

AUTOMATIC GARBAGE COLLECTION USING GSM GPS

AIM:

Design and Development of Automatic Garbage Collection Using GSM GPS.

PURPOSE:

The most unorganized problem is waste management. A country like in India the waste management is very tough because of more population. There are so many garbage collection bins available across city. But immediate evacuation is very important, but there is no system to intimate about garbage level. Here we propose system like automatic garbage collection using GSM GPS. It will intimate garbage level.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART. GPS module connected to Arduino through UART interface. Ultrasonic Sensor (HC-04) connected to Arduino digital pins.

WORKING:

Arduino continuously reads Ultrasonic sensor. If garbage level filled then distance in ultrasonic will be near. If garbage level empty then distance in ultrasonic will be more. Garbage level displaying in LCD. When ultrasonic detects garbage filling then Arduino sends SMS to register mobile number. SMS contains Google maps location of garbage bin. Each garbage bin will have this kind of system. Buzzer will be ON when garbage filled.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
GPS	:	NEO-6M
Ultrasonic Sensor	:	HC-SR04
Buzzer	:	5vDC
Power Source	:	12v 2 amp Adaptor

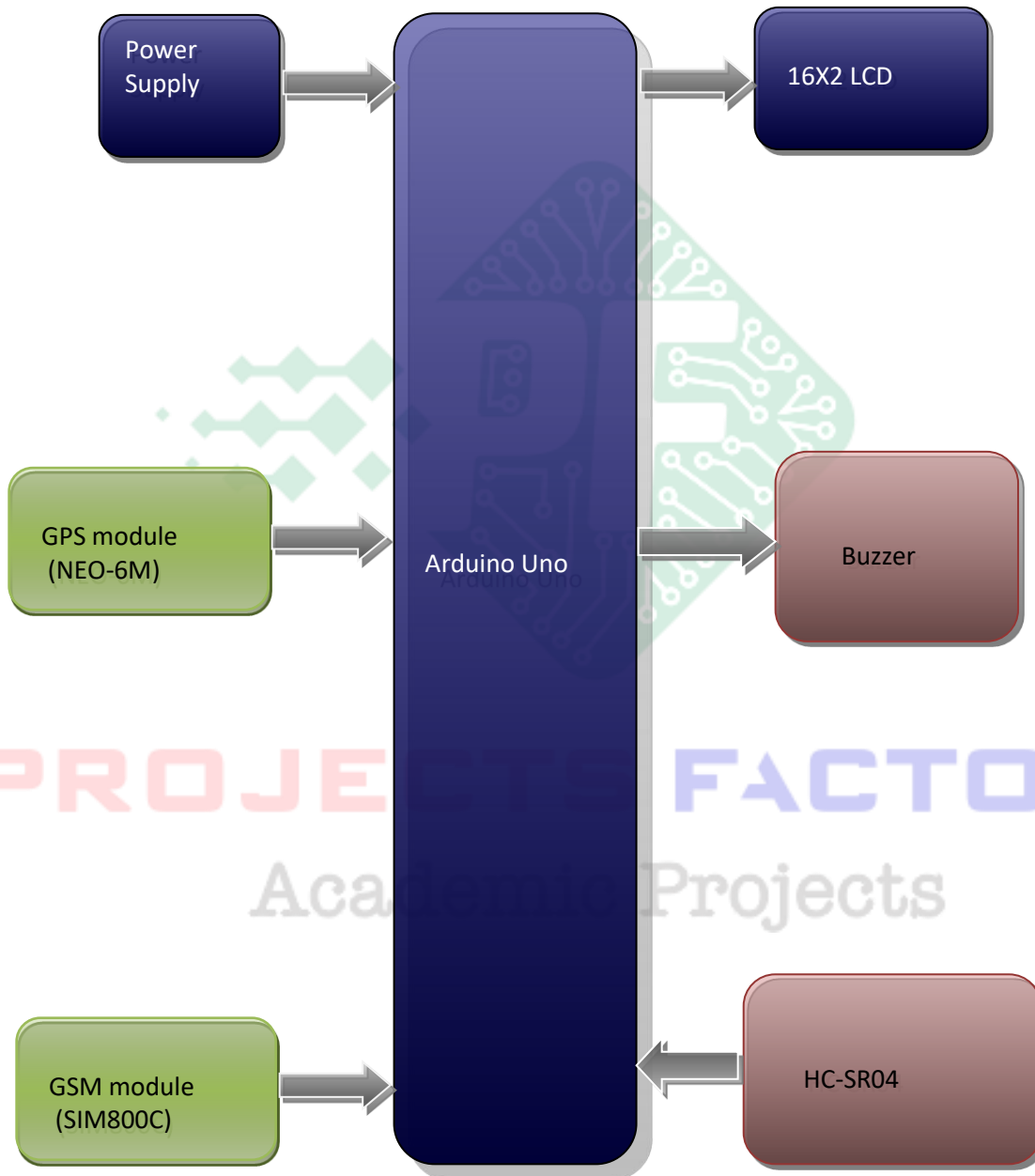
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

APPLICATIONS:

- Waste Management
- Garbage collection management

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- GPS (NEO-6M) module interfacing
- Ultrasonic Sensor (HC-SR04)

PROJECTS FACTORY
Academic Projects