

# **GSM BASED WEATHER MONITORING SYSTEM USING ARDUINO**

## **AIM:**

Design and development of GSM based Weather Monitoring System using Arduino

## **PURPOSE:**

Weather is very important for humans and our responsibility is to protect it. By monitoring weather we can protect it. Wireless (GSM) weather monitoring is very useful to monitor from remote location. So that here we proposed GSM based weather monitoring system using Arduino.

## **DESCRIPTION:**

This project includes GSM (Sim800C) module, which is connected to Arduino through UART interface. LM35 (Temperature Sensor), MQ2 (CO level), Humidity and LDR sensors are connected to Arduino through Analog and Digital IO pins. For basic Weather monitoring these parameters are primary necessities.

## **WORKING:**

Arduino continuously read all these sensors data. Always update on LCD. For every specific time interval (like 1 min), all sensors data transmitted to mobile as SMS through GSM module. If any abnormal conditions occur then buzzer sound will come. We can get sensors data at any time based to request SMS to Arduino.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
Buzzer	:	5V DC
Temperature/Hum Sensor	:	DHT11
CO Sensor	:	Mq2
Light Sensor	:	LDR
Power Source	:	12v 2 amp Adaptor

### SOFTWARE:

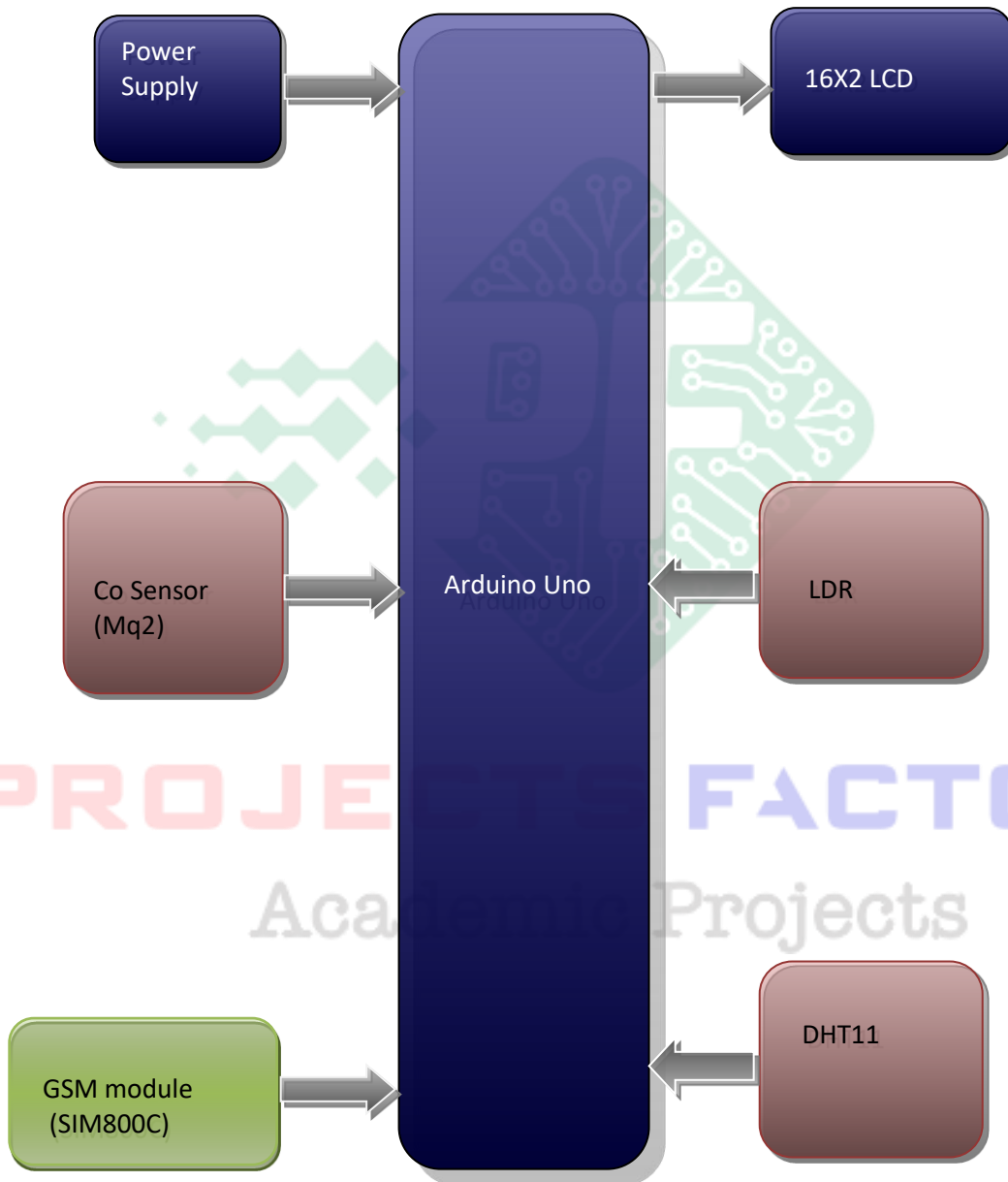
Arduino IDE

Proteus based circuit diagram

### APPLICATIONS:

- Weather Stations
- Climate Monitoring
- Agri Sector

**BLOCK DIAGRAM:**



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- DHT11 (Temp/Hum Sensor) and CO sensor (MQ2) Sensor interfacing

PROJECTS FACTORY  
Academic Projects