Nalla Narasimha Reddy Education Society's Group of Institutions
School of Engineering
Department of Electronics & Communication Engineering (ECE)
in association with
Institution's Innovation Council (IIC) &
IETE Students Forum (ISF)

Organized a
1-week Student Development Program
on
"IDEAS TO REALITY :
EMBEDDED SYSTEMS & IoT"
by
NNRG Embedded & IoT Nerds (NEIoN) Team

REPORT

Date: **21st October, 2023**

❖ **WORKSHOP PARTICULARS :**

Duration	Title of Workshop	Venue of Conduct	Participants
16th October, 2023 *(Monday)* to **21st October, 2023** *(Saturday)*	**"Ideas to Reality : Embedded Systems & IoT"**	**@ ECE Seminar Hall, II Floor**	**B.Tech-(ECE) IV-I students of Embedded & IoT Domains** (19 Project Batches)

❖ **OVERVIEW OF WORKSHOP:**

The Department of Electronics & Communication (**ECE**) Engineering in association with Institution's Innovation Council (**IIC)** & newly constituted IETE Students Forum (**ISF**) of Nalla Narasimha Reddy Education Society's Group of Institution **(NNRESGI)**, Hyderabad through its newly created club NNRG Embedded & IoT Nerds **(NeIoN)** Team had organized a Student Development Programme on **"IDEAS TO REALITY: EMBEDDED SYSTEMS & IoT"** from **16th October, 2023** (Monday) to **21st October, 2023** (Saturday).

This program was organized exclusively for the B.Tech (ECE)- IV year, I Semester students belonging to the Embedded Systems & IoT domain with an intention & motive to let them know the concepts, ideas and create the awareness and understanding of latest trends and applications.

The **NEIoN Team** led by **Dr. Ravi Bolimera,** *Assistant Professor*, ECE consists of 5 members **Mr. K.Rambabu**, *Assistant Professor*, ECE , **Mr. Nitesh Gaikwad**, *Assistant Professor*, ECE, **Mr. M.Sharath Chandra**, *Assistant Professor*, ECE, **Mr.B.Saidulu,** *Assistant Professor*, ECE and **Mr. Koustubh Kulkarni,** *Assistant Professor*, ECE.

Strength of total 57 students (19 Project Batches) had actively participated in this workshop for all the sessions.

The main purpose was to bring together the learners of embedded systems and Internet of Things (IoT) domains to find the necessary solutions to their problem statements of mini projects and major projects. As a part of complete program, the timetable was scheduled for various sessions from the in-house faculty as resource persons from 16/10/2023-Day-1 (Monday) to 21/10/2023- Day-6 (Saturday).

This workshop was organized to provide a thorough overview of the principles of electronics and programming using the Arduino platform. The hands-on exercises taught them how to construct and manage different embedded projects. The workshop's ultimate goal was to stimulate creativity, problem-solving skills, and a practical awareness of the interface between technology and daily life. In addition to hands-on live demonstrations of ARDUINO and PROTEUS design tools, the program included theoretical lectures by department faculty.

The inaugural session was held on 16/10/2023 (Monday) 10.00am at ECE seminar hall. The department profile & activities were briefed by Convener **Dr.S.Ravichand**, *Professor & Head*, Dept. of ECE. Next speech was made by **Dr. G.Janardhana Raju**, *Dean,* SoE to encourage the participants registered for the workshop.

(L) HoD, ECE addressing the students

(R) Dean sir speaking on the occassion

Director sir sharing his views with the students

The Head of institution **Dr. C.V.Krishna Reddy**, *Director*, NNRESGI, Hyderabad had given the importance of technology and the impact of Electronics Engineers in various field towards the growth and development of systems required for the society.

The NEIoN club's motto and agenda was given by **Dr.Ravi Bolimera**, *Assistant Professor*, ECE department who also briefed up the session topics and schedule.

The following section gives the brief information about the each day's session along with the few glimpses of presentation (screenshots).

