

# “Go In Green”

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**Abstract-** This paper address the problems associated for monitoring work done in Swachh Bharat Abhiyan, smart garbage collecting systems aiming to satisfy the involved parties (e.g., garbage pick service providers and work done monitoring) have been developed. Based on the observation that level of garbage bin overflow will reduce dramatically, this system propose a Automation-based solution, built on advanced sensing and mobile communication technology, with the objectives to alleviate the garbage contention, balance the benefits between garbage pick service, coordinate among service provider, to reduce the amount of garbage as well. To achieve the design goals, a powerful tool to model the behavior of both service providers and public is required.

**Keywords-** IOT, client-server, sensors, Smart Phone, Loction Cloud.

## I. INTRODUCTION

The agenda behind developing this application for monitoring Garbage Worker. In this, automation process checks the level of garbage container through ultrasonic sensor and gives the signal to server with level: red=90 percentage, yellow=50 percentage and green=0 percentage. When the level of garbage container reaches up to 90 percentage then server get notification with its GPS location of garbage bin from where garbage is to be collected. Also, this system provides alternative process, i.e. Manual process through which citizen click the image with its GPS location and send it to server. After receiving the data form Automation or Manual process by server, the server assign task for collecting the garbage to garbage collector(Truck) with their Geographical Location (. i.e. GPS). The worker truck has the tablet integrated to their vehicles which receives garbage location and process that request according to area assigned to them. When the garbage is collected by the worker, garbage bin generates signal. i.e. work done.

Swachh Bharat Abhiyan is a cleanliness drive aimed to cover 4,041 statutory cities and towns all over India in order to clean the streets, roads and other infrastructure. Swachh Bharat Abhiyan is a cleanliness campaign run by the government of India and initiated by the Honourable Prime Minister, Narendra Modi. The campaign was officially launched on 2 October 2014 at Rajghat, New Delhi by Prime

Ministe Narendra Modi. It is India's largest ever cleanliness drive with 3 million government employees, especially school and college students from all part of India, participating in the campaign.

Swachh Bharat Abhiyan is also called as the Clean India Mission or Clean India drive or Swachh Bharat Campaign. It is a national level campaign run by the Indian Government to cover all the backward statutory towns to make them clean. This campaign involves the construction of latrines sanitation programmers, cleaning streets, roads and changing the infrastructure of the country to lead the country ahead.

A. ARDUINO UNO :

SS Arduino UNO is a microcontroller board based on the AT mega 328p. It has 14 digital input/output pins, 6 analog inputs, a 16 MHz quartz crystal, a USB connection, a power jack, an ISCP header and reset button. Simply connect the controller using USB cable or power it with AC-to-DC adapter or battery to get use. The arduino UNO can be programmed with arduino software IDE. Select Arduino UNO from tools -> Board menu. The arduino UNO becomes a default programs with about header that allow to upload new code to it without the use of external hardware program.

B. POWER :

The external power supply is via USB cable to the arduino. Either AC-to-Dc adapter can be used as an external supply. The 2.1mm centered positive plug issued in the board's power jack.

C. REQUIRED POWER SUPPLY

The board can operate in between 6-20 volts on an external. The board becomes unstable if supply is less than 7v and if supply is higher than 12v it may overheat and damage the board. So 7-12v is recommended to use.

D. ULTRASONIC SENSOR

The object distance is determined by calculating the duration of ultrasound that reflects back to sensor. They send pulsed ultrasonic waves of a certain frequency and determine the objects distance from the duration of ultrasound that it reflects. Ultrasonic sensor ranges from 2cm-400cm measurement function of non- contact. The connecting wires such as 5v power supply trigger pulse input, echo pulse output, 0v ground

#### E.GSM

A GSM modem is a device which can be either a mobile phone or a modem device which can be used to make a computer or any other processor communicate over a network. A GSM modem requires a SIM card to be operated and operates over a network range subscribed by the network operator. It can be connected to a computer through serial, USB or Bluetooth connection. A GSM modem can also be a standard GSM mobile phone with the appropriate cable and software driver to connect to a serial port or USB port on your computer. GSM modem is usually preferable to a GSM mobile phone. The GSM modem has wide range of applications in transaction terminals, supply chain management, security applications, weather stations and GPRS mode remote data logging

#### F.CLOUD STORAGE

In cloud storage, the logical pool is used to store the digital data. The cloud storage ensures the availability and accessibility of information stored in it. We use two fields in our cloud database. The field 1 is time and the other is percentage. Each status of information is stored in database. Only if the bin reaches 90 percent it sends the alert message to the authorized person or control room.

