Edition

Jan-July 2022

SNJB

Electro Sparks

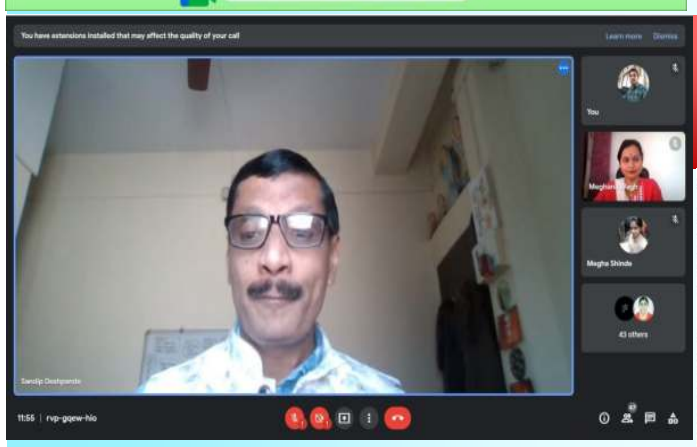
ESTD - 1928

EXTRA-CURRICULAR ACTIVITY

SPORTS EVENT

Prize distribution of Sports Event by Hon. Management and Respected Principal Dr.V.A.Wankhede. The Sports Event organised by department and coordinated by Mr.P.J.Bafana.

मराठी भाषा पंधरवाडा



On the occasion of Marathi Bhasha Pandharwada we arranged the programed "Kavitechya Gava".The speaker for this event was well knowned poet and writer Mr. Sandeep Deshpande from Manmad. This programmed was coordinated by Mrs.M.M.Wagh madam.

EXPERT SESSION

On 28/02/2022 Expert Session by Dr. Suryawanshi Madam was organized on topic "Health and it's importance". All Girl Students got benefit from this. This program coordinated by Respected Mrs. Neeraja Prasad Madam.

PARENT'S MEET

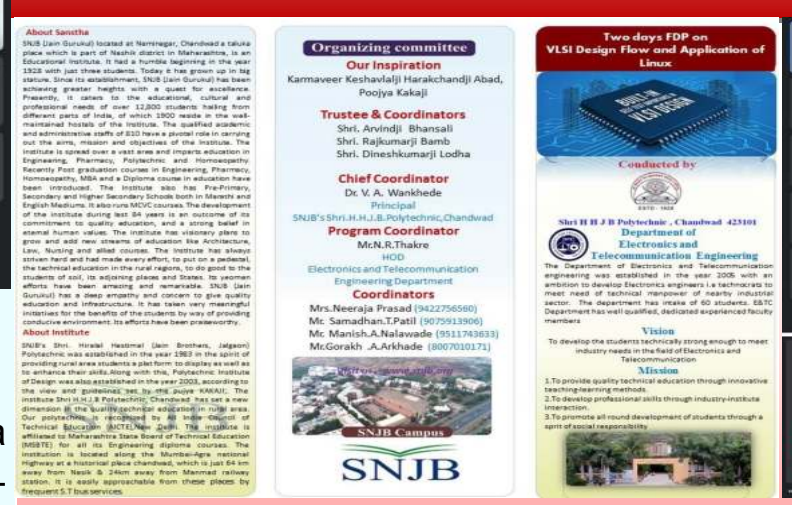
On 16/04/2022 Department has organized Parent's Meet. This Parent's Meet coordinated by Mrs. Neeraja Prasad Madam and Mr.M.A.Nalawade.

INDUSTRIAL VISIT'S

On 13/04/2022 Department has organized industrial visit at Reliance Electronics Ambad Nashik. Total 45 students get benefited by this visit. This was organised by Mr.S.T.Patil & Mr.L.D.Jagtap.

On 16/04/2022 Department has organized industrial visit at AVEE Broilers Sogras Chandwad, under the course Mechatronics (22643). Total 45 students get benefited by this visit. This was organised by Mr.S.T.Patil, Mr.J.V.Shimpi & Mr.L.D.Jagtap.

FACULTY DEVELOPMENT PROGRAM (FDP)



On 21st and 22nd March 2022 Department has organized FDP on “VLSI Design Flow and Application of Linux”. The resource persons for this FDP were Dr.Vaishali Dhare(Assistant Professor, Institute of Technology, Nirma University, Ahmedabad) and Dr.Sachin Pabale (Head of Department, Government Polytechnic, Nashik). This FDP coordinated by Mr.N.R Thakre, Mrs. Neeraja Prasad Madam, Mr.M.A.Nalawade and Mr.G.A.Arkhade.

