

NNRG EMBEDDED & IoT NERDS (NEIoN)

REPORT
of
STUDENT DEVELOPMENT PROGRAM (SDP)
on
“WISE ON-BOARD IoT DEVISERS”

Date: 24th JUNE, 2024

❖ **PROGRAM PARTICULARS :**

<i>Duration</i>	<i>SDP Theme</i>	<i>Organized by</i>	<i>Conducted for</i>
18 th June (Tue) – 22 nd June (Sat) , 2024	“BASICS & ADVANCED ARDUINO, RASPBERRY- PI & IoT PROGRAMMING-ON DEVICES ”	NEIoN Team, ECE dept., NNRESGI, Hyderabad	B.Tech-III A,B,C sections- Project Batches (Embedded & IoT Domain)



NALLA NARASIMHA REDDY
Education Society's Group of Institutions-Integrated Campus
(Approved by AICTE & PCI, New Delhi & Affiliated to JNTUH, Accredited by NAAC with A+ Grade)
Chowdariguda (V), Korremula 'X' Road, Ghatkesar (M), Medchal-Malkajgiri (D), Hyderabad - 500088, Telangana.
(UGC AUTONOMOUS INSTITUTION)

Department of Electronics & Communication Engineering
NNRG Embedded & IoT Nerds (NEIoN)
In association with IIC & IETE Student Forum (ISF)
Organizes
A One Week Student Development Programme
on
WISE On-board-IoT devisERS
18th - 22nd June 2024

Chief Patron Shri Nalla Narasimha Reddy Chairman	Patron Dr. C.V. Krishna Reddy Director	Co-Patron Mr. Nalla Prashanth Reddy Vice-Chairman	Co-Patron Dr. G. Janardhana Raju Dean - SoE	Convener Dr. S. Ravi Chand HoD - ECE	Co-Convenor Dr. B. Ravi R&D Coordinator	Co-ordinators Mr. K. Kulkarni Mr. M. Sharath Chandra ECE
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Venue: Seminar Hall

Program Placard

❖ PROGRAM's MOTIVE & PURPOSE:

The Department of Electronics & Communication (ECE) Engineering & Institute Innovation Cell (IIC) of Nalla Narasimha Reddy Education Society's Group of Institution, Hyderabad in association with IETE, Hyderabad had organized a Student Development Programme (SDP) on “**WISE ON-BOARD IoT DEVISERS**” for the embedded & IoT domain students of B.Tech III Year- A,B,C sections from **18th June, 2024** (Monday) to **22nd June, 2024** (Saturday) through the theoretical and hands-on sessions.

This program was organized for the students of prefinal year for getting help and motivation to their learning and doing for practical exposure into projects. The main purpose intention was to motivate to create the awareness and understanding of boards and programming. which use the blend of IoT and other connecting solutions.

The inaugural session was held at 10.30am, followed by message from **Dr. G.Janardhan Raju**, *Dean, SoE*, followed with the words from the Head of Department, ECE **Dr. S.Ravichand**, who had addressed the participants and resource persons (in-house faculty)

A strength of 42 participants of 14 batches had actively involved and participated in all the sessions of program.

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

- **Day-1 : 18th June, 2024 (Tuesday) – Inaugural Session & 2 Sessions**
- **Day-2 : 19th June, 2024 (Wednesday) - 3 Sessions (Theory+Hands-on)**
- **Day-3 : 20th June, 2024 (Thursday) - 3 Sessions (Theory+Hands-on)**
- **Day-4 : 21st June, 2024 (Friday) -3 Sessions (Theory+Hands-on)**
- **Day-5 : 22nd June, 2024 (Saturday) – Test & Valedictory Session**

Day-1 : 18th June, 2024 (Tuesday)

Outline:

After the inaugural session, the sessions by resource person started. The first session of the FDP program Day-1 was handled by **Dr. S.Ravichand**, *Professor & Head*, Dept. of ECE had given his view on “Basics of Arduino”, which included origin, history and development of Arduino in Embedded Systems. The second session of the day was taken by **Mr. K.Rambabu**, *Assistant Professor*, Dept. of ECE on the topic “Arduino Programming”, that had given insights to students into the software part of Arduino through IDE-Integrated Development Environment.



