
18.	912619104001	M.Annapoorani		
19.	912619104001	M.Annapoorani	IV/ VIII	Symposium - Copy cat (SEC)
20.	912619104023	D.Santhi		
21.	912620104014	S.Sabha Aysha	III/ VI	Symposium - Paper Presentation (SEC)
22.	912619104001	M.Annapoorani	IV/ VIII	
23.	912619104023	D.Santhi		
24.	912619104005	D.Dharshini	IV/ VIII	Symposium - Paper Presentation (MAIET)
25.	912619104010	J.Helan		
26.	912619104011	R.Keerthana		
27.	912619104013	M.Muthu Meenakshi		
28.	912619104019	K.Ranjani		
29.	912619104021	R.Roopina		
30.	912619104027	R.Sneha		
31.	912619104301	S.Abinaya		
32.	912620104018	C.Subashini	III/ VI	

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PARTICIPATIVE LEARNING (SYMPOSIUM/WORKSHOP/SEMINAR)

33.	912619104005	D.Dharshini	IV/ VIII	Symposium - Paper Presentation (SRRCET)
34.	912619104005	D.Dharshini	IV/ VIII	Symposium - QUIZ (SRRCET)
35.	912619104019	K.Ranjani		
36.	912619104012	G.Muthulakshmi		
37.	912619104017	S.Parameshwari		
38.	912619104001	M.Annapoorani	IV/ VIII	Symposium – Thought Presenter
39.	912619104023	D.Santhi		
40.	912620104002	V.Hema	III/ VI	International Conference – Paper Presentation (SRRCET)
41.	912620104018	C.Subashini		
42.	912620104014	S. Sabha Aysha		
43.	912620104019	M.Subashini		
44.	912620104304	R.Vaishnavi		
45.	912619104003	A.Arunnavameena	IV/ VIII	
46.	912619104004	P.Dayana		
47.	912619104007	B.Fahmidha		
48.	912619104009	S.Gulnas Fathima		
49.	912619104010	J.Helan		
50.	912619104011	R.Keerthana		
51.	912619104014	R.Niroshika		
52.	912619104017	S.Parameshwari		
53.	912619104021	R.Roopina		
54.	912619104027	R.Sneha		
55.	912619104001	M.Annapoorani	IV/ VIII	International Conference – Paper Presentation (CCE)
56.	912619104013	M.Muthu Meenakshi		
57.	912619104020	J.Rilwana Parveen		
58.	912619104024	C.Saranya		
59.	912619104023	D.Santhi		
60.	912619104029	S.Suriya Jothi		

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ECEntra'22

This is to certify that SUBHASINI · C of III CSE from SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN has presented a paper entitled MOBILE COMPUTING in ECEntra'22 – National Level workshop & Technical symposium organized by Department of ECE held on 24th September 2022 at K.Ramakrishnan College of Engineering, Trichy.

Dr. M.Maheswari
HOD/ECE

Dr. S.THILAGAVATHI M.E., Ph.D.
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Dr. D.Srinivasan
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CERTIFICATE OF PARTICIPATION

ECEntra'22

This is to certify that SIVAHARINI · S of III CSE from SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN has presented a paper entitled MOBILE COMPUTING

in ECEntra'22 – National Level workshop & Technical symposium organized by Department of ECE held on 24th September 2022 at K.Ramakrishnan College of Engineering, Trichy.

Dr. M.Maheswari
HOD/ECE

Dr. S.THILAGAVATHI M.E., Ph.D.,
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ECEntra'22

This is to certify that D. Sivagami of III / CSE from Sri Bharathi Engineering College for Women has presented a paper entitled Artificial Intelligence in ECEntra'22 – National Level workshop & Technical symposium organized by Department of ECE held on 24th September 2022 at K.Ramakrishnan College of Engineering, Trichy.

