ELECTRON 23

Vel Tech Multi Tech
Dr.Rangarajan Dr.Sakunthala Engineering College
An Autonomous Institution

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

MARCH 2023

Student Editors

1.Dhuvarak – IV Year / EEE
2.Kesavan - III Year / EEE
3.Dhana Sekar - IV Year / EEE
4.Jaya Keerthan - III Year / EEE

Vision of the Institution

Elevating well being of humanity by augmenting human resource potential through quality technical education and training.

Mission of the Institution

- **To effectuate supremacy in technical education through articulation of research and industry practices for social relevance.**
- **To inculcate the habit of lifelong learning**
- **To exhibit professional ethics, commitment and leadership qualities**

Vision of the Department

To emerge as a centre of academic excellence in electrical and electronics engineering and related fields through knowledge acquisition and propagation meeting global practices.

Mission of the Department

- **To nurture the talent and to facilitate the students with research ambience in Electrical and Electronics Engineering.**
- **To propagate lifelong learning.**
- **To impart the right proportion of knowledge, attitudes and ethics in students, to enable them take up positions of responsibility**

Programme Educational Objectives

- **To prepare graduates to have successful and flourishing career in Electrical and Electronics Industry.**
- **To make students able to excel in their career with ethical values and managerial skills to solve real life technical problems.**
- **To make students capable of solving problems in Electrical and Electronics Engineering which are found in utilities and industries**
- **To help students to engage in quest for self-learning and life-long learning.**

QUIZ TIME!

1.What will be the current density of metal if a current of 30A is passed through a cross-sectional area of 0.5m2?

a) 7.5 A/m2 b) 15 A/m2 c) 60 A/m2 d) 120 A/m2

2.How many cycles will an AC signal make in 2 seconds if its frequency is 100 Hz?

a) 50 b) 100 c) 150 d) 200

3. What kind of quantity is an Electric potential?

a) Vector quantity b) Tensor quantity c) Scalar quantity d) Dimensionless quantity

4.What do crowded lines of force indicate?

a) Strong electric field b) Weak electric field c) Strong electric potential d) Weak electric potential

5.What is the number of primary turns in a 200/1000 V transformer if the emf per turn is 10V

a) 5 b) 10 c) 20 d) 40

6. How many directions can the electric field at a point have?

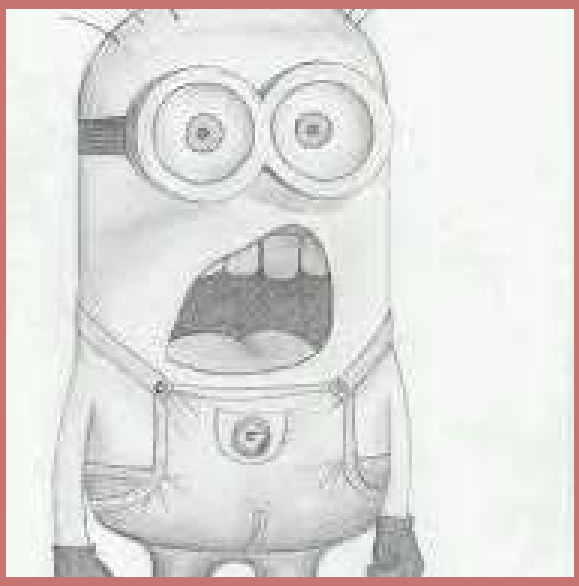
a) Zero b) One c) Two d) Many

Kesavan – III Year - EEE

DRAWINGS

Dhuvarak – IV Year - EEE

Dhana Sekar – IV Year - EEE



Jaya Keerthan – III Year - EEE

7 THINGS YOU SHOULD KNOW ABOUT THE FILE FORMAT

1.Graphics Interchange Format was invented in the late 80sGraphics Interchange Format (GIF) was invented in 1987 by Stephen Wilhite for CompuServe.

2. Graphics Interchange Format was created to share coloured graphics over
internet CompuServe wanted to share high-quality graphics in colour over the internet back in the day when the internet connection was too slow for videos. To achieve that, the GIF file format was first created.

