

IOT SMART GARBAGE MONITORING SYSTEM FOR MUNICIPAL CORPORATION

AIM:

Design and development of smart garbage monitoring system for Municipal Corporation using IOT.

PURPOSE:

Waste management is very tough and necessary in these days. But there is no proper maintenance of waste in anywhere. Particularly in cities and towns workers miss waste in various places due to various reasons. We are finding in metro cities there are lot of garbage bins filled with waste and remains same after long days. These effects to pollute environment. Here we are providing solution to this with smart IOT. Each garbage bin consists one RFID tag. Each RFID indicates that particular area location. We can assign our area names. If vehicle doesn't go through that area that means they miss that particular garbage. It indicates empty in server, based on this higher officer can take action against garbage collection vehicle/team.

DESCRIPTION:

This project includes WIFI (Esp8266/IOT module) and RFID (EM18) reader and connected to Arduino through UART interface. When RFID tag comes near to Reader it reads tag data and sends to Arduino.

WORKING:

When Arduino Reads tag data it identifies location name based on inside code. Arduino sends area name to IOT server using IOT module (ESP8266/IOT). In server Data will be stored with respective to data and time. In any particular time if no data for particular location that means garbage collection not happens in that particular location.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
RFID Reader	:	EM-18
Limit Switch	:	Digital Type
Power Source	:	12v 2 amp Adaptor

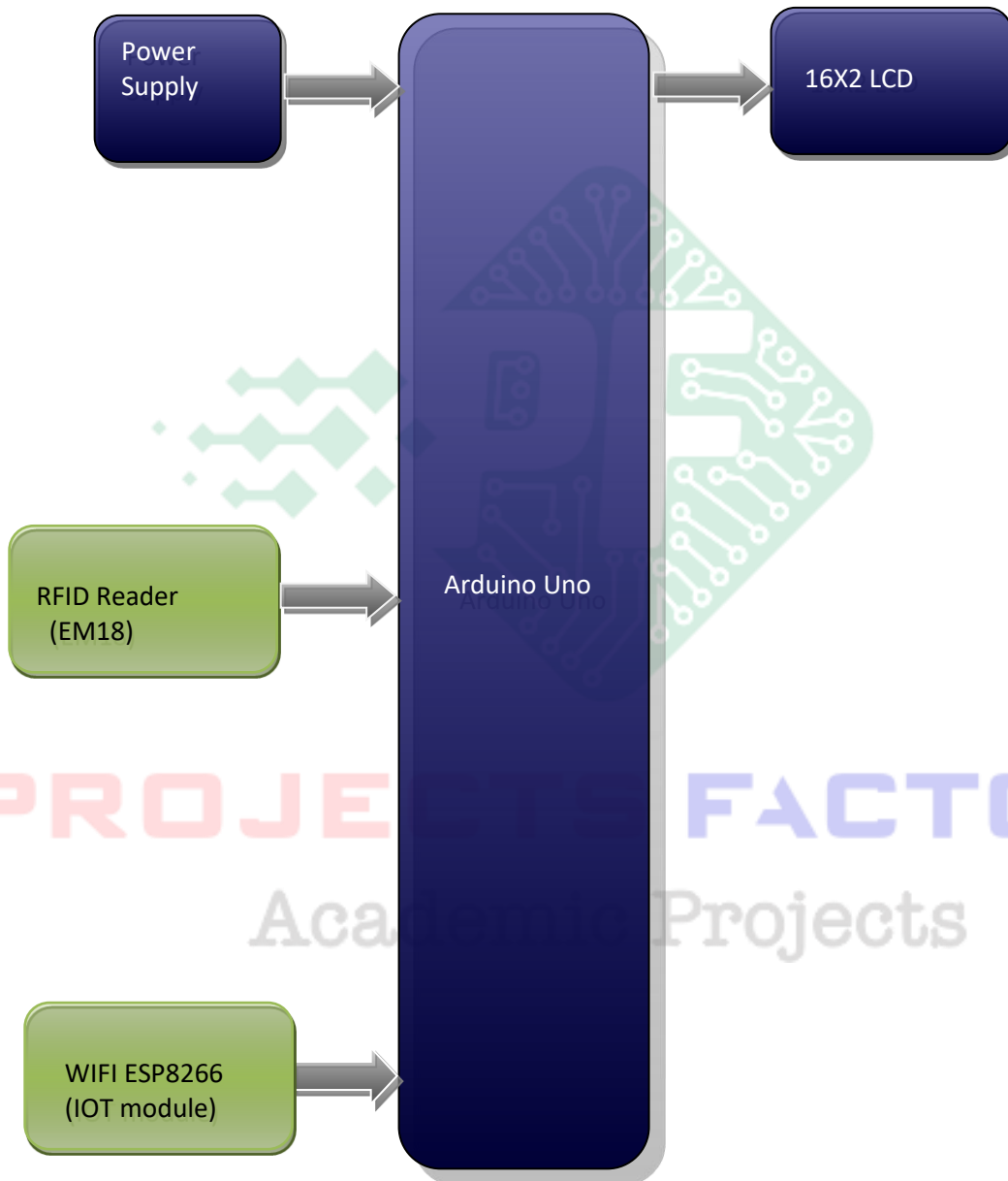
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

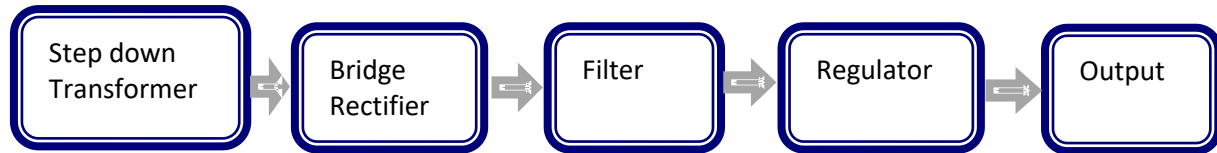
APPLICATIONS:

- Waste management
- Municipalities
- Swatch Bharath Mission
- Smart Garbage

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- In this project we have covered WIFI (ESP8266/IOT) module and RFID interfacing.

PROJECTS FACTORY
Academic Projects