Day 1 : 16th October, 2023 (*Monday*)

In the morning session, **Dr.S. Ravichand sir** as resource person delivered the **"Key-Note Address"** which was continued after the inauguration. The afternoon session is followed by **Mr. K. Rambabu sir** as resource person delivered the **"Introduction To Boards".**

<u>Day 2 :</u> 17th October, 2023 (*Tuesday*)

In morning session, resource person **Mr.M.Sharath Chandra** delivered the theoretical session on **"Sensors Interfacing".** In the Afternoon session, Hands-on implementation of respective projects were conducted.

The workshop proceedings were the headlines of the daily newspaper Andhra Prabha dated 17/10/2023.

Day 3 : 18th October, 2023 (*Wednesday*)

On the morning session we had the hands on board session in which all the students tried to implement their own ideas with the K .Rambabu sir and Dr. Ravi Bolimerra sir guidance.

<u>Day 4 :</u> 19th October, 2023 (*Thursday*)

In morning session, resource person **Dr.B Ravi** delivered lecture on **"Introduction to IoT".** In the afternoon session, implementation of coding on respective projects and hands on sessions on respective projects.

<u>Day 5 :</u> 20th October, 2023 (*Friday*)

In morning session, resource person **Mr. K.Rambabu** delivered lecture on Proteus Tool and in the afternoon displayed the usage of software.

Day 6 : 21st October, 2023 *(Saturday)*

PROJECT EXPO & VALEDICTORY SESSION

On the last day of workshop, the students had given the demonstraton of their project kits and doings to the experts.

S. No.	Section & Batch No.	Roll No.	Name of the student	Title of the Project
1	A-4	207Z1A0452	GOLI VARSHITHA (TL)	Interactive LED Display for Person's Status Monitoring Using Bluetooth
2	A-4	207Z1A0421	BOKKA THANOOJ KUMAR	
3	A-4	207Z1A0448	G VENUGOPAL REDDY	
4	A-5	207Z1A0439	DONDLA SRUTHA KEERTHI (TL)	performance improvement and energy saving on visitor count
5	A-5	207Z1A0434	DANTHINAPALLI JAISAI VARDHAN	
6	A-5	207Z1A0447	ETTEDI VEDAUJWALA	
7	A-6	207Z1A0425	BUKKA SAI PRIYA (TL)	Smart Kitchen using IoT and ESP8286
8	A-6	207Z1A0424	BUGGA SRAVANI	
9	A-6	207Z1A0438	DOMMATA UMESH	
10	A-9	207Z1A0445	ERRABELLI AISHWARYA (TL)	Automatic medicine reminder using arduino
11	A-9	207Z1A0423	BOPPIDI PRAVALIKA	
12	A-9	207Z1A0422	BONAGAM SAIRAM CHAKRAVARTHI	
13	A-11	207Z1A0431	CHINTHAKUNTLA AKHILA (TL)	Line follower robot
14	A-11	207Z1A0409	ARELLI MANOJ KUMAR	
15	A-11	207Z1A0406	ALLI NISHANTH	
16	A-12	207Z1A0417	BATTULA MANU SHREE (TL)	Driver drowsiness detection system
17	A-12	207Z1A0446	ERUKALA REVANTH GOUD	
18	A-12	207Z1A0436	DHARMISHETTI MANIKUMAR	
19	A-14	207Z1A0427	CHENNADI THIRUMALA (TL)	Smart Home Automation
20	A-14	207Z1A0449	GALI HEMAKANTH	
21	A-14	207Z1A0450	GANAGAM UMESHCHANDRA	
22	B-2	207Z1A0460	GURUVELLI CHANDRIKA APOORVA (TL)	Finger print vehicle starter system Arduino Nano
23	B-2	207Z1A0454	GOPPA YASHWANTH REDDY	
24	B-2	207Z1A0475	KOTAGIRI NEERAJ	
25	B-6	207Z1A0462	JAVAJI MURARI (TL)	Monitoring plant's health and growth using smart system
26	B-6	207Z1A0485	MAKAM YESHWANTH	
27	B-6	207Z1A0466	KANCHARLA RAHUL REDDY	
28	B-9	207Z1A0481	KYASAGALLA RAMYA (TL)	IoT Based Weather Forecast Using Arduino and Clouding
29	B-9	207Z1A04A7	PULGAM HARSHITHA	
30	B-9	207Z1A0497	NARIGE REVANTH KUMAR	
31	B-11	207Z1A0496	NAGADI HARSHITHA PRAKEERTHI (TL)	: Home Automation with Google Assistant,Alexa and
32	B-11	207Z1A0499	OGGU MANOJ KUMAR	