3. GIF is just a file format for images like JPG or PNG.Most people don't know that GIF is just another file format for images like other commonly used image formats like PNG, JPG, etc.

4. GIFs are not videos, they are images.As mentioned,GIF is a file format for images. It's just that it can also be used to
create animated images. But, they aren't videos.

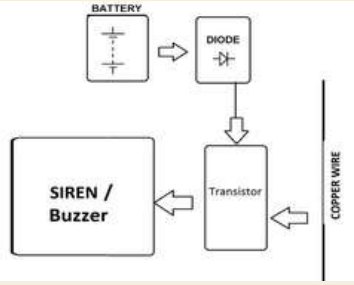
5. GIFs can be larger than the same length MP4 videos GIFs are very popular today and it is used to share memes, stickers, etc it is also an integral part of modern-day instant messaging apps. Most people think that's because of its smaller size. That's not the case, a good quality GIF can even surpass an MP4 video of the same size because it's an uncompressed file format.

Jayakeerthan , III-EEE

WRITE UP

Smart Burglar Alarm

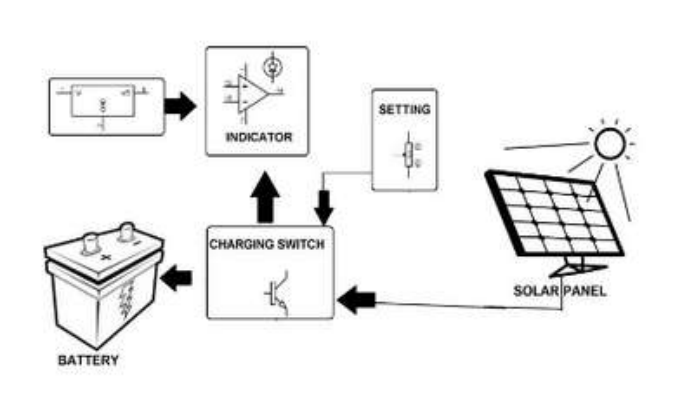
Burglary is an unwanted event that no one wants to happen their premises. However it is difficult for anyone to be alert at all the times to protect their premises. This simple device Smart Burglar Alarm helps in this situation by raising an Alarm when there is an unwanted intrusion in the secured premises.The Smart Burglar Alarm is based on a loop of copper wire which is laid at the entrance of the secured area. When an intruder steps in breaking the loop, the system activates an alarm connected to the system. By hearing the alarm the resident of the office / home can get alert about the intrusion and a possible burglary. The alarm sounds till the system is turned OFF or the wire loop is connected back.The principle of working of the project lies in the conductivity of a long copper wire which switches a transistor in its absence.



Kaviya Shree , III -EEE

Solar Powered Battery Charging With Reverse Current Protection

Solar energy is a very efficient source of green energy that is available for free. But it needs to be coupled with proper storage for best use. Also to store it we need to use charge controlling circuitry to protect panel from reverse currents as well as to charge the battery efficiently. So we demonstrate this concept by using a mini solar panel to charge a rechargeable pencil cell battery. Also we use a charge control circuit designed to stop reverse current flow and charge the battery effectively using the solar panel. Thus this allows us to effectively provide solar battery charging with reverse current protection.

