IOT EARLY FLOOD DETECTION

AIM:

Design and development of IOT early flood detection.

PURPOSE:

Flood is one of the worst natural disasters happen in every year in several places in India. It starts from one place and within days it spreads to other down side places and brings lot of losses. Also local rivers, ponds and water reservoirs raised levels than desired. Intimation before is prevent some amount of loss from it. But there is no such technology used now. Here we proposed IOT early flood detection using Arduino.

DESCRIPTION:

This project includes water sensors in different levels. We can install these level sensors in ponds or water reservoirs. Level sensors are magnetic type sensors and interfaced with Arduino through digital I/O. On other hand WIFI (Esp8266/IOT module) module connected to Arduino through UART port. Siren also connected to Arduino digital I/O and will ON when level cross desired level.

WORKING:

Here we use three water level sensors to intimate low flood, medium flood and high flood respectively. Whenever level changes from one level to another level Arduino will detect and send information to IOT server through WIFI (Esp8266/IOT module). Precautionary actions will take immediately by seeing data. IOT information can be access from anywhere. Here we have graphical representation to estimate up and down sequence of flood, it will help to predict flood flow.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
Level Sensor	:	Magnetic Type
Siren	:	DC 5V
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

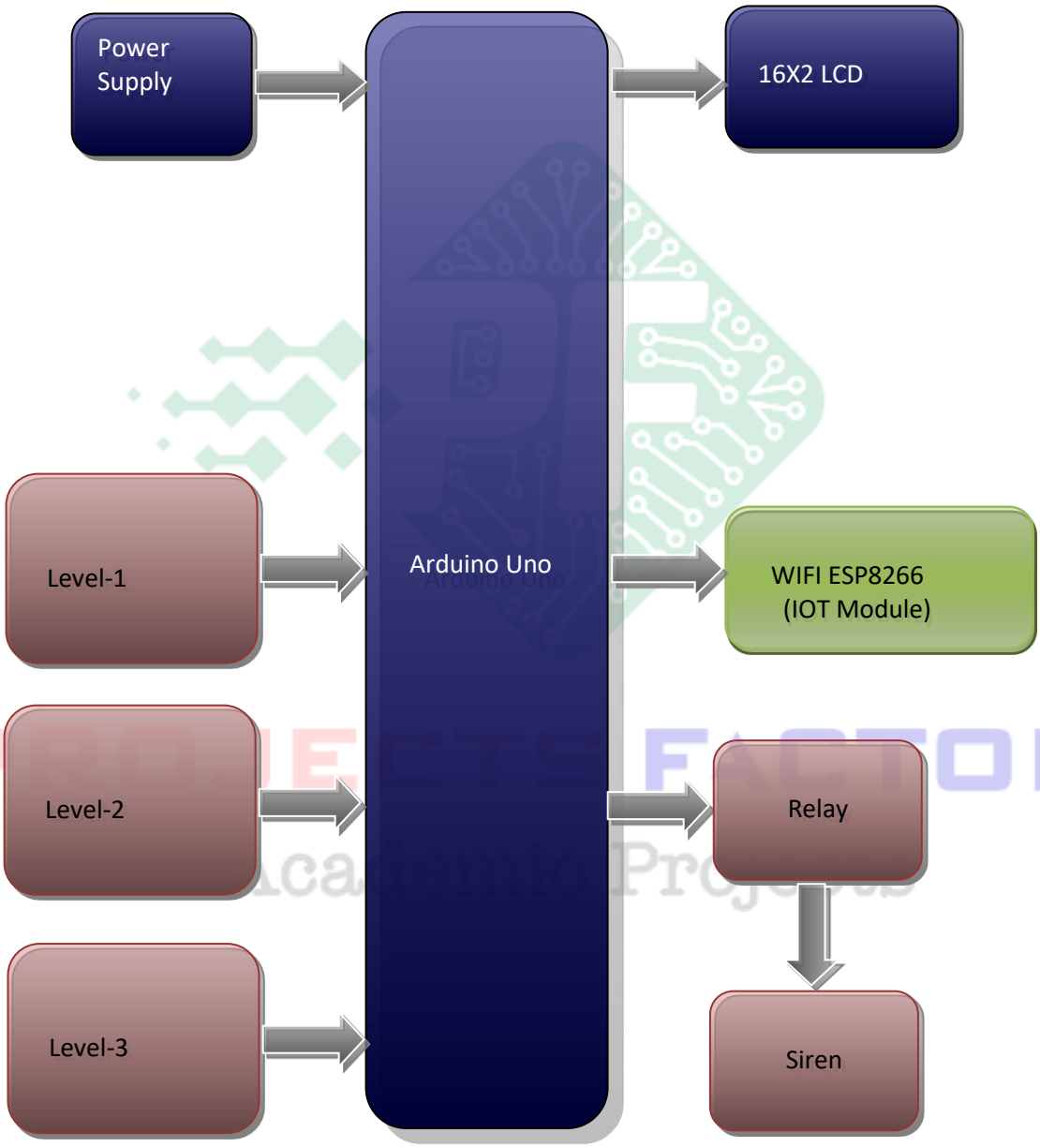
Arduino IDE

Proteus based circuit diagram

APPLICATIONS:

- Flood Management
- Water Management
- Water reservoir Monitoring

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:

INTERFACES COVERD:

- In this project we have covered WIFI (ESP8266/IOT) module interfacings. Water level sensors and siren to digital IO.