Dr. S.THILAGAVATHI M.E., Ph.D.,
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ECEntra'22

This is to certify that E. Prishiya of III / CSE from Sri Bharathi Engineering College for Women has presented a paper entitled Artificial Intelligence in ECEntra'22 – National Level workshop & Technical symposium organized by Department of ECE held on 24th September 2022 at K.Ramakrishnan College of Engineering, Trichy.

Dr. S.THILAGAVATHI M.E., Ph.D.,
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Dr M Maheswari

Dr. D.Srinivasan

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BUREAU OF YOUNG COMPUTER ENGINEERS
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This is to certify that ~~Mr~~/Ms.....S....SABHA AYSHA.....of Sri Bharathi Engineering College for Women.....has participated and Secured ~~I~~/ II prize in Thought Presenter / Master Minds / Clear the Red / Capture the Flag in the National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

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AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

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This is to certify that ~~Mr~~/Ms K. KALPANA *of* Sri Bharathi Engineering College for Women *has participated and presented a paper Titled* Internet of Things Architecture *in the National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.*

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This is to certify that ~~Mr~~/Ms .....M..SUBASHINI.....*of*
.....Sri...Bharathi....Engineering....College...for....Women....*has participated and presented a paper*
Titled.....Virtual.....Artificial....Intelligence.....*in the*
National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

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CERTIFICATE

This is to certify that ~~Mr/~~Ms .....S. Vinciya mary.....*of*
Sri Bharathi Engineering college for Women *has participated and presented a paper*
Titled.....Internet of Things Architecture.....*in the*
National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

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CERTIFICATE

This is to certify that ~~Mr~~/Ms .....PRASANNA.DEVI.....
...Sri....Bharathi.....Engineering...College..for.....Women.....*has participated and presented a paper*
Titled.....Virtual.....Artificial.....Intelligence.....*in the*
National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

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This is to certify that ~~Mr~~/Ms.....S. VINCIYA MARY.....of Sri Bharathi Engineering College of Engineering.....has participated ~~and~~ ~~Secured~~ ~~I / II~~ ~~prise~~ in Thought Presenter / Master Minds / Clear the Red / Capture the Flag in the National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

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This is to certify that Mr/Ms.....V. HEMA.....of .....Sri.....Bharathi.....Engineering.....college.....for.....women.....has participated ~~and Secured I / II prize~~ in Thought Presenter / Master Minds / Clear the Red / Capture the Flag in the National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

PRINCIPAL

SHANMUGANATHAN ENGINEERING COLLEGE

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ACCREDITED BY NAAC, AN ISO 9001:2015 CERTIFIED INSTITUTION)
ARASAMPATTI-622 507 , THIRUMAYAM (TALUK), PUDUKKOTTAI(DISTRICT)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BOYCE ASSOCIATION

BUREAU OF YOUNG COMPUTER ENGINEERS
AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that Mr/Ms.....P. PRASANNA DEVI.....of .....Sri Bharathi Engineering College for women.....has participated ~~and Secured I / II prize~~ in Thought Presenter / Master Minds / Clear the Red / Capture the Flag in the National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkotta Dt.

PRINCIPAL

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BOYCE ASSOCIATION

BUREAU OF YOUNG COMPUTER ENGINEERS
AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that ~~Mr~~/Ms.....K.KALPANA.....of ...Sri.....Bharathi.....college.....of.....Engineering.....for.....Women.....has participated ~~and Secured I / II prize~~ in Thought Presenter / Master Minds / Clear the Red / Capture the Flag in the National Level Technical Symposium "TechnoPedia 2022" held on 01st June 2022, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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CERTIFICATE
—— of winner ——

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Kaikkurchi - 622 303, Pudukkottai Dt.

This is to certify that C. SUBASHINI of SRI BHARATHI ENGINEERING COLLEGE has secured WINNER prize in the event SUPERFICIO held on 26 Apr 2023.

