# DAM GATE CONTROL WITH FLOOD CONTROL

## AIM:

Design and Development of Dam gate control with flood control.

## PURPOSE:

The project is designed in such a way that the micro controller Arduino is interfaced to three water level sensors which are placed at 3 levels of water in the reservoir. The status of the sensors will be continuously monitored by the micro controller, if the sensor at level 3 is sensed in the water the corresponding signal will be passed to the controller and it will take the intelligent decision of rotating the motor which is interfaced to the controller and is connected to the gate, so that the gate will be opened. Likewise, for the levels 1 &2 the gate will be closed as per the code logic. Here the project title is dam gate control with flood control using Arduino.

## DESCRIPTION:

This project includes water level sensor which is connected to Arduino digital pin. Siren controlled by relay which is connected to Arduino digital pin. DC motor controlled by L293D which is connected to Arduino digital pin.



## WORKING:

In this project water level sensor detects level of reservoir. If water level of reservoir 1 or 2 then gate will close. If water level full (Level-3) then Arduino detects and gives output signal to l293d. Here l293d controls DC motor which opens and close dam gate. Dam gate will open when level full. Also Siren will ON when Dam level full. This information will display on 16X2 LCD display.

## TECHNICAL SPECIFICATIONS:

## HARDWARE:

| | | |
|---|---|---|
| Microcontroller | : | Arduino Uno |
| LCD | : | 16X2 LCD Display |
| Crystal | : | 16 MHz |
| H-Bridge | : | L293D |
| Dam Gate | : | DC motor with Sliding door/gate mechanism |
| Water Level Sensor | : | Leaded Type |
| Siren | : | 12V/5V DC |
| Relay | : | 12V DC Electromagnetic |
| Power Source | : | 12v 2 amp Adaptor |

## SOFTWARE:

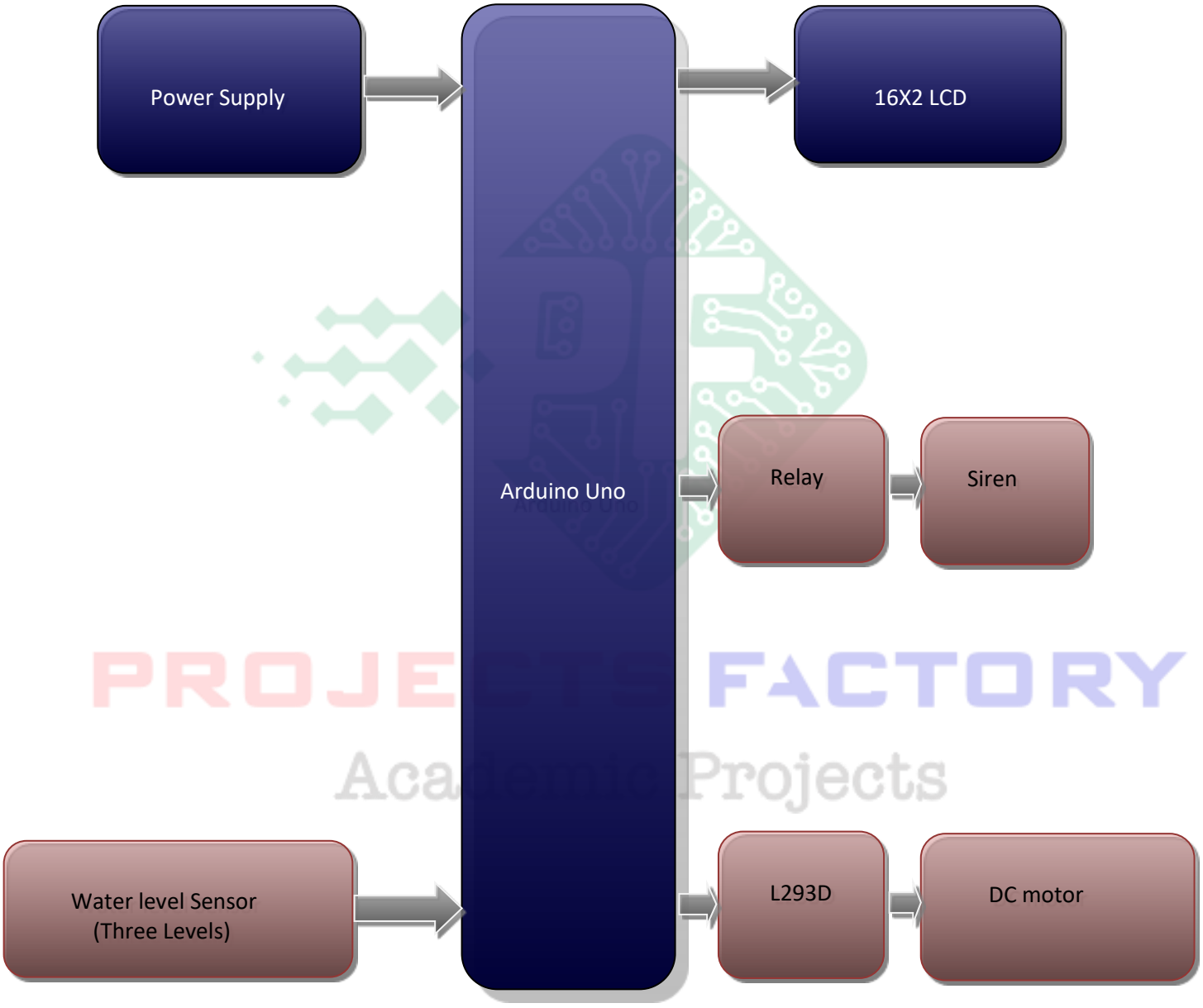
Arduino IDE

Proteus based circuit diagram

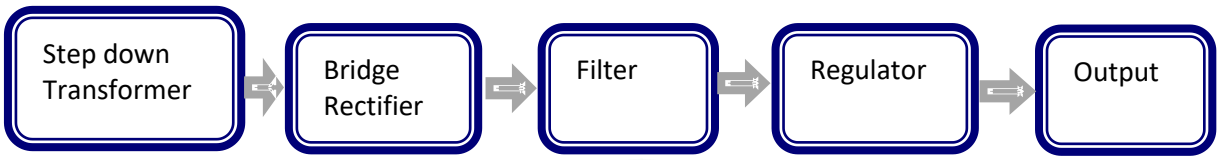
## APPLICATIONS:

- Smart Irrigation
- Hydroponics

## BLOCK DIAGRAM:



## POWER SUPPLY BLOCKDIAGRAM:




## INTERFACES COVERD:

- AC water pump and Relay interface