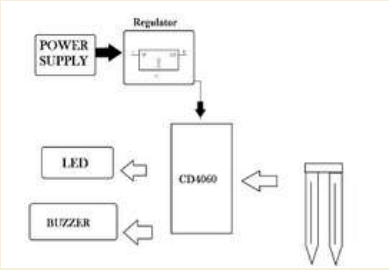


Krithika , III-EEE

WRITE UP

Plant Moisture Monitoring System

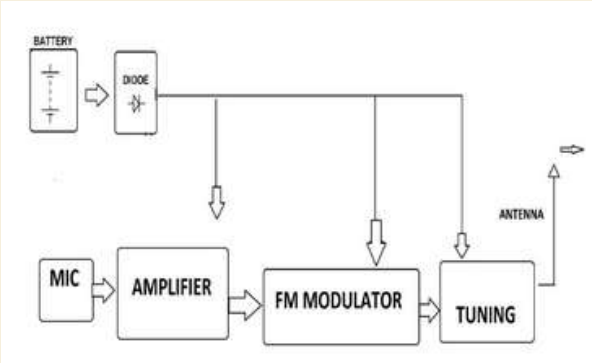
Planting a tree in an environment where the seed or the plant would not get water adequately through natural sources like rain or ground water in its initial phases has been always a matter of concern for tree planters. This is where an autonomous moisture monitor for plants system can help.The system timely monitors the moisture level of the soil. If at the time of monitoring it comes to know that the moisture level of the soil is lower than recommended then it will raise an audio visual alert. This alert is then received by the care taker of the plant. When the care taker waters the plant the alarm goes off and the monitoring cycle continues.In this system we use a timer IC to time the monitoring process. A moisture level sensor is used to detect the moisture level of the soil. An LED is used to give visual alarm and a Buzzer is used to give audio alarm to the care taker of the plant.



Rabiya Banu , III -EEE

Mini FM Transmission System

The Mini FM Transmission System is an example of wireless communication with the help of transmission in FM band. The choice of FM band is in this project is mainly because of the high digital quality and low noise interference that this band offers in audio transmission. Also, we do have readymade receivers for the FM band in the form of our standard Radio receivers or our cell phone devices that are fitted with FM receivers. So once the audio signal, be it voice, be it music, it can be transmitted through this transmitter system and can be heard through the receiver that was mentioned above.In this transmitter system we will be using the FM band of 88 MHz to 108 MHz of frequency spectrum for transmission purpose. The input to this system is audio signal which is amplified with transistor based audio amplifier. This signal is then modulated with the carrier frequency in the above mentioned frequency range and then transmitted through the antenna.



Kesavan , III-EEE

WRITE UP

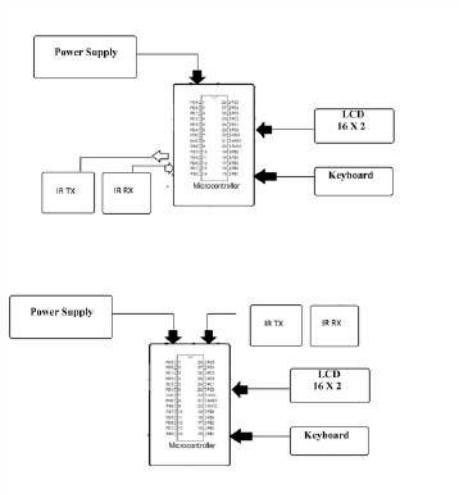
Arduino Covid Disinfection Box

Covid19 changed all of humankind in 2020. Due to its fast and efficiently spreading nature, we were forced to use face masks and gloves to protect from everything we touch. Well we can use masks to protect us outside but what about the things we bring home from market or things we exchange with other people. For example: We cannot apply sanitizers on fruits, vegetables, packed food, batteries etc we buy from outside or we cant sanitize files, paperwork that doctors exchange with patients or employees exchange with each other.

Indhra kumar , IV-EEE

IR Wireless Underwater Communication System

Here we propose an IR based underwater communication system that can be used for wireless communication of messages even through water. The system can prove to be a very cheap alternative to long heavy physical wires that run through seas, rivers and require large costs for laying those wires and their maintenance. Our system makes use of infrared transmitter receiver in order to achieve this system. Our system consists of two microcontroller based circuits that have IR transmitter-receiver pairs as well as LCD displays for displaying the messages.