R. Murugan
Secretary

26/4/23
Head of the Department

Vice Principal

Principal

MOUNT ZION

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, Affiliated to Anna University & Accredited by NAAC)
Lena Vilakku, Pilivalam P.O, Thirumayam TK, Pudukkottai - 622507
E-mail: info@mzcet.in | www.mzcet.in

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ORGANIZES

A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHQUEST 2022

RIDE THE CREAST OF TECH

Certificate of Winner

This certificate is presented to PRASANNA DEVI. P of Sri Bharathi Engineering College for Women for securing third place in CYBER ETHNICITY of TECHQUEST'22 on OCTOBER 20, 2022.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt

20/10/22

CO-ORDINATOR

20/10/2022

HEAD OF THE DEPARTMENT

SHANMUGANATHAN ENGINEERING COLLEGE

(APPROVED BY AICTE, NEW DELHI, AFFILIATED TO ANNA UNIVERSITY, CHENNAI,
ACCREDITED BY NAAC, AN ISO 9001:2015 CERTIFIED INSTITUTION)
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BOYCE ASSOCIATION

BUREAU OF YOUNG COMPUTER ENGINEERS
AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that Mr/Ms.....SABHA AYSHA S.....of .....SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN.....has participated and Secured I / II prize in Copy cat / Hashcrack / Thought presenter / Poster Presentation / Short flim / Meme Contest / Mr.Bean game in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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ARASAMPATTI, THIRUMAYAM (TALUK), PUDUKKOTTAI(DISTRICT) - 622 507

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BOYCE ASSOCIATION

BUREAU OF YOUNG COMPUTER ENGINEERS
AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that ~~Mr~~/Ms.....ANNAPOORANI. M.....of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN.....has participated ~~and Secured I / II prize~~ in Copy cat / Hashcrack / Thought presenter / Poster Presentation / Short flim / Meme Contest / Mr.Bean game in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
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AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that ~~Mr/Ms~~.....SANTHI..D.....of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN.....has participated ~~and Secured I / II prize~~ in Copy cat / Hashcrack / Thought presenter / Poster Presentation / Short flim / Meme Contest / Mr.Bean game in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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BOYCE ASSOCIATION

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AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that ~~Mr/Ms~~ .....SABHA AYSHA S.....*of*
SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN *has participated and presented a paper*
Titled BEAUTY PARADISE THE COSMETIC CENTRE.....*in the*
National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E., Ph.D.,
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AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that ~~Mr/Ms~~ ANNA POORANI M ,of SRI BHARATHI ENGINEERING COLLEGE *has participated and presented a paper Titled* CROP DISEASE DETECTION USING NEURAL NETWORK *in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.*

HOD-CSE

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
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COLLEGE FOR WOMEN
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AND
INTERNAL QUALITY ASSURANCE CELL (IQAC)

CERTIFICATE

This is to certify that Mr/Ms .....SANTHI....D.....*of* .SRI.BHARATHI.ENGINEERING.COLLEGE.FOR.WOMEN.*has participated and presented a paper Titled*...CROP...DISEASE...DETECTION...USING...NEURAL.NETWORK.....*in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.*

HOD-CSE

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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MAHATH AMMA

INSTITUTE OF ENGINEERING & TECHNOLOGY

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of Appreciation

TECHNOPHILIA – 2K23

This certificate is proudly presented to

This Is To Certify That Mr/Ms D. DHARSHINI

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Has Participated/~~Win~~ In PAPER PRESENTATION Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
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In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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MAHATH AMMA

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Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has ~~Participated~~/Win In PAPER PRESENTATION (III rd place) Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
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Of SRI BHARATHI COLLEGE OF ENGINEERING FOR WOMEN

Has Participated/~~Win In~~ PAPER PRESENTATION Event

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In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E., Ph.D.,
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Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has Participated/~~Win~~ In PAPER PRESENTATION Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E., Ph.D.,
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Of SRI BHARATHI COLLEGE OF ENGINEERING FOR WOMEN

Has Participated/~~Win~~ In PAPER PRESENTATION Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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COLLEGE FOR WOMEN
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of Appreciation