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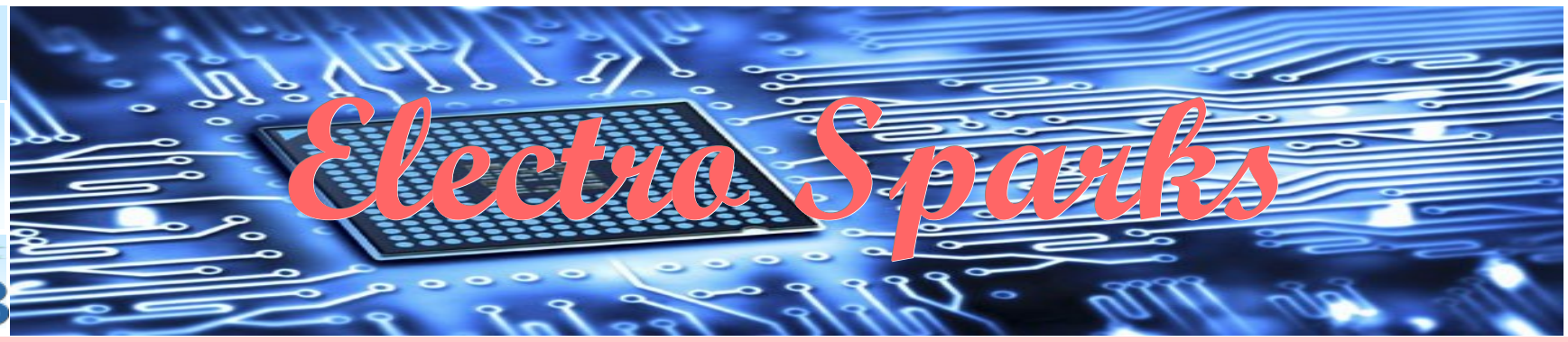

श्री नेमिनाथ जैन ब्रह्मचर्याश्रम चांदवड (नाशिक)
॥ ॐ तेजस्विनावधीतमस्तु ॥
ESTD - 1928

Student Corner

Savita .V. Desale

When we talk about the security the one thing come in mind that whether our home is secure or not. It is must to secure our home first then look at other things. Our home has always important documents, money and other precious things, that need to be protected from the In-truders or thieves. We also need to protect the home from fire and gas leak as they can also destroy our home. We can use security device at our home that will warn us from any harm by alarm or sending SMS to cell. We can use 8051 microcontroller or 89s52.

They are low power chips. They are high performance chips with 8 bit and they is flash memory for storing data. This flash memory allows them repro-gram when required. Flash are made up of monolithic chips as they are highly flexible and loss cost. They consist of 32 I/O lines, timers, pointers, oscilla-tors, and clocks etc.

For this microprocessor we use the software called Kiel u- version. This pro-vides tools for the development of the software of the 8051. With the help of this we can generate embedded applications. They use the protocol com-mand named as AT command. They receive the message comes from the phone, then decode the SMS, authenticate the number. Then use their ports to control the specific appliances and after the operation send the feedback to the users for the confirmation.AT command sets are used for the GSM ser-vice to connect the device with the mobile phones.

Miss. Savita Vasant Desale

(TYEJ)

Rupali .W. Gangurde

This advanced project allows a user to control a fire fighter robot equipped with water tank and gun remotely wirelessly for extinguishing fires. For this purposes the system uses an Rf remote for remote operation along with rf receive based microcontroller circuit for operating the robotic vehicle and water pump. The rf based remote transfers users commands through rf signals which are received by the receiver circuit. The receiver circuit now decodes the data commands sent. It then forwards it to the microcontroller. Now the microcontroller processes these instructions and then instructions the vehicle motors to run the vehicle in desired directions. It also operates the water pump motor and pump direc-tion motor to spray water based on users commands. This allows the user to operate the robot and put off the fire by standing at a safe distance. The robot operates within a 8 meter range of the remote.

Hardware Specifications

8051 Microcontroller, Robotic Chassis, Water Tank, Spray Tube, Pump,

RF Tx Rx, RF Encoder IC, RF Decoder IC

Resistors, Capacitors, Transistors, Cables and Connectors

Diodes, PCB and Breadboards, LED, Push Buttons Switch

IC, IC Sockets

Software Specifications

Keil µVision IDE

MC Programming Language: C

Miss. Rupali Waman Gangurde

(TYEJ)

Akash .D. Rajgire

Line follower robot is one kind of autonomous robot which follows a line until that line exists. Generally, the line is drawn on the floor. It can be either black or white. The line can also be normal visible color or invisible magnetic field or electric field. The robot follows the line by using Infra-Red Ray (IR) sensors. There are five IR sensors which makes it an IR sensor array. These sensors read the line and send that reading to Arduino and then control the robot movement. In this paper, the authors will explain about the robot design, implementation, coding, testing, problems they faced and their solutions.

