

GSM BASED IRRIGATION SYSTEM USING ARDUINO

AIM:

Design and development of GSM based irrigation system using Arduino.

PURPOSE:

Villages are the backbone of our nation. The farmers strive hard day and night to yield very good results in their farm. They know the entire process how to produce a farm, when to provide water to the farms etc. When it is the time to water the farms, they just stop their current works then and there and rush to the farms to start the pump sets to water the farms. This project provides an excellent solution to this process. The farmer need not go to the farm to water his field. We propose solution like GSM based irrigation system using Arduino.

DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART interface. Soil moisture sensor connected to Arduino digital pin.AC water pump will be control through relay.

WORKING:

Soil moisture sensor water wet and dry conditions. Arduino sends soil moisture sensor information to registered mobile number. User can switch ON and OFF pump motor by SMS. All this information will be displayed on LCD. By sending request SMS to GSM modem user can get sensors status immediately.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
Soil Moisture Sensor	:	Leaded Type
AC pump motor	:	230v AC
Power Source	:	12v 2 amp Adaptor

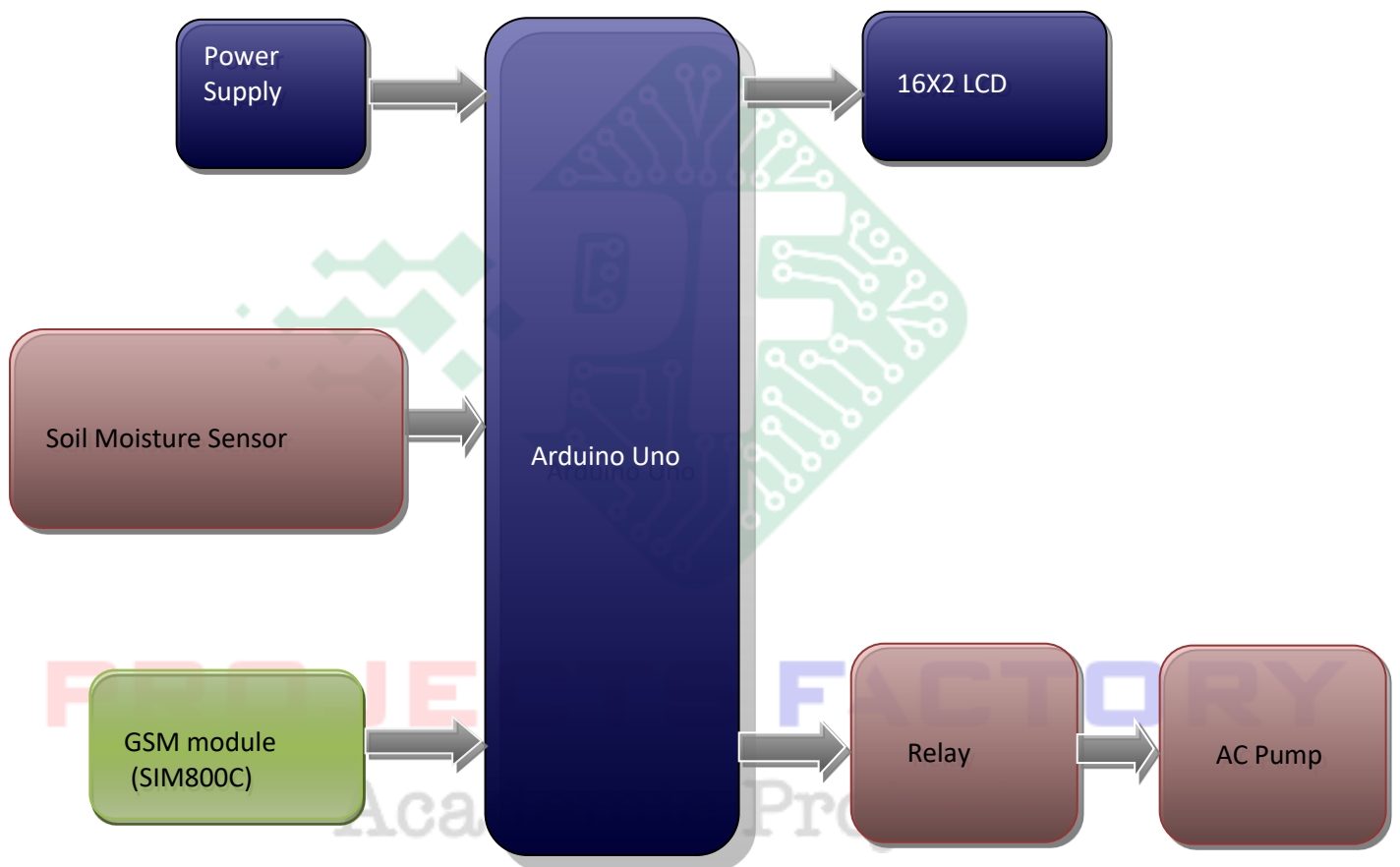
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

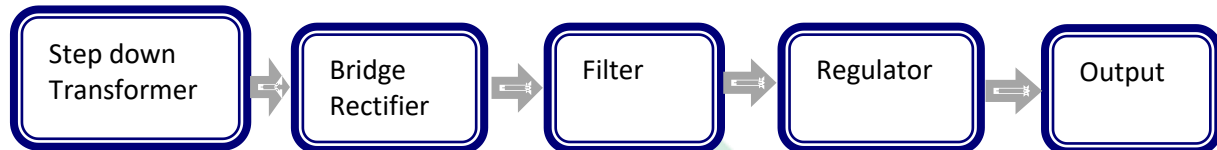
APPLICATIONS:

- Agriculture Sector
- Pump motor control in buildings
- Water supply management

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- Soil moisture Sensor interface
- AC pump motor control

PROJECTS FACTORY
Academic Projects