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Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has Participated/~~Win~~ In PAPER PRESENTATION Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
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COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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of Appreciation

TECHNOPHILIA – 2K23

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This Is To Certify That Mr/Ms ROOPINA . R

Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has ~~Participated~~/Win In PAPER PRESENTATION (IIIrd place) Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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of Appreciation

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Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has ~~Participated~~/Win In PAPER PRESENTATION [III rd prize] Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
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COLLEGE FOR WOMEN
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of Appreciation

TECHNOPHILIA – 2K23

This certificate is proudly presented to

This Is To Certify That Mr/Ms S.ABINAYA
Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN
Has Participated/~~Win~~ In PAPER PRESENTATION Event
Conducted By The Department Of Computer Science Engineering
In TECHNOPHILIA - 2K23 A National Level Technical Symposium
On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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MAHATH AMMA

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of Appreciation

TECHNOPHILIA – 2K23

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This Is To Certify That Mr/Ms C. SUBASHINI

Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has ~~Participated~~/Win In CONNECTION COMPETITION [II prize] Event

Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
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COLLEGE FOR WOMEN
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PRINCIPAL

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COLLEGE OF ENGINEERING AND TECHNOLOGY

(APPROVED BY AICTE, NEW DELHI & AFFILIATED TO ANNA UNIVERSITY CHENNAI)
AMARAVATHI PUDUR, KARAIKUDI 630 301, SIVAGANGAI DIST

A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHSAT '23

CERTIFICATE OF MERIT

~~Mr~~/Ms/~~Mrs~~ D. Dharshini CSE (IV Year) of
SBECW Has Participate In The Event paper presentation.
In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023
Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

HOD CONVENER PRINCIPAL

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COLLEGE OF ENGINEERING AND TECHNOLOGY

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AMARAVATHI PUDUR, KARAIKUDI 630 301, SIVAGANGAI DIST

A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHSAT '23

CERTIFICATE OF MERIT

Mr/Ms/Mrs D. Dharshini of
SBECW Has Participate In The Event Tech Quiz
In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023
Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
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COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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TECHSAT '23

CERTIFICATE OF MERIT

Mr/Ms/Mrs K. RANJANI of
SBECW Has Participate In The Event Technical Quitz
In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023
Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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COLLEGE OF ENGINEERING AND TECHNOLOGY

(APPROVED BY AICTE, NEW DELHI & AFFILIATED TO ANNA UNIVERSITY CHENNAI)
AMARAVATHI PUDUR, KARAIKUDI 630 301, SIVAGANGAI DIST

A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHSAT '23

CERTIFICATE OF MERIT

Mr/Ms/Mrs Parameswari. S of
SBECW Has Participate In The Event Tech Quiz,
In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023
Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHSAT '23

CERTIFICATE OF MERIT

Mr/Ms/Mrs G. Muthulakshmi of SBECW. Has Participate In The Event Tech Quiz.
In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023
Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BOYCE ASSOCIATION

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AND
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This is to certify that Mr/Ms..... ANNA POORANI M *.....of*
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participated and Secured I / *II prize in Copy cat / Hashcrack / Thought presenter / Poster Presentation / Short flim / Meme Contest / Mr.Bean game in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.*

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EMERGING TRENDS IN ELECTRICAL ELECTRONICS & COMMUNICATION TECHNOLOGY

(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. V. HEMA , CSE - THIRD YEAR has presented a Paper entitled E-VOTING SYSTEM USING ETHEREUM NETWORK In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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Principal