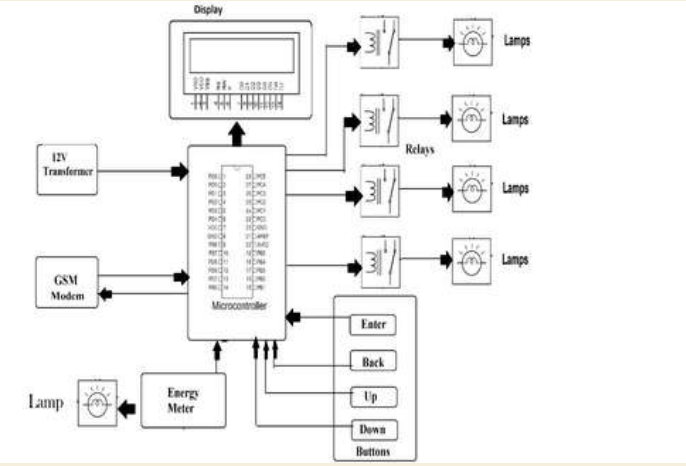


Keerthi Josh , IV-EEE

WRITE UP

Bill Prediction & Power Factor Measuring With SMS Alert

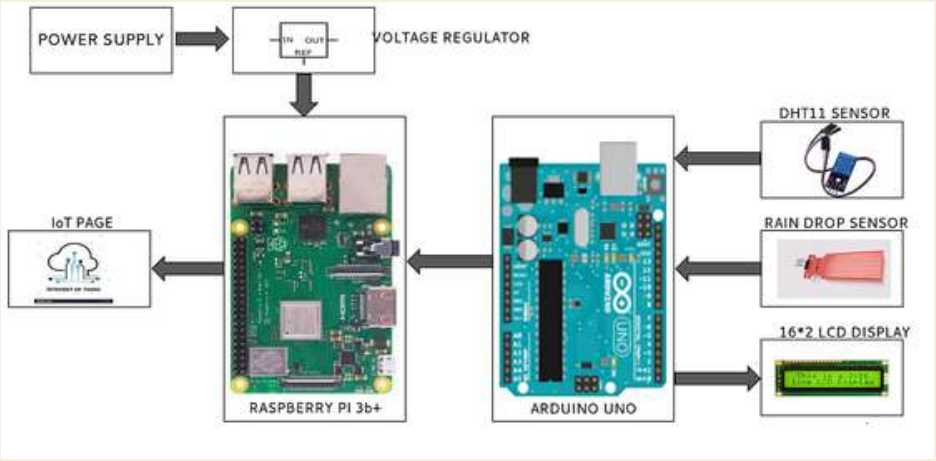
Industries use many electrical equipment to get their work done. It becomes difficult for them to understand which equipment is consuming more electricity and which one is efficient enough. Good quality equipment consume less electricity and also give a good power factor in usage. These facts can be evaluated and also be automated using this project.



Dhuvarak , IV-EEE

IOT Weather Reporting System using Adruino and Ras Pi

Keeping Track of weather is a very critical operation and needs high speed and coordination among weather trackers and reporting teams. A constant coordination is required between both teams to collect and constantly transmit weather data to reporting teams. This data is viewed by normal public to plan their day, ships and sea route planning, fishing department, disaster relief department and more.



Dhana Sekar , IV-EEE

EVENTS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Brain Teaser
Chamber Of Python
Think Before Speak
Logo Designing
Paper Presentation
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Freeze It
Ad-Zap
Rubik's Cube
Meme Challenge
Recycle
Talent Show
Back To Kid
Debate
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WORKSHOP INDUSTRIAL ROBOTICS AND AUTOMATION


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excelling in the basics of KUKA & Mitsubishi Industrial Robotics and Automation,
at the Centre for Robotics And Automation, Chennai Institute of Technology on
01-09-2023.
CO-ORDINATOR
Mr. Vinoth Kumar P
CONVENER
Dr. Pragadish N
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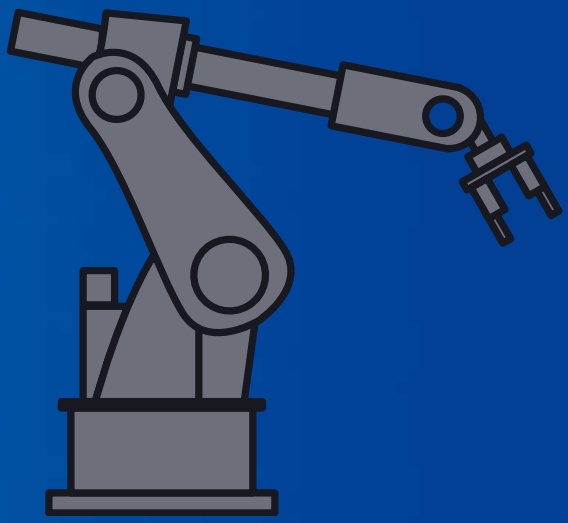


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