



VISHNU INSTITUTE OF TECHNOLOGY

Vishnupur, Bhimavaram, Andhra Pradesh - 534202

(Approved by A.I.C.T.E. & Affiliated to J.N.T.U Kakinada)

(Accredited by NBA & NAAC 'A' Grade)

Department of Electrical and Electronics Engineering

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Vishnupur, BHIMAVARAM – 534 202

Department of Electrical & Electronics Engineering

VISION AND MISSION OF THE DEPARTMENT

VISION:

To be recognized as a Centre of Excellence in the field of Education and Research so as to produce Competent & Ethical Engineers capable enough to contribute to the society.

MISSION:

- To develop innovative, efficient and proficient electrical engineers.
- To keep the curriculum industry friendly, with due regard to the University curriculum.
- To be a place for innovative blended learning and entrepreneurship development in multidisciplinary areas.
- To promote ethical and moral values among the students so as to make them emerge as responsible professionals.

PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

- PEO1:** To produce Electrical and Electronics Engineering graduates who have strong foundation in Mathematics, Sciences and Basic Engineering
- PEO2:** To provide intensive training in problem solving, laboratory skills and design skills to use modern engineering tools through higher education and research.
- PEO3:** Ability to pursue higher studies and to seek employment in a variety of engineering technology positions and work successfully in their chosen career aspirations and generate entrepreneurs.
- PEO4:** To inculcate in students professional and ethical attitude, effective communication skills, teamwork skills, multidisciplinary approach, and an ability to relate engineering issues to broader social context through life-long learning.

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1.HAND GESTURE CONTROLLED ROBOTIC ARM

M.SAI TEJA, N.BHANU PRAKASH, N.HEMA DURGA PRASAD,
M.PRASANTH KUMAR, R.RAHUL
SUPERVISOR: Mr. K. N. S. DURGA PRAKASH, M.Tech.

OBJECTIVE OF THE PROJECT:

Nowadays, robots are increasingly being integrated into working tasks to reduce human's efforts especially to perform the repetitive task. The usage of robots increases where conditions are not certain such as fire fighting or rescue operations, robots can be made which follow the instruction of human operator and perform the task. Robots are controlled using hand gesture because robots need a helping hand whether it may be any function. The main purpose of using hand gestures is that it provides a more schematic way of controlling the robots, as human hand gestures are natural, with the help of wireless communication; it is easier to interact with the robot in a more-friendly way. The proposal work presents the robot which is controlled by a human gesture using accelerometer. We have controlled the movement of robot with normal hand gesture. It consists of mainly two parts. One is transmitter part and another is receiver part. A transmitter, transmit appropriate signal. This signal received by the receiver. Accelerometer is connected to aurdino board, which is programmed to take analog readings from accelerometer and transmit them using RF transmitter to the receiving unit. The movement of robot is achieved by the motor. The arm is also equipped with gripper to facilitate the pick and place facility. The programming is done in aurdino board. This type of robots widely used where high risk involves such as Industrial, construction and military applications.

PROPOSED BLOCK DIAGRAM:

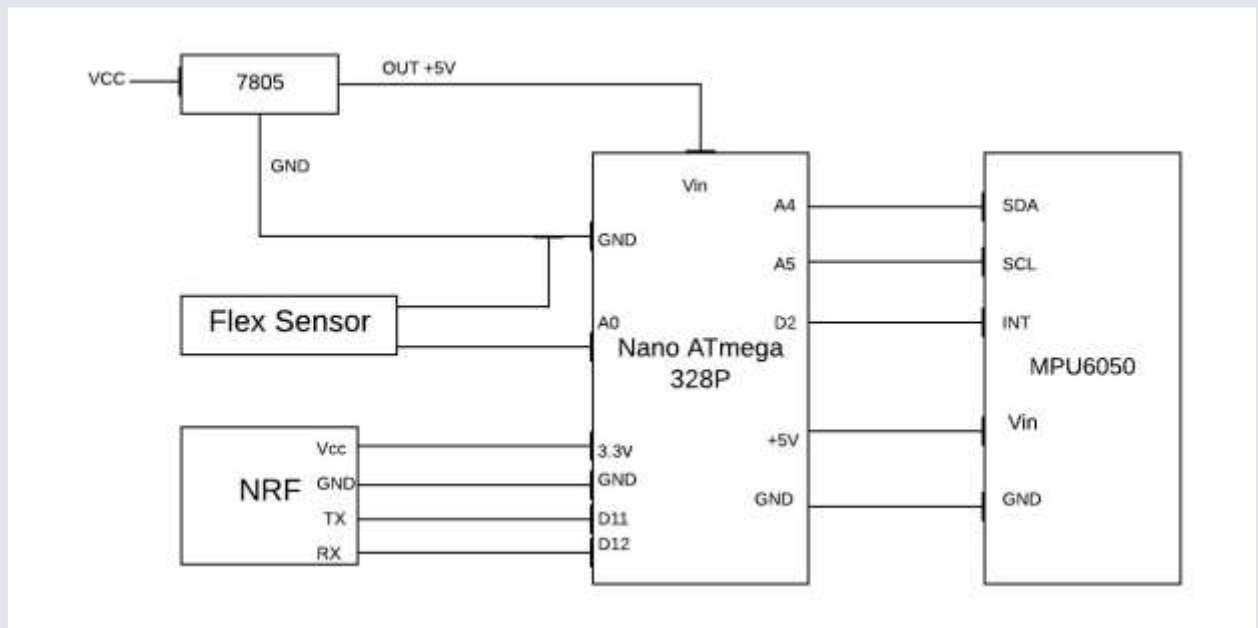
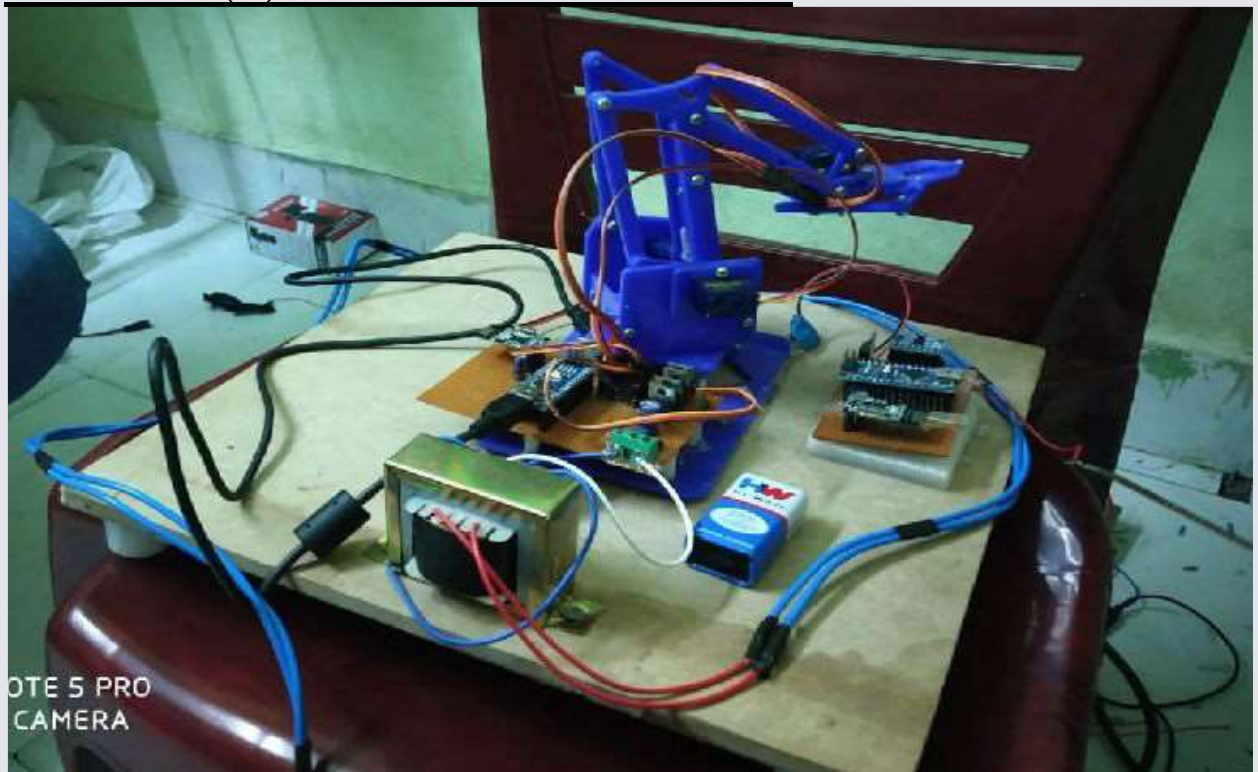


Fig 2.1 Circuit Diagram for Transmitter Part

MODULE(S) OF THE PROTOTYPE:



Hand Gesture Controlled Robotic Arm Project Kit



Pin Diagram Of Adriano Nano



Servo motor

CONCLUSION OF THE PROJECT:

A robotic system has been developed which works according to your hand gesture. It provides a better way to control a robotic arm using an accelerometer which is more intuitive and easy to work. The RF module is working on the frequency of 433 MHz and has a range of 80-100 meters.