Dr.S.SUBBIAH
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(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. S. SABHAAYSHA, BE(CSE) - THIRD YEAR has presented a Paper entitled DESIGN AND IMPLEMENTATION OF BEAUTY PARADISE In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. M.SUBASHINI - CSE - THIRD YEAR has presented a Paper entitled ....E-VOTING SYSTEM USING ETHEREUM NETWORK..... In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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This is to certify that Prof./Dr./Mr./Ms. C. SUBASHINI has presented a Paper entitled ANDROID APP FOR WOMEN SAFETY In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. B.R. VAISHNAVI has presented a Paper entitled "ANDROID APP FOR WOMEN SAFETY" In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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This is to certify that Prof./Dr./Mr./Ms. ARUNNAVA MEENA : A has presented a Paper entitled EVENT OF SAFETY VIOLATION DETECTION IN INDUSTRIAL ENVIRONMENT In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. DAYANA. P has presented a Paper entitled EVENT OF SAFETY VIOLATION DETECTION IN INDUSTRIAL ENVIRONMENT In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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This is to certify that Prof./Dr./Mr./Ms. B. FAHMIDHA, IV-YEAR (CSE) has presented a Paper entitled Driver recognition and Drowsiness Detection using deep learning technique In the International Conference on "Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023, Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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This is to certify that Prof./Dr./Mr./Ms. S.GIULNAS FATHIMA, IV-YEAR - CSE has presented a Paper entitled Driver recognition and Drowsiness detection using deep learning technique In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. J.HELAN - B.E (CSE) - FINAL YEAR has presented a Paper entitled Interact computer with Facial Expression for tetraplegia users using deep learning. In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. P.KEERTHANA, BE.(CSE) - FINALYEAR has presented a Paper entitled Liquid petroleum hydro carbon ocean costal water pollution Identification using deep learning In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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This is to certify that Prof./Dr./Mr./Ms. PARAMESHWARI. S has presented a Paper entitled EVENT OF SAFETY VIOLATION DETECTION IN INDUSTRIAL ENVIRONMENT. In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

Mrs.k.Isabella Rani.M.E.,
Conveiner

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CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. R. ROOPINA - BE (CSE) - FINAL YEAR has presented a Paper entitled Interact computer with facial Expression for tetrapiegia users using deep Learning In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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This is to certify that Prof./Dr./Mr./Ms. P. SNEHA - B.E(CSE) - FINAL YEAR has presented a Paper entitled Interact computer with Facial Expression for Tetraplegia users using deep Learning In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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CERTIFICATE OF PARTICIPATION

This is to certify that

Mr/Ms **M ANNAPOORANI** of

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has Presented Paper Entitled as

Plant Disease Prediction Using Neural Network

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
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Kaikkurchi - 622 303, Pudukkottai Dt.

in the "International Conference on Information and Communication Engineering (ICICE'23) organized by Department of Electronics and Communication Engineering at CARE College of Engineering during 27 & 28 April , 2023.

Ms. M.Shiva Shankari Organizing Chair CARE College of Engineering Tiruchirappalli	Ms. R.Deepalakshmi Organizing Chair CARE College of Engineering	Mrs. R. Vanitha Organising Chair CARE College of Engineering	**Dr. J. Jeyarani** **HOD, ECE** **CARE College of Engineering** **Tiruchirappalli**	**Dr. S. Shanthi** **Principal** **CARE College of Engineering** **Tiruchirappalli**

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This is to certify that

Mr/Ms **M. MUTHU MEENAKSHI** of

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Has Presented Paper Entitled as

Plant Disease Prediction Using Neural Network

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Organizing Chair	Organizing Chair	Organising Chair	HOD, ECE	Principal
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This is to certify that

Mr/Ms **J.RILWANA PARVEEN** of

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Has Presented Paper Entitled as

Ai Enhanced Ot Security Tool

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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Ai Enhanced Ot Security Tool

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This is to certify that

Mr/Ms **D. SANTHI** of

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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Organizing Chair	Organizing Chair	Organizing Chair	HOD, ECE	Principal
CARE College of Engineering	CARE College of Engineering	CARE College of Engineering	CARE College of Engineering	CARE College of Engineering
Tiruchirappalli			Tiruchirappalli	Tiruchirappalli

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This is to certify that

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Has Presented Paper Entitled as

Ai Enhanced Ot Security Tool

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