Line follower robot is autonomous that means it automatically follows a line which is pre-defined. Generally, it follows a black line on a white sur-face or a white line on a black surface. Some of the basic operation of a line follower is given below:

· Reading the pre-defined line by IR sensor array which is installed on the front-down side of the robot and sends those readings to the Arduino. The ATMega microcontroller which is built in on Arduino analyzes those read-ings and do the particular operations.

· The steering mechanism is simple in this robot. Three wheels are used, two wheels are on the back part connected with the motors and one inde-pendent wheel on the front-middle part of the robot. · On Straight line, the speed is fast and on a turn, speed is relatively slow depending on turn an-gel. Good motor quality and good sensing quality will increase the robot movement performance.

heavy and risky products. Radioactive products transportation inside a fac-tory is very much risky for human life. A line follower robot can help in that section. Also in a hospital, it can monitor patients and inform doctors in criti-cal situations. In the restaurant business it can also help in many sections such as food servers and order taking jobs can be easily done by this kind of robot.

Mr. Akash Dyaneshwar Rajgire

(TYEJ)

Human lungs use the reverse pressure generated by contraction motion of the diaphragm to suck in air for breathing. A contradictory motion is used-by a ventilator to inflate the lungs by pumping type motion. A ventilator mechanism must be able to deliver in the range of 10-30 breaths per minute, with the ability to adjust rising increments in sets of Along with this the ventilator must have the ability to adjust the air volume pushed into lungs in each breath. The last but now the least is the setting to adjust the time duration for inhalation to exhalation ratio. Apart from this the ventilator must be able to monitor the patients blood oxygen level and exhaled lung pressure to avoid over/under air pressure simultaneously. The ventilator we here design and develop using Arduino encompasses all these requirements to develop a reliable yet affordable DIY ventilator to help in times of pandemic. We here use a silicon ventilator bag coupled driven by DC motors with 2 side push mechanism to push the ventilator bag. We use toggle switch for switching and a variable pot to adjust the breath length and the BPM value for the patient. Our system makes use of blood oxygen sen-sor along with sensitive pressure sensor to monitor the necessary vitals of the patient and display on a mini screen. Also an emergency buzzer alert is fitted in the system to sound an alert as soon as any anomaly is detected.

The entire system is driven by Arduino controller to achieve desired results and to assist patients in COVID pandemic and other emergency situations.

Mr. Sudarshan Bajrang Ugale

(TYEJ)

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STUDENT CORNER

PLACEMENT DETAILS

BAJAJ

RING AQUA
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NAMATRONIX
LIGHTING THE FUTURE

Sr. No.	Name of Company	Name of Students
1	Bajaj Auto Ltd. Chakan, Pune	Aher Anuj Jayram
2		Desale Savita Vasant
3		Gavit Dnyaneshwar Hiraman
4		Jadhav Jyoti Ashok
5		Kekan Shruti Ramdas
6		Sonawane Ashwini Dattatray
7		Ghumare Vaibhav Yashwant
8		Khairnar Aditya Madhukar
9		Suryawanshi Pooja Arun
10		Thete Nayan Dilip
11	Ring Plus Aqua Ltd. Sinner	Aher Anuj Jayram
12		Ghumare Vaibhav Yashwant
13		Mule Avinash Dattu
14		Rajgire Akash Dnyaneshwar
15		Sonawane Pankaj Ramesh
16		Thete Nayan Dilip
17		Sonawane Gauri Rangnath
18	Namotronics Nashik	Nikam Vishakha Sunil
19		Aher Shital Balasaheb

MSBTE Winter-2021 Examination

Congratulations Our Toppers

Rank	Name of Toppers	%Score
FYEJ(1st Semester)		
1	ARPIT A JAIN	82.86
2	SHRUTI D PANDIT	81.86
3	SWETA S GHOLAP	81.14
SYEJ(3rd Semester)		
1	YASH N NIKAM	91.41
2	UNMESH A BHOI	89.06
3	SATYAM J MORE	86.71
TYEJ(5th Semester)		
1	SAVITA V DESALE	87.58
2	AKASH D RAJGIRE	86.11
3	DHIRAJ S SHELKE	84.63

Respected Dr.V.A.Wankhede, Head of Department Mr.N.R.Thakre and TPO Felecitated the selected students .

Newsletter Coordinator :
Mr.M.A.Nalawade