The gesture controlled robotic arm for industrial application is designed and implemented. The movement is precise, accurate, as well easy to control and friendly to use. The robotic arm has been made very carefully and in a detailed manner so that the movement of the robot can be controlled accurately. This robotic arm control method will be helpful in many aspects to make human life comfortable and easy.

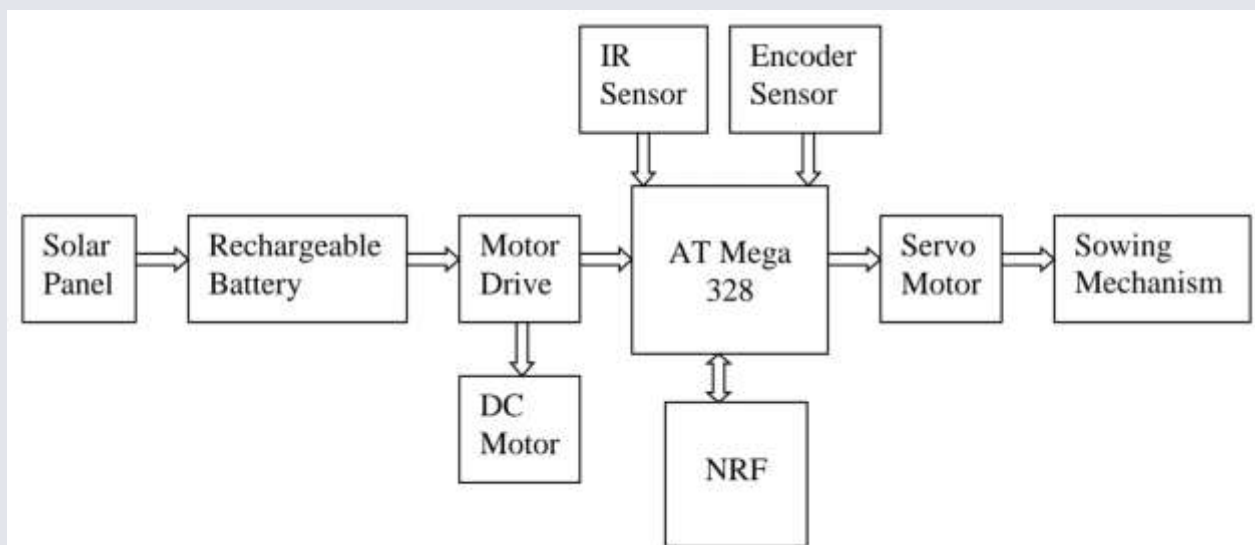
2. AUTOMATIC SEED SOWING MACHINE USING SOLAR ENERGY

T.VENKATA KALYAN, Y.SAI CHAKRADHAR, P.CHANDAN SAI,
P.YOGANAND, R.VAMSI KRISHNA.
SUPERVISOR: Mrs. D. Mamatha, M.Tech.,

OBJECTIVE OF THE PROJECT:

Agriculture plays an important role in the life of economy. It is the backbone of our economy system. In this project work focused on seed sowing processes and tried to solve the problem. In seed sowing machine system they are used battery powered wheels and dc motor inbuilt in these wheels. When the seeds are empty it detects the level of storage seed and indicates the alarm. When any obstacle comes in the in-front of machine or divert path the seed sowing machine can detect this obstacle very easily. In each complete rotation of rotating wheel there is seeds falls from this seed drum and the seed plantation process can take place smoothly as well as without wastage of seeds. The end of system machine reached and it create alarm. This system provides all the facility which can work efficiently. The Automatic seed sowing machine are developed. In this proposed work they have focused on seed sowing process. In this seed sowing process to avoid the drawbacks. The seed sowing machine is developed which has very less cost. Also the unskilled farmer can be easily operated automatic seed sowing system.

