

ANDROID BASED WEATHER MONITORING SYSTEM USING BLUETOOTH

AIM:

Design and Development of Android based weather monitoring system using Bluetooth.

PURPOSE:

Weather monitoring is important for everyone. Especially for farmers it is very necessary thing. They can take immediate actions when they know prediction of weather. Current weather monitoring announcements coming from government or news agencies. They get information of weather from central system. Individual weather monitoring systems can predict weather accurately with respect to particular area. Here we propose solution like Android based weather monitoring system using Bluetooth.

DESCRIPTION:

This project includes Bluetooth (HC-05) module, which is connected to Arduino through UART interface. DHT11 connected to Arduino digital pins to read Atmospheric temperature and humidity. BMP180/280 connected to Arduino I2C port and it can read atmospheric pressure. Also MQ135 connected to Arduino analog pin and it can read CO2/pollution level of air.

WORKING:

Here DHT11, BMP180/290 and MQ135 read respective parameters of atmosphere. These values will display on 16X2 LCD display. Also Bluetooth sends all these data to android mobile application. This Android Application is customized and displayed all sensors data.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Bluetooth	:	HC-05
Temperature Sensor	:	DHT11
Humidity Sensor	:	DHT11
Atmospheric Pressure	:	BMP180/280
Pollution CO2 Sensor	:	MQ135
Power Source	:	12v 2 amp Adaptor

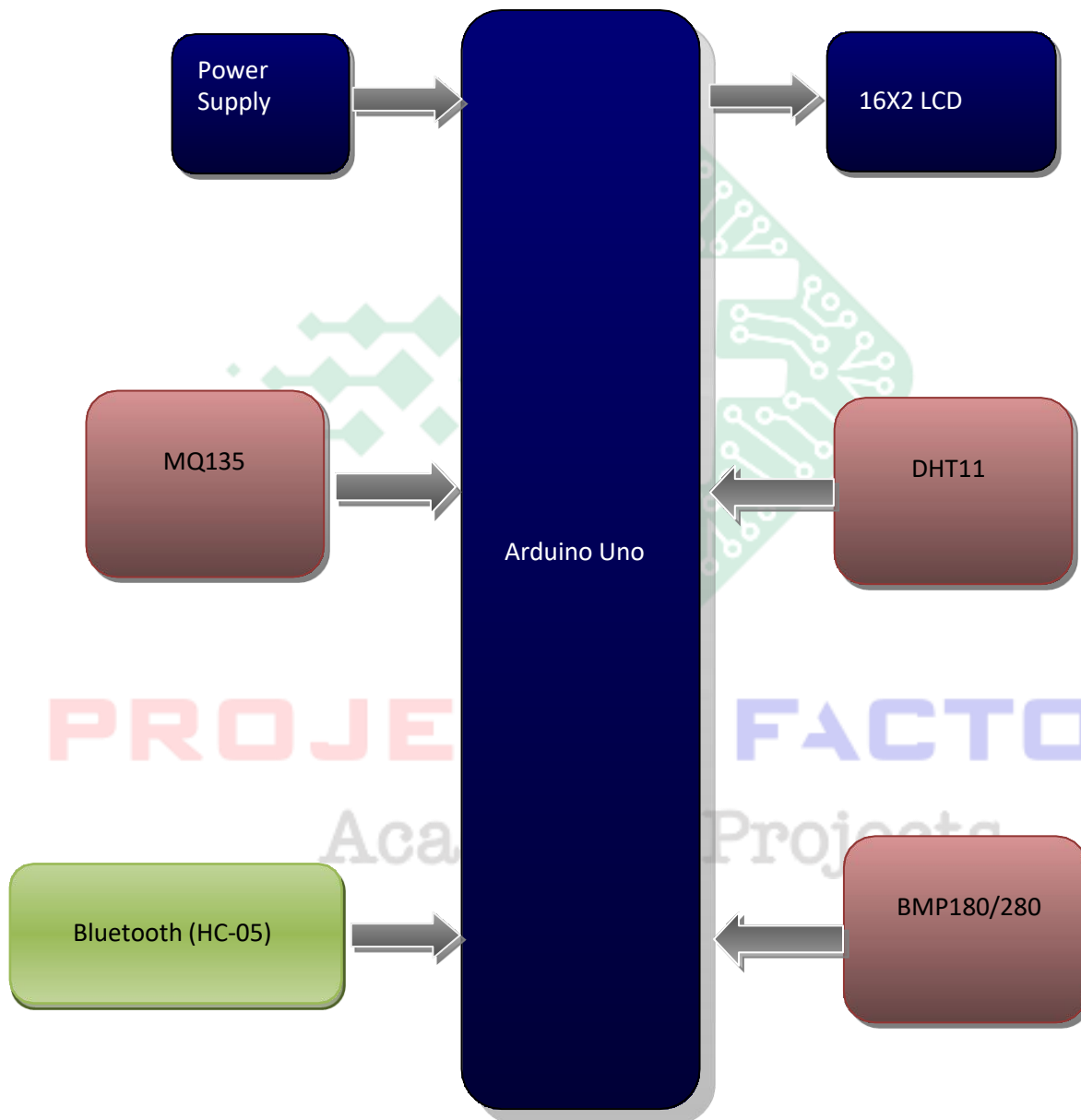
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

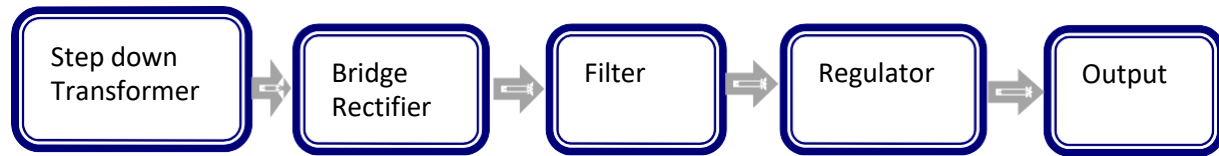
APPLICATIONS:

- Weather Station
- Atmosphere monitoring

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered Bluetooth (HC-05) module interfacing
- DHT11 sensor, BMP180/280 and MQ135 sensors interface.



PROJECTS FACTORY
Academic Projects