

## IOT SCHOOL BUS ATTENDANCE SYSTEM

### **AIM:**

Design and development of IOT based school bus student's attendance system using RFID technology.

### **PURPOSE:**

Attendance of students is important and should maintain by management of educational institutes. Particularly School management should maintain children attendance. Here we provide IOT school bus attendance system using RFID technology.

### **DESCRIPTION:**

This project includes WIFI (Esp8266/IOT module) and RFID (EM18) reader and connected to Arduino through UART interface. When RFID tag comes near to Reader it reads tag data and sends to Arduino.

### **WORKING:**

When Arduino Reads tag data it identifies student name based on inside code. Arduino allocates student names to particular tags. While student get into the bus RFID reader (EM-18) reads tag data and sends to IOT server using IOT module (ESP8266/IOT). In server Data will be stored with respective to date and time. Absence of students will not visible in server. School management and parents can monitor their children status remotely. It is very helpful for school management and parents.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
RFID Reader	:	EM-18
Limit Switch	:	Digital Type
Power Source	:	12v 2 amp Adaptor

### SOFTWARE:

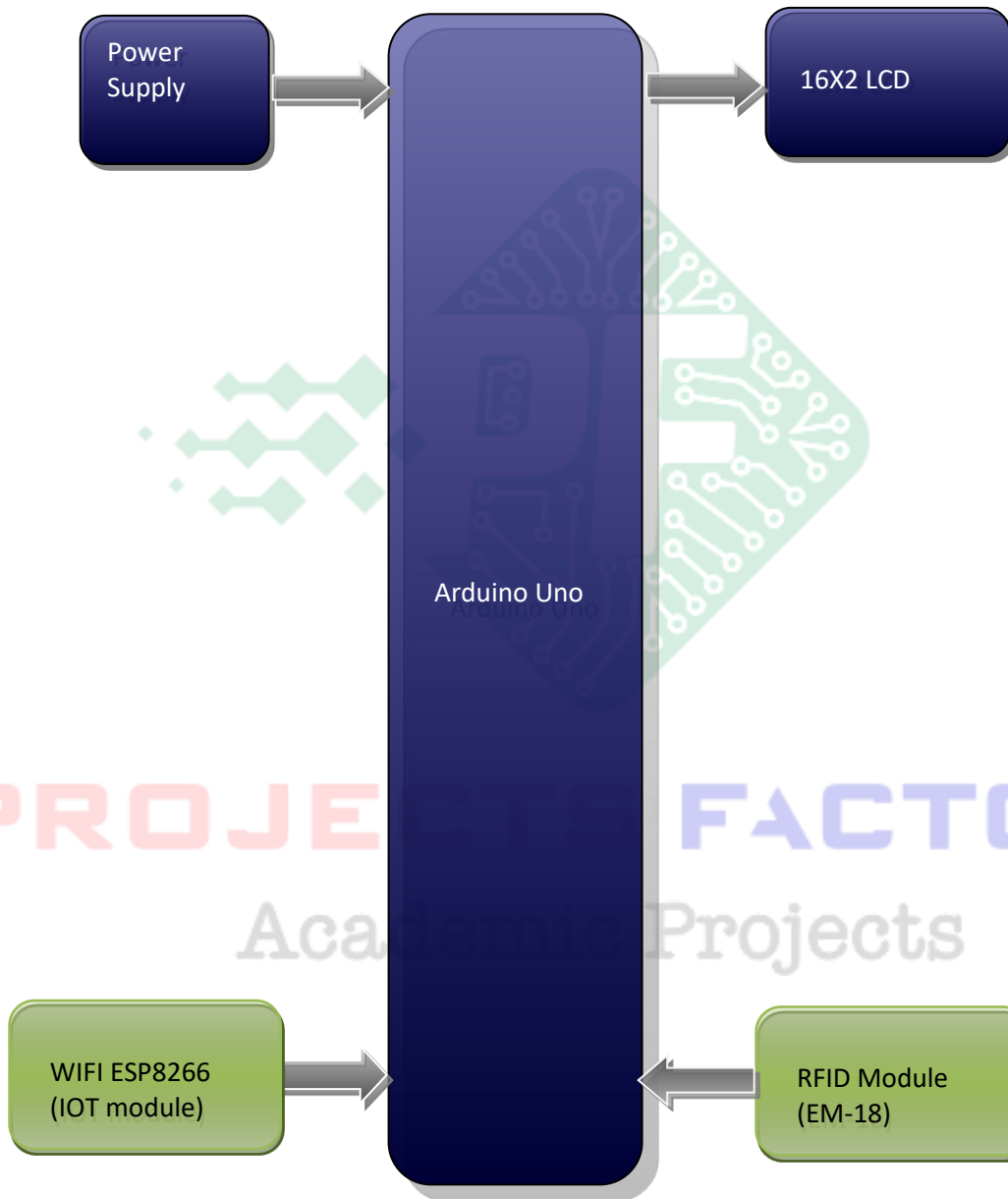
Arduino IDE  
Proteus based circuit diagram

### APPLICATIONS:

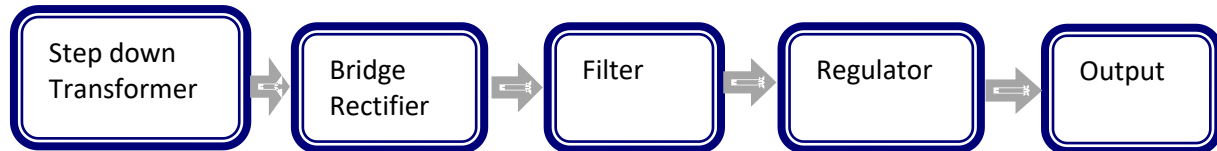
- Attendance Management
- Travels

**PROJECTS FACTORY**  
Academic Projects

**BLOCK DIAGRAM:**



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- In this project we have covered WIFI (ESP8266/IOT) module and RFID interfacing.



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