PROPOSED BLOCK DIAGRAM:



MODULE(S) OF THE PROTOTYPE:



CONCLUSION OF THE PROJECT:

Innovative Seed sowing equipment has remarkable influence in agriculture. By using this innovative project of seed sowing equipment we can save more time required for sowing process and also it reduces lot of laborer cost. It is very helpful for small scale formers. After comparing the different method of seed sowing and limitations of the existing machine, it is concluded that the this solar powered seed sowing machine can

1. Maintain row spacing and controls seed rate.
2. Control the seed depth and proper utilization of seeds can be done with less loss.
3. Perform the various simultaneous operations and hence saves labor requirement so as labor cost, labor time and also save lots of energy.

Hence it is easily affordable by farmers. So we feel that this project serves something good to this world and we would like to present it before this prosperous world.

3.SMART WATER MANAGEMENT SYSTEM

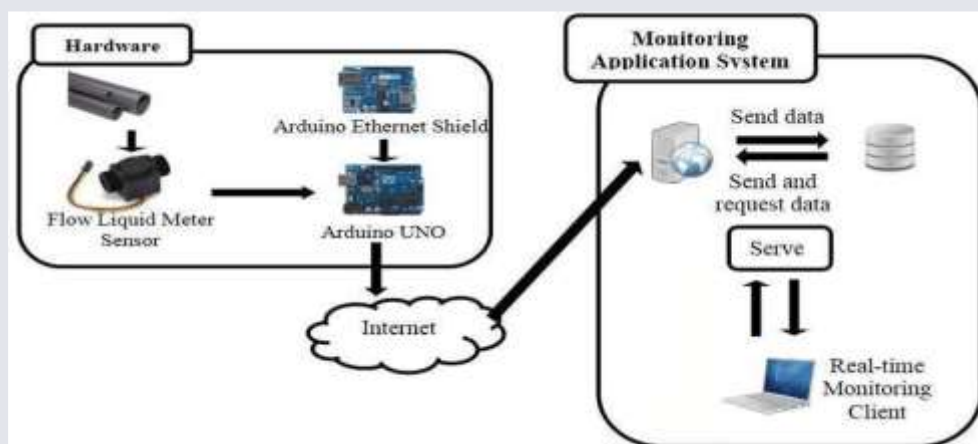
P. Jyothi Narayan, R. Venkateswarlu, R. Priya Chandrika, MD. Asiff,
K. Sai Kumar

SUPERVISOR: Mr. B.N.CH.V.CHAKRAVARTHI, M. Tech.

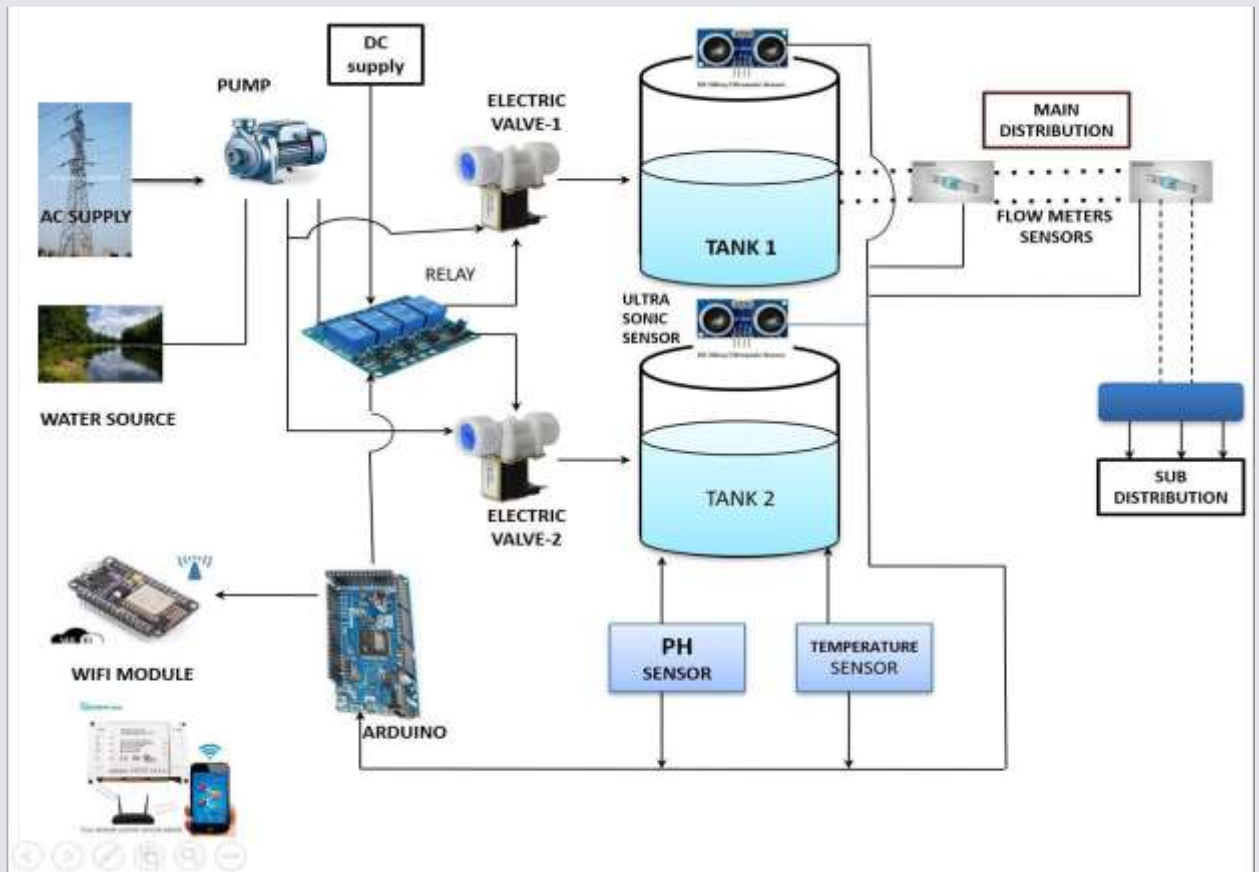
OBJECTIVE OF THE PROJECT:

The project smart water management, as the name says it is all about management of water supply throughout the scale, right from small societies, townships to entire urban infrastructure and also for irrigation water supply management, The objective of smart water management is to achieve water security at all levels in a sustainability and self- sufficiency manner, The key role of our project is to deliver the information about the quality of drinking water to the end users, detecting the leakages in the pipeline network with a fully automated pumping system for commercial and irrigation purpose. Water source is necessary and an important factor in any area of our society and it is a key to quality of our life as well. Water Quality, Leakage, Contamination and Managing pipeline plays a key role for the betterment of our society. From the Literature survey, we came to know that we don't have such a system which can work autonomously and take right decisions under all practical conditions and we have brought a solution for this problem that is *SMART WATER MANagementsystem*.

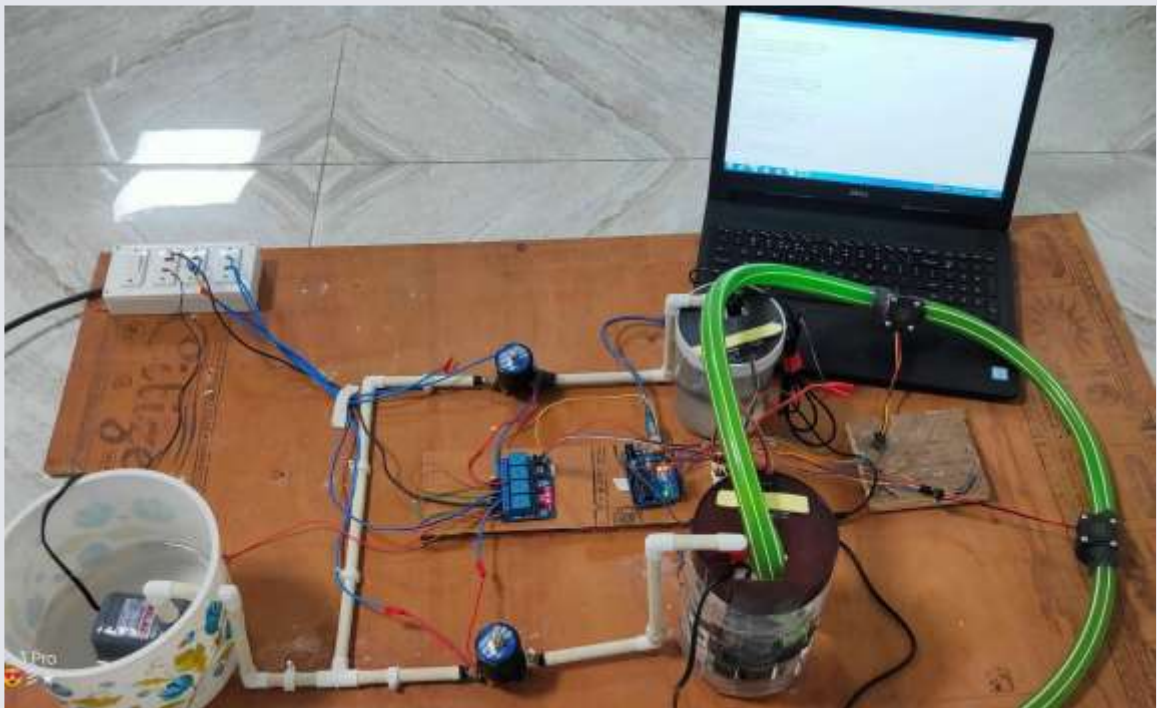
PROPOSED BLOCK DIAGRAM:



Leakage detection & Monitoring system



MODULE(S) OF THE PROTOTYPE:



PROJECT KIT

4.A RESIDENTIAL LOAD MANAGEMENT SYSTEM USING IOT

**M.VEERA VENKATA GANESH , S. NARESH , V. BALAJI PAVAN SAI
RAJU
N. AVINASH , V. BHASKAR SAI MARUTHI**

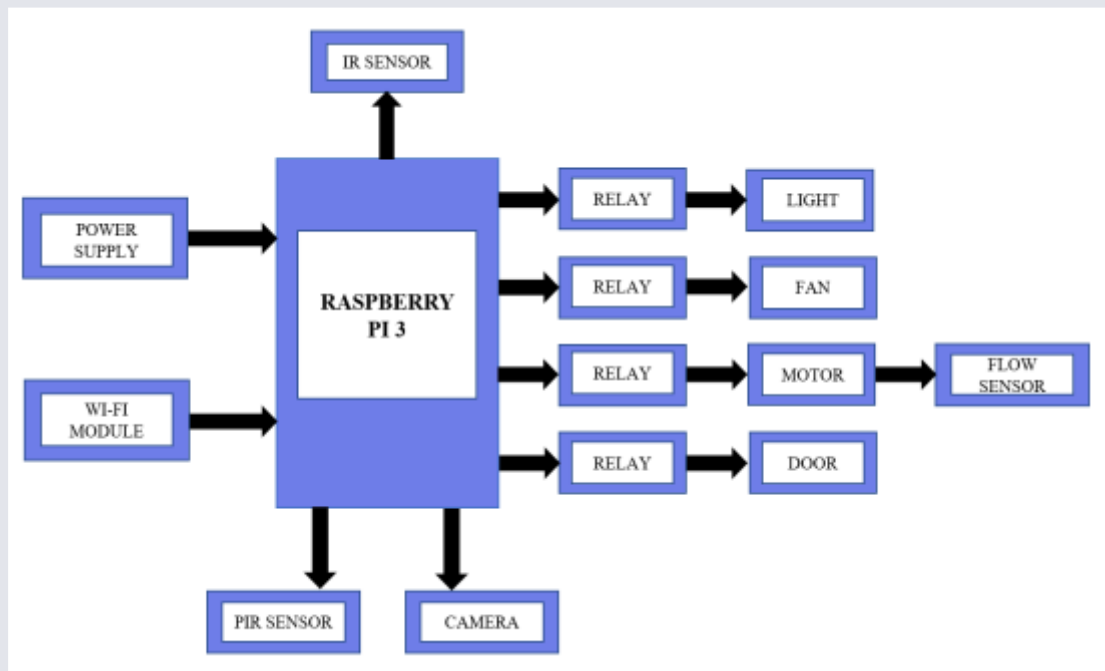
SUPERVISOR: Mr. V. S. N. NARASIMHA RAJU, M.Tech.

OBJECTIVE OF THE PROJECT:

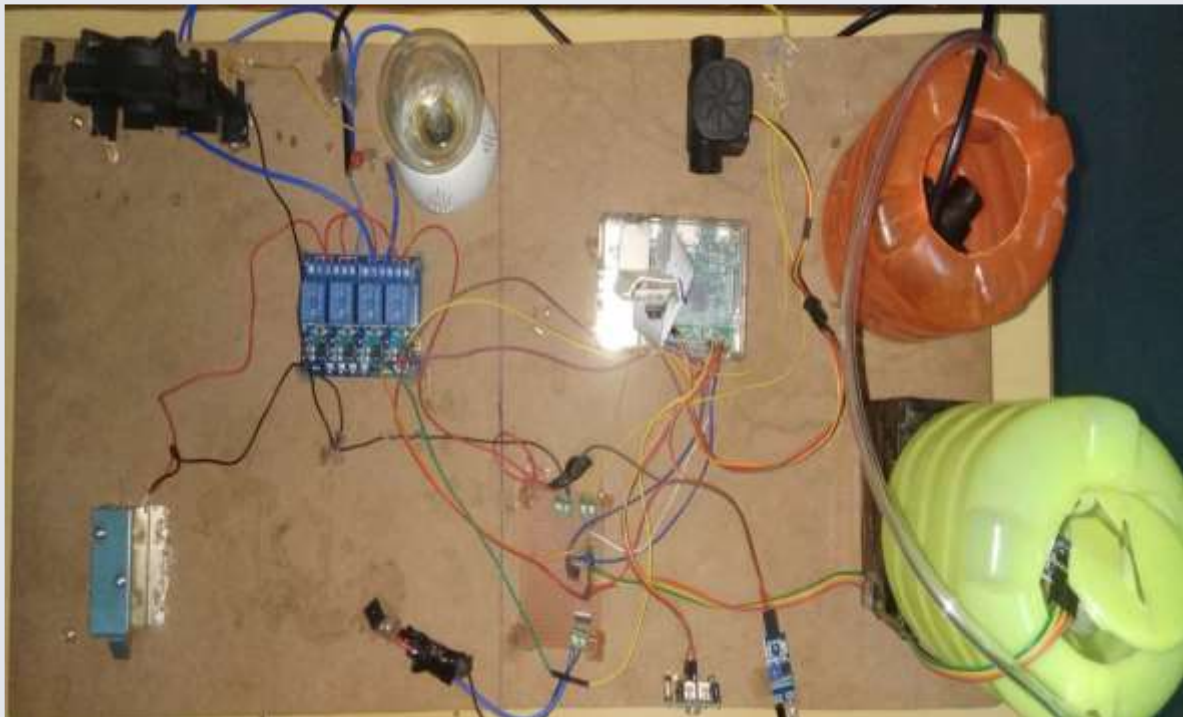
Internet of Things (IOT) conceptualizes the idea of remotely connecting and monitoring real world objects (things) through the Internet. When it comes to our houses, this concept can be aptly incorporated to make it smarter, safer and automated. This IoT project focuses on building a smart wireless home security system which sends alerts to the owner by using Internet in case of any trespass and raises an alarm optionally. Besides, the same can also be utilized for home automation by making use of the same set of sensors. The leverage obtained by preferring this system over the similar kinds of existing system is that the alerts and the status sent by the WIFI connected microcontroller managed system can be received by the user on his phone from any distance irrespective of whether his mobile phone is connected to the Internet.

Now a days home automation system is being widely used to control devices around the home. A variety of home devices can be controlled with the help of a home automation system. All kinds of home appliances like doors, lights, fan, electric motor, surveillance systems, and consumer electronics belong to the home automation system devices.

PROPOSED BLOCK DIAGRAM:



MODULE(S) OF THE PROTOTYPE:





CAMARA MODULE



ULTRA SONIC SENSOR

CONCLUSION OF THE PROJECT:

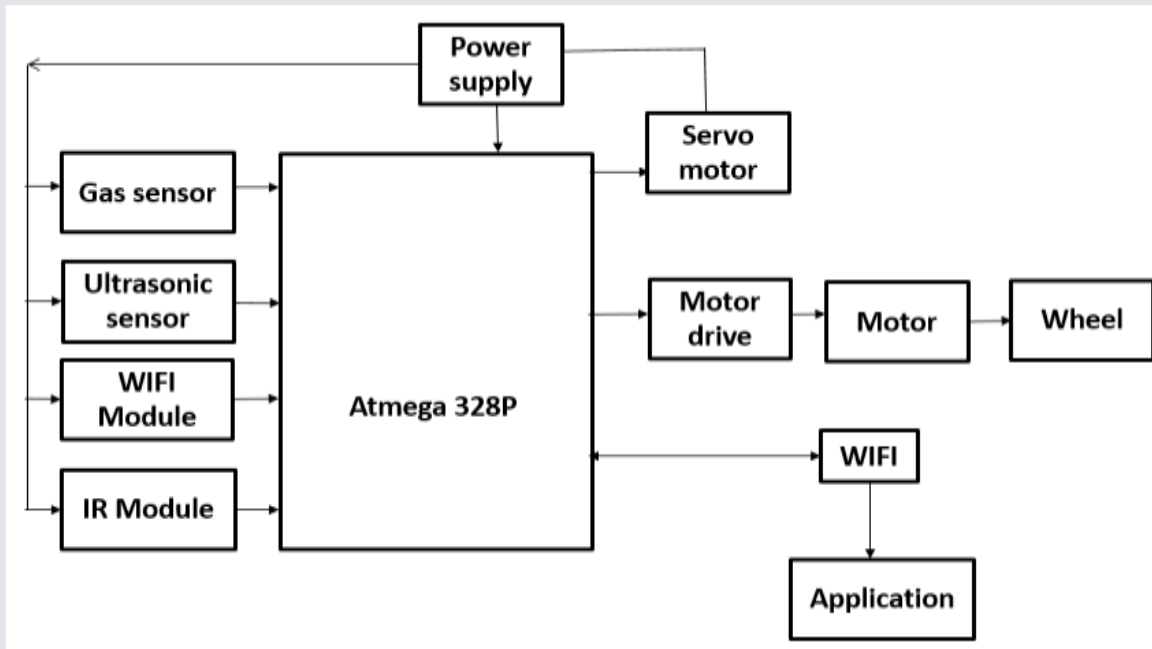
A residential load management system using IOT has been proposed to control the home appliances automatically. The raspberry pi is used and can perform multiple operations at a time in handling residential loads like fans, lights, water management system, security systems etc. This type of home automation system is required because humans can make mistakes and forget to switch off the appliances when there is no use and, in this case, this is useful in order to utilize the power effectively and also in a secured manner. In this project we have successfully designed a system that communicates with a mobile device such as a smartphone or laptop via Raspberry Pi to control a door lock sensor and a light switch and a camera to stream live video, but has many possible applications that could benefit from this work. The PYTHON platform is used for coding this residential management system.

5.SMART GARBAGE MANAGEMENT SYSTEM

K.L.S.SHANKAR, S.M.SURESH , T.ANIL KUMAR , M.S.MADHURI
SUPERVISOR: Mr.P.NAVEEN, M.Tech (Ph.D.)

OBJECTIVE OF THE PROJECT:

In the recent decades, Urbanization has increased tremendously. At the same phase there is an increase in waste production. Waste management has been a crucial issue to be considered. This project is a way to achieve this good cause. In this project, smart garbage bin is built on a microcontroller with Ultrasonic sensor, dc servo, IR sensor, Gas sensor, Pressure sensor, and Wi-Fi module. Ultrasonic sensor is placed at the top of the dustbin which will measure the stature of the dustbin. The threshold stature is set as 10cm. Project will be programmed in such a way that when the dustbin is being filled, the remaining height from the threshold height will be displayed. Once the garbage reaches the threshold level ultrasonic sensor will trigger the Wi-Fi modem which will continuously alert the required authority until the garbage in the dustbin is squashed. Once the dustbin is squashed, people can reuse the dustbin. At regular intervals dustbin will be squashed. Once these smart bins are implemented on a large scale, by replacing our traditional bins present today, waste can be managed efficiently as it avoids unnecessary lumping of wastes. Foul smell from these rotten wastes that remain untreated for a long time, due to negligence of authorities and carelessness of workers may lead to long term problems. Breeding of insects and mosquitoes can create nuisance around promoting unclean environment. This may even cause dreadful diseases.



MODULE(S) OF THE PROTOTYPE:



Smart Garbage Management System



Opening lid of dustbin



Over Weight Alert Notification

CONCLUSION OF THE PROJECT:

This project work is the implementation of Automatic Smart Garbage Fill Alerting Management system using Ultrasonic sensor, Arduino Uno, Buzzer and Wi-Fi module. This system assures the cleaning of dustbins soon when the garbage level reaches its maximum. It will take power supply with the help of Piezoelectric Device .If the dustbin is not cleaned in specific time, then the record is sent to the Sweeper or higher authority who can take appropriate action against the concerned contractor. This system also helps to monitor the fake reports and hence can reduce the corruption in the overall management system. This reduces the total number of trips of garbage collection vehicle and hence reduces the overall expenditure associated with the garbage collection. It ultimately helps to keep cleanliness in the society. Therefore, the Automatic Garbage Fill Alerting system makes the garbage collection more efficient.