

IoT Based Smart Dustbin with Real Time Notification System.

About This Project:

This project is a way to achieve this good cause. In this project, IoT smart bin is built on a microcontroller based platform Arduino Nano board which is interfaced with Node Mcu ,Ultrasonic Sensor & Gas Sensor,. 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. Arduino 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 Node Mcu 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 on roadside. Foul smell from these rotten wastes that remain untreated for a long time, due to negligence of authorities and carelessness of public may lead to long term problems. Breeding of insects and mosquitoes can create nuisance around promoting unclean environment. This may even cause dreadful diseases.

Block Diagram:

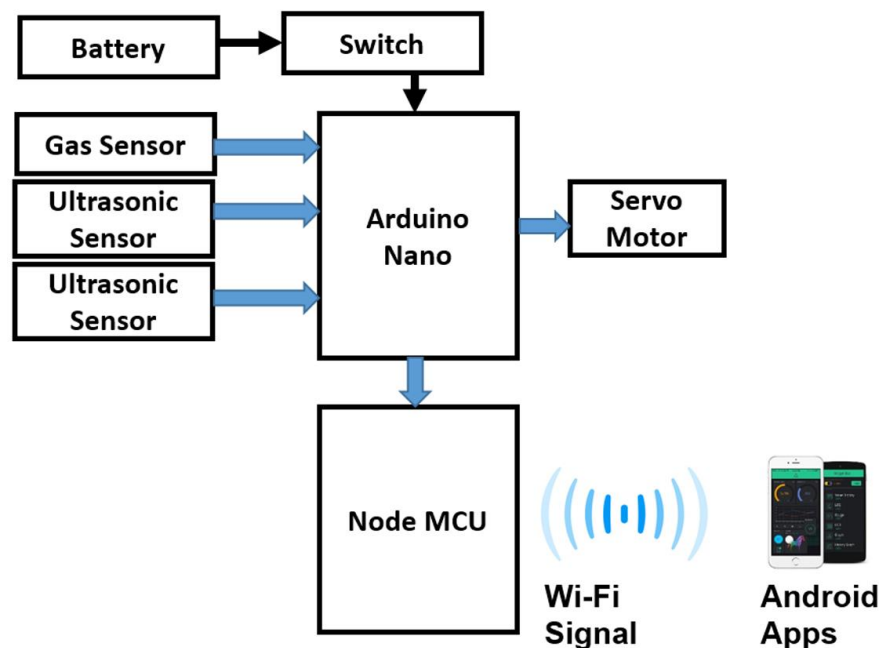


Figure: Block Diagram of IoT Based Smart Dustbin with Real Time Notification System.

Required Instrument:

- Arduino Nano.
- Node Mcu.
- Ultrasonic Sensor.
- Gas Sensor.
- Servo Motor.
- Battery.

Advantages:

There are many advantages of our project because of its accuracy. Some of the advantages are pointed out below:

- Automatically Operated.
- Gas Sensing System.
- IoT Notification System.
- Remotely garbage monitoring system.
- Portable.
- Cost Effective.
- High Accuracy.
- Better Longevity.



Applications:

The application areas for this project in this modern and practical world are huge and some of these are given below:

Dustbin is very much used at the end of our daily work. So it can be used everywhere.

- It can be used in home.
- It can be used in hospital.
- It's also can be used in shopping mall.
- It can be used extensively on the side of the road to keep the city clean.

N.B: *Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.*

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