NEION Team on inaugural day

After the second session, the third session was also the most interactive and interesting one as it had thrown some important things of installing and working on Arduino Programming that was handled by **Mr. K.Rambabu**, *Assistant Professor*, Dept. of ECE.



Glimpse of Day-1 sessions

Day-2 : 19th June, 2024 (Wednesday)

Outline:

The first session of Day-2 FDP was presided over by **Dr. B.Ravi**, *Assistant Professor*, Dept. of ECE on the content of “Embedded & IoT Essentials”, which covered many aspects and fundamentals of embedded systems and Internet of things in detailed manner.

The second session and third session was carried through by **Mr. K.Rambabu**, *Assistant Professor*, Dept. of ECE regarding the installation of required software set-ups for Arduino Programming viz..Proteus 8.8 Software, and downloading of necessary library files for basic projects.



Glimpse of Day-2 sessions

Day 3 : 20th June, 2024 (Thursday)

Outline:

The 3rd day started off with the first session by **Mr.Sharath Chandra**, *Assistant Professor*, Dept. of ECE on the aspects of Python Programming necessary for prediction algorithms and protocols. The II session on how to choose wisely the projects pertaining to embedded & IoT domain was delivered by **Mr.Koustubh Kulkarni**, *Assistant Professor*, Dept. of ECE. Last session was dealt with Arduino IDE programming on few examples by **Mr. Rambabu**, *Assistant Professor*, Dept. of ECE.



Glimpse of Day-3 sessions

Day 4 : 21st June, 2024 (Friday)

The session of Day-4 began with **Mr. Koustubh Kulkarni**, *Assistant Professor*, Dept. of ECE, who introduced briefly the impact of embedded systems and IoT in society with diversified applications and case studies necessary for the students to select their projects of choice. The II session was handled by **Mr.M.Sharath Chandra**, *Assistant Professor*, Dept. of ECE, on IoT protocols and implementation strategy, with cloud computing and automation. The last session was taken by **Mr. K.Rambabu**, *Assistant Professor*, Dept. of ECE, on Raspberry-Pi programming.



Glimpse of Day-4 sessions

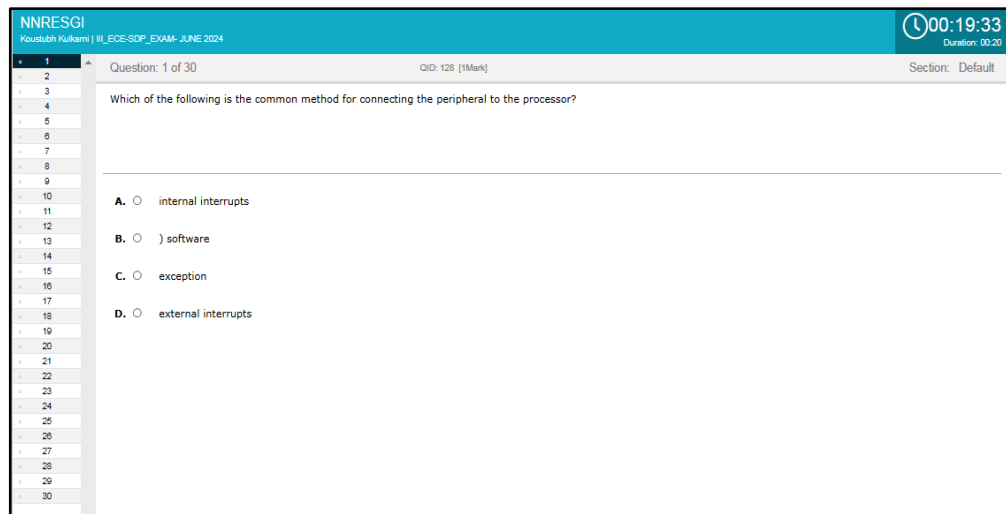
Day 5 : 22nd June, 2024 (Saturday)

The last day was all about the revision of all the learnt concepts and making students ready for the test, which was then conducted to test their ability and understanding.

