

## IOT BASED VEHICLE OVER WEIGHT SAFETY SYSTEM

### **AIM:**

Design and development of IOT based vehicle over weight safety system using Arduino.

### **PURPOSE:**

Vehicle over weight causes accidents in highways. Sometimes loses are heavy than imaginary. Road damages occur due to heavy weight. There is no system to monitoring vehicle weight. Here we have solution that IOT based vehicle over weight safety system.

### **DESCRIPTION:**

This project includes WIFI (Esp8266/IOT module), which is connected to Arduino through UART interface. Load cell connected to Arduino through analog pin. Load cell monitor vehicle weight. Here load cell limit from 1-10Kg. DC motor connected Arduino through L293d.

### **WORKING:**

Here Arduino calculates vehicle weight from load cell. When vehicle weight is more it gives buzzer sound and gate will be closed. It won't allow vehicle to move forward by closing gate. This information always updated on LCD. At the same time information transmitted to IOT server through WIFI (Esp8266/IOT module). User can see data in IOT server from anywhere.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

|                 |   |                      |
|-----------------|---|----------------------|
| Microcontroller | : | Arduino Uno          |
| Crystal         | : | 16 MHz               |
| LCD             | : | 16X2 LCD             |
| WIFI            | : | Esp8266 (IOT module) |
| Load cell       | : | 1-10Kg               |
| DC motor        | : | 10 r.p.m             |
| H-Bridge        | : | L293d                |
| Power Source    | : | 12v 2 amp Adaptor    |

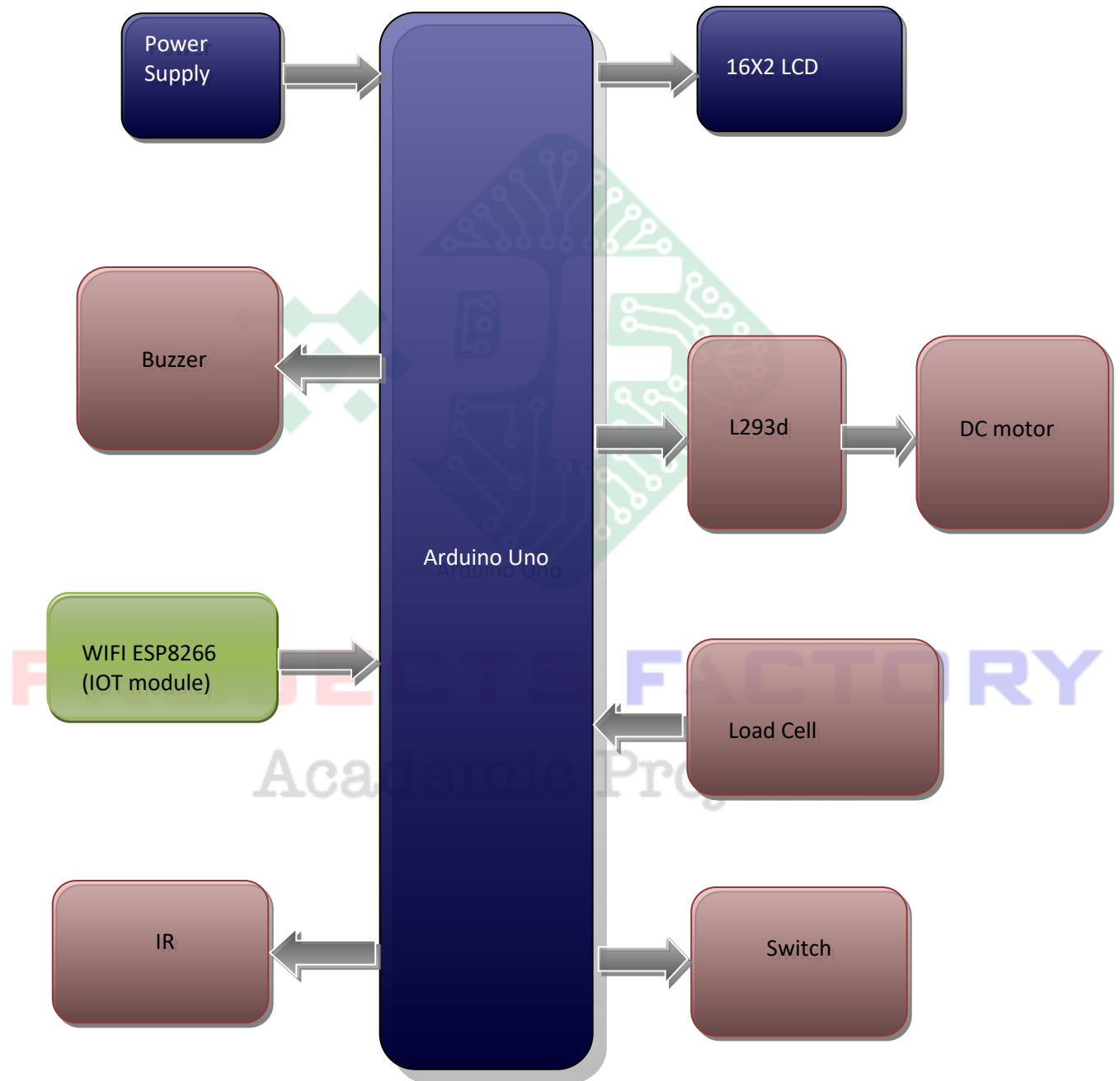
### SOFTWARE:

Arduino IDE  
Proteus based circuit diagram

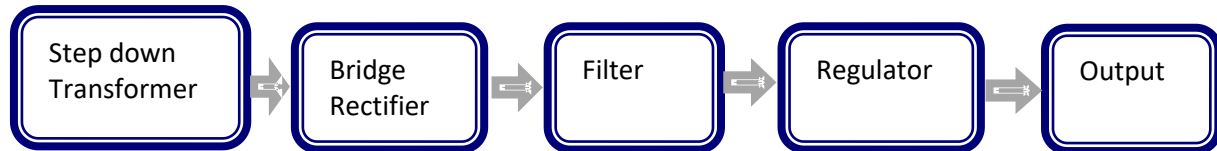
### APPLICATIONS:

- Road transport
- High way maintenance

**BLOCK DIAGRAM:**



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered WIFI (ESP8266/IOT) module interfacing
- Load cell
- L293d dc motor driver

**PROJECTS FACTORY**  
Academic Projects