## II. LITERATURE SURVEY

**Chetan Patil , Ajay Shimpi , Prasad Sawant , Piyusha Patil has propose work** the level of garbage which is characterized into different levels as the level extends the bin limit , the bin can not be open by outsiders. It can only be open through valid card. **The** drawback of the system is dustbin is Full not usable by outsiders, only authorized person it open.

**Sanket S. Ghate has proposed** technology like Zigbee, GSM etc. that enables the remote monitoring of solid waste bin in real time and which will inform the authorized person when the garbage bin is about to fill. The drawback of the system was network gets down whole system will collapse.

**Mohd Helmy Abd Wahab; Aeslina Abdul Kadir; Mohd Razali Tomari; Mohamad Hairol Jabbar has prposed** the system which uses pervasive computing technology to improve waste management system by means of radio frequency identification at bin level. The drawback of this system was slow connection in pervasive computing leads to slow processing.

**Dr.N.Sathish Ku-mar1,B.Vijaylaxmi2, R. Jenifer Prarthana3,A.shankar4 has prposed** dustbin which detects the level of garbage with the help of sensors which communicates to the authorized control room. Arduino provides interface sensors and GSM.The major disadvantage for this system was if the network gets collapse the hole system gets collapsed.

## III. PROPOSED WORK

System is an application for monitoring Garbage Worker. In this, automation process checks the level of garbage container through ultrasonic sensor and gives the signal to server with level: red=90 percentage ,yellow=50 percentage and green=0 percentage. When the level of garbage container reach up to 90 percent- age then server get notification with its GPS location of garbage bin from where garbage is to be collected. Also we are providing alternative process, i.e. Manual process through which citizen click the image with its GPS location and send it to server. After receiving the data form Automation or Manual process by server, the server assign task for collecting the garbage to garbage collector(Truck) with their Geographical Location(i.e. GPS) . The worker truck has the tablet integrated to their vehicles which receives garbage location and process that request according to area assigned to them. When the garbage is collected by the worker, garbage bin generates signal. i.e. work done.

The system Monitors how much work is done by worker throughout the day and keeps the track of workers. The system monitors the garbage collector and garbage from starting point to garbage junk yard. Hence the exact location of garbage collector (Truck) is done and reduces theft of garbage. Feedback system is used for manual and automation system. In manual system, if garbage is not collected ,then the citizen sends the image with Geo-Tag to server after specified time span and In automation system the level of the garbage is Monitored by Ultrasonic sensor and depending on that feedback is sent to server(i.e. Levels R=90 percentage ,Y=50percentage, G=0 percentage) which alert the system at 90 percentage to collect the garbage. Database is used to store the details of users ,workers and Work done in SBM

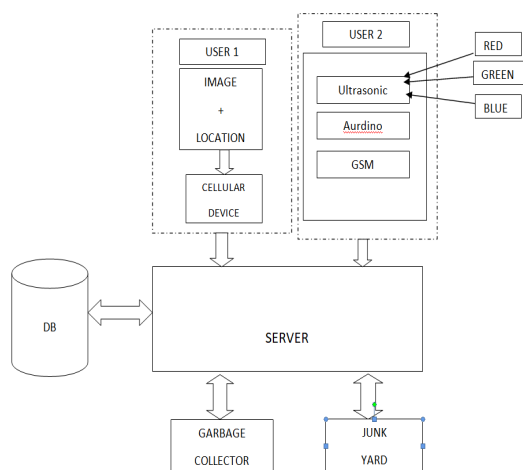


Fig: System Diagram

#### IV. CONCLUSION

We have discussed about location-based services and how it works. We have done lots of automation work. Proper record is maintained

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