S. No.	Section & Batch No.	Roll No.	Name of the student	Title of the Project
33	B-11	207Z1A04A1	PALUSA MURARI GOUD	Manual Switches wireless notice board using Arduino.
34	B-13	207Z1A04A4	PARUPATI NITHEESH (TL)	
35	B-13	207Z1A0465	KAMPELLI HARIKA	
36	B-13	207Z1A04A5	PATHIPATI NITHESH	
37	B-16	207Z1A0463	JULUKANTI SATHWIK (TL)	Colour controlled vehicle using tcs 3200 colour sensor
38	B-16	207Z1A0464	K NAVEEN	
39	B-16	207Z1A04A6	PETTEM VIKAS VARMA	
40	C-2	207Z1A04B5	SHAMAKURI NANDHINI REDDY (TL)	Smart Glasses For Blind
41	C-2	217Z5A0415	MARELLA SRAVYA	
42	C-2	207Z1A04B6	SINGIRALA SRINATH	
43	C-3	207Z1A04C7	THUMUKUNTA POOJA (TL)	Laser Security System for Agriculture using Arduino Uno
44	C-3	207Z1A04C6	THUMU VIKRANTH	
45	C-3	207Z1A04C4	THAMATAM EDIGA SESHA MAHESH GOUD	
46	C-4	207Z1A04D0	VANAMALA NIHARIKA (TL)	Bend Detection Of Gesture Vocalizer
47	C-4	207Z1A04B7	SIRISANAGANDLA SRI VYSHALINI	
48	C-4	207Z1A04D5	YERAVELLI AJAY	
49	C-8	217Z5A0423	VALLANGULA TEJASVI (TL)	Automatic Street Light Control And Manhole Maintenance. Using:Aurdino&Gsm
50	C-8	207Z1A04B2	SAI LAKSHMI	
51	C-8	207Z1A04D4	VUPULA MAHENDER	
52	C-12	217Z5A0405	CHANDUBATLA SNEHA (TL)	Electronic protection for exam paper leakage.
53	C-12	217Z5A0411	KASTHI RISHIKA	
54	C-12	217Z5A0410	KANIKE SHIVALINGAM	
55	C-15	217Z5A0408	K PAVAN KUMAR (TL)	IoT Based Smart Key Finder
56	C-15	217Z5A0419	PEKKAMWAR MANASA	
57	C-15	207Z1A04A9	PUTTOLU MAHESH	

The students exhibiting their kits to the director sir and team

The good and top performers were awarded the Certificate of Appreciation and Certificate of Participation was given away to each and every participants of the program. The coordinators and mentors of NEIoN club were given the Certificate of Appreciation by director sir.The valedictory session ended with Vote of thanks.

NEIoN team with Director sir and HoD sir

❖ WORKSHOP's OUTCOME:

The students had an good learning exposure to ARDUINO boards, ARDUINO IDE, PROTEUS tool for design, building and execution of projects with study of different types of sensors and components used as primary resources. During the sessions of workshop, the students were able to design, verify, and execute the real time embedded projects for problem solving, and many students completed their objective of mini-projects well within the required duration.

Workshop Team

WORK is WORSHIP

Convener

Dr. S.Ravi Chand
Professor & Head , ECE