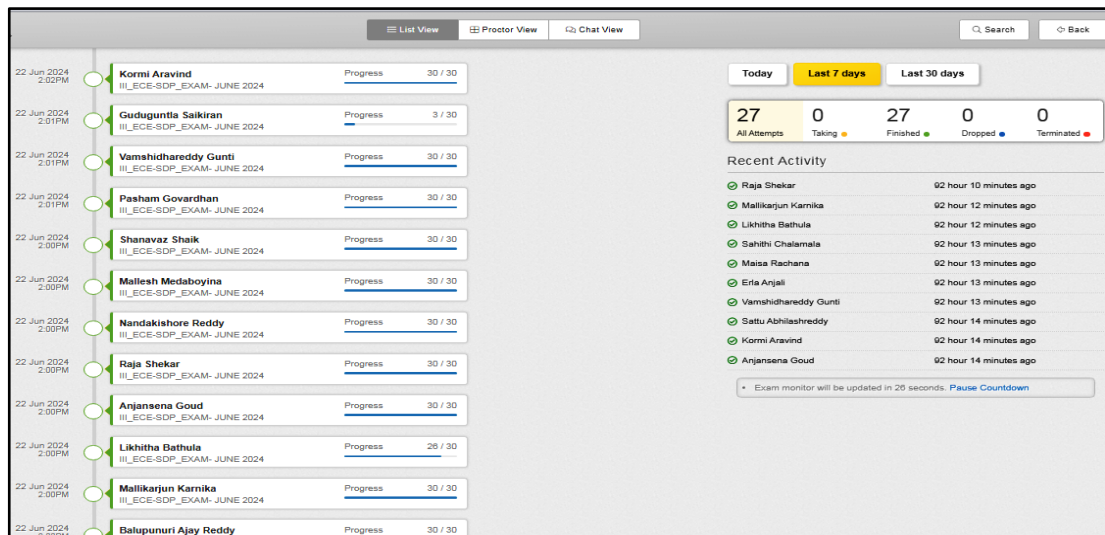
❖ ONLINE & OFFLINE TEST :

To make the learners more proficient, in their training conducted a test in offline and online mode was conducted to gauge their performance. Online mode had MCQs and offline test was kept to describe their project content through Arduino in their own understanding and knowledge.

The participants of the FDP had participated in the 'Online Test' which was of Multiple-Choice Questions (MCQs) type organized on 13th May, 2023 (Saturday) after the end of all lecture sessions of FDP. The test was arranged online through the Google form link which was of 20 minutes time duration. The questions were based on the topics selected from all the content of speakers lecture sessions. All the participants actively participated in test and expressed their feedback and suggestions about the conduct and organization of FDP.



A view of Online test in progress on last day



Report showing candidates test attempt



Best Performers receiving their merit certificates

❖ **PROGRAM OUTCOME :**

The Student Development Program (SDP) had given many insights into the subject, basics & the applications of Arduino, Raspberry-Pi, IoT and many more technologies with their roots connected to the cloud of things which are used in the form of services and applications in one's life and society.

After the test, valedictory function & vote of thanks made the program complete. The overall outcome of the program was good, as many participants expressed their gratitude by sharing their valuable feedback towards SDP organizing. The organizing team of SDP led by NEIoN thanked the NNRESGI management for providing the platform for making such a technological trendy program happen on a success note.

we need to DEVELOP for DEVELOPMENT !!

Co-Coordinator

Coordinator & SPoC

R&D Coordinator

Head, ECE

Koustubh
Kulkarni,
Asst.Prof.

Sharath Chandra
Asst.Prof.

Dr.B.Ravi
Asst.Prof.

Dr.B.Ravi
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