

ADVANCED GREEN HOUSE AUTOMATION WITH GSM

AIM:

Design and development of advanced greenhouse automation with GSM.

PURPOSE:

Labor or human power required in green houses to monitor parameters like temperature, humidity, light and gas. Reading of all these parameters helps to predict further changes. This prediction helps to take action for further needs. But existing systems can read only few parameters and static. Here we proposed solution like advanced green house automation with GSM.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART interface. Temperature Sensor , Humidity Sensor, Soil moisture Sensor, and LDR Sensor(Light sensor) connected to Arduino through respective digital pins. AC pump motor will controlled through relay which is connected to Arduino digital Pin.

WORKING:

Arduino reads all sensors continuously. DHT11 sensor detects temperature and humidity. Soil moisture reads wet and dry condition of soil. LDR sensor monitors light intensity. Co sensor reads environmental gases. All sensors data will be displayed on LCD. Arduino updates all these sensors data to registered mobile number through SMS.

For every time interval all sensors values come to mobile. When sensors changes its state or exceed values then also SMS will come. By sending request SMS to Arduino it will send all SMS. In these three ways we will get all sensors data in SMS. User can control AC water pump when required by SMS.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
Temperature, Humidity	:	DHT11
Light Sensor	:	LDR
Soil Moisture	:	Leaded Type
Power Source	:	12v 2 amp Adaptor

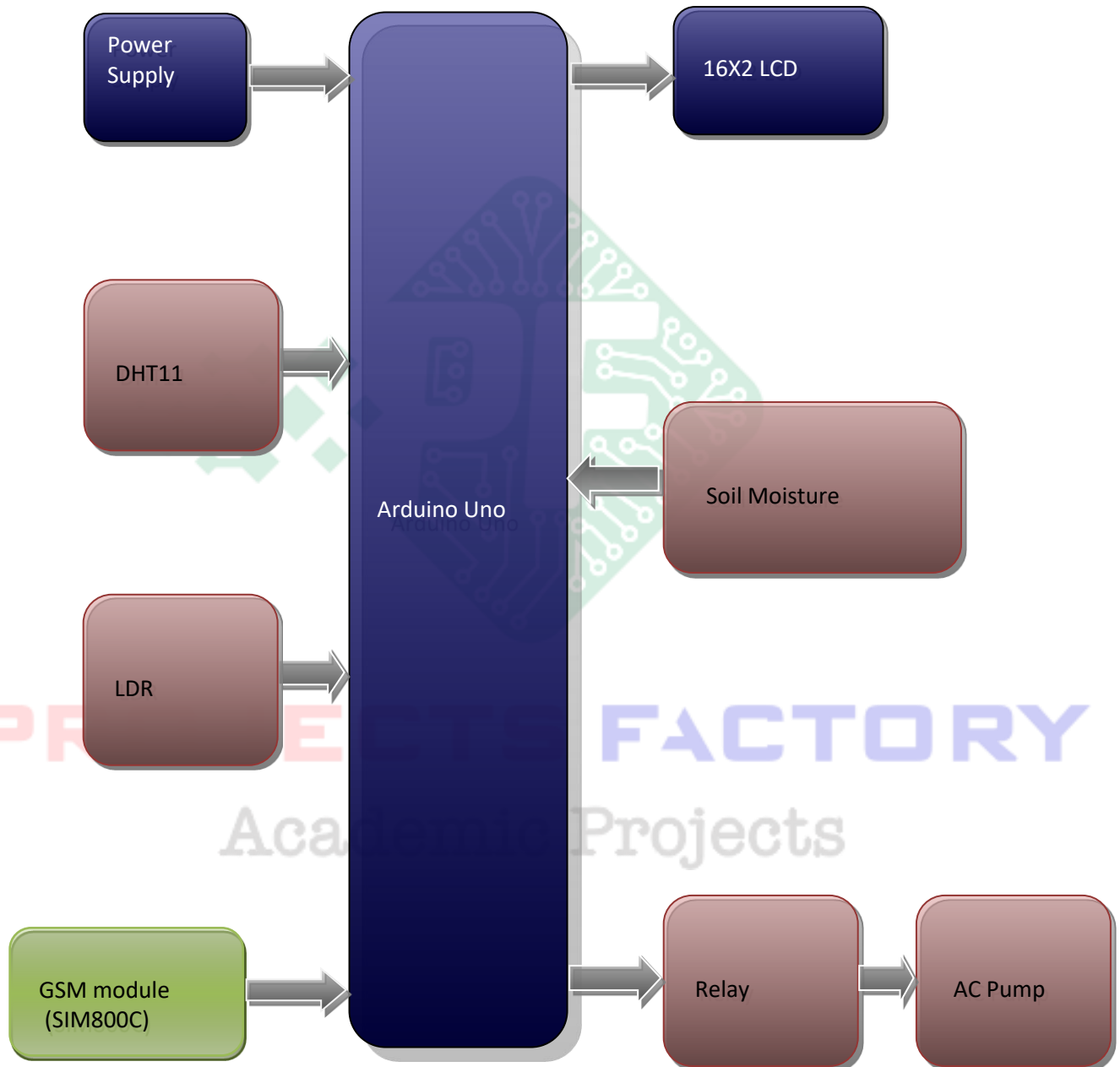
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

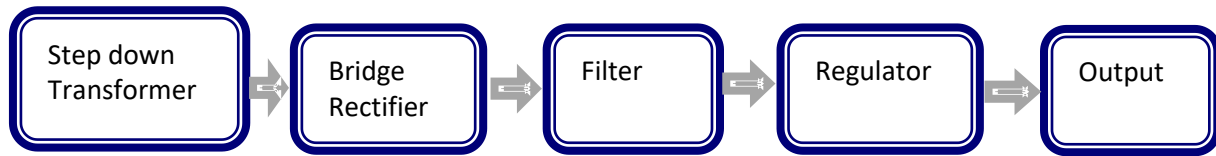
APPLICATIONS:

- Green House automation
- Agri sector
- Hydroponics

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- Different Sensors like DHT11, LDR and Soil moisture sensors interfacings



PROJECTS FACTORY
Academic Projects