

IOT BASED ASSET TRACKING WITH RFID

AIM:

Design and development of IOT based asset tracking with RFID.

PURPOSE:

Combination IOT with RFID to perform asset tracking is very effective and low cost. From shopping mall items to airline luggage items RFID tag tracking is very simple. Using RFID reader tag information can be read and this tag information assign to particular required objects or things.

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. Each RFID tag assigned with object information. Based on RFID tag information Arduino identifies object information. RFID works with 9600 baud rate.

WORKING:

When Arduino Reads tag data it identifies asset/object name based on inside code. Arduino sends asset name to IOT server using IOT module (ESP8266/IOT). In server Data will be stored with respective to date and time. This will helps to tracking assets with respective to time. This data can be monitor from anywhere. Missing assets/objects information will not present in IOT server.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
RFID Reader	:	EM-18
Buzzer	:	5v DC
Power Source	:	12v 2 amp Adaptor

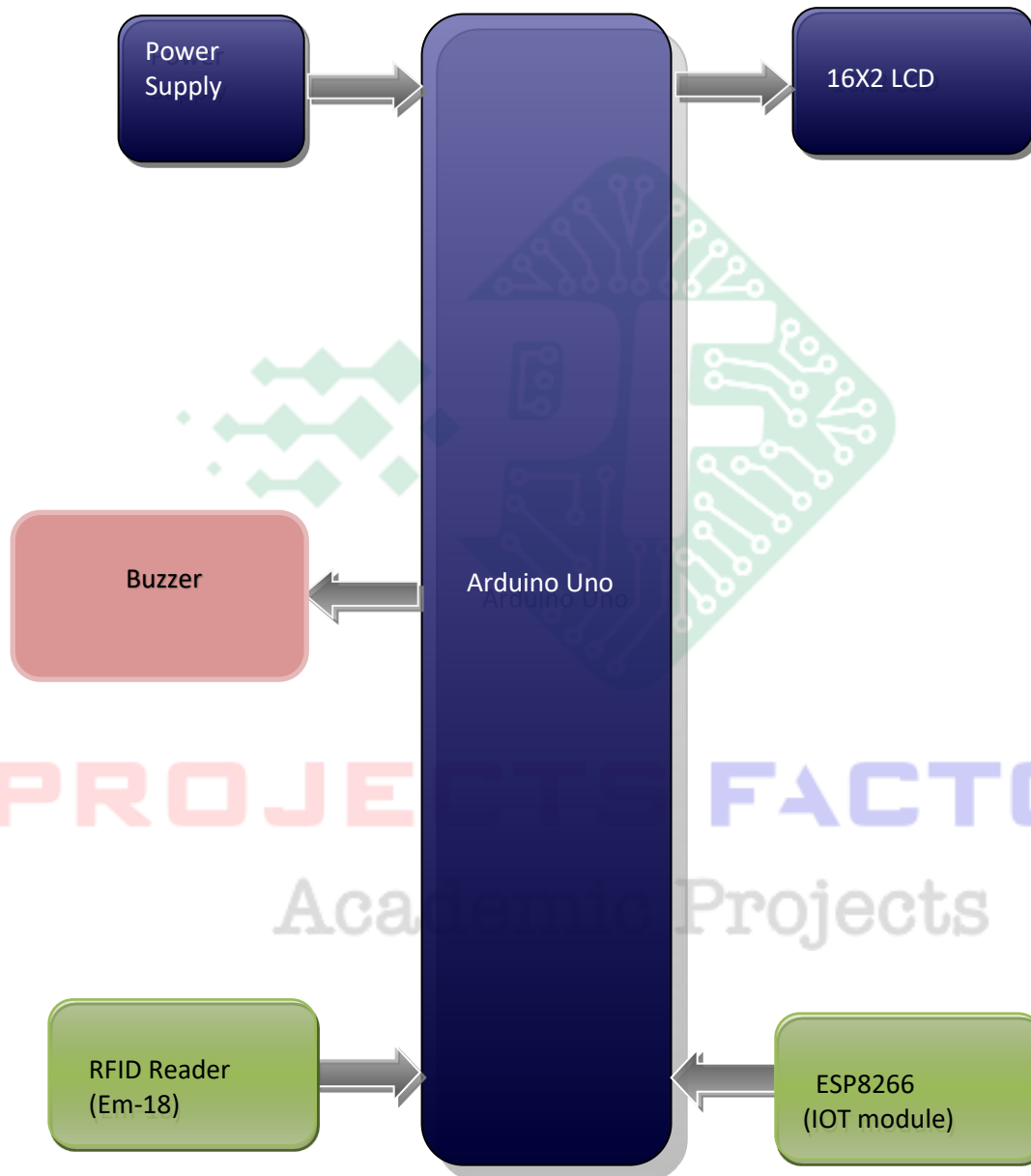
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

APPLICATIONS:

- Shopping malls
- Asset Tracking
- Airline Luggage

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

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

PROJECTS FACTORY
Academic Projects