

IOT BASED HAND SANITIZER

AIM:

Design and development of IOT based hand sanitizer

PURPOSE:

Maintaining of hand hygiene is most important in any disease spreading. Particularly in covid-19 situation it is not only important but also very necessary thing. This hand hygiene is done by hand sanitization. There are lot of leg pressed sanitizer machines available but they are Any kind of wireless com just static and no advanced feature in it. Also not completely touch less, even legs has to touch pedal. Here we proposed IOT based hand sanitizer using Arduino.

DESCRIPTION:

This project includes WIFI (Esp8266/IOT module), which is connected to Arduino through UART interface. IR sensor connected to Arduino through digital IO pins. Solenoid valve connected to relay to drop sanitizer. 10K potentiometer connected to Arduino analog pin to adjust quantity of sanitizer liquid.

WORKING:

When hand comes near to IR sensor it sense hand and then deliver sanitizer. Every time count will increased in Arduino. It represents how many times sanitizer drops. This information displayed on LCD. Same data will transmit to IOT server through WIFI (Esp8266/IOT module).

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
WIFI	:	Esp8266 (IOT module)
IR sensor	:	Digital Type
Relay	:	12v Electromagnetic Type
Solenoid Valve	:	Electromagnetic Type
Power Source	:	12v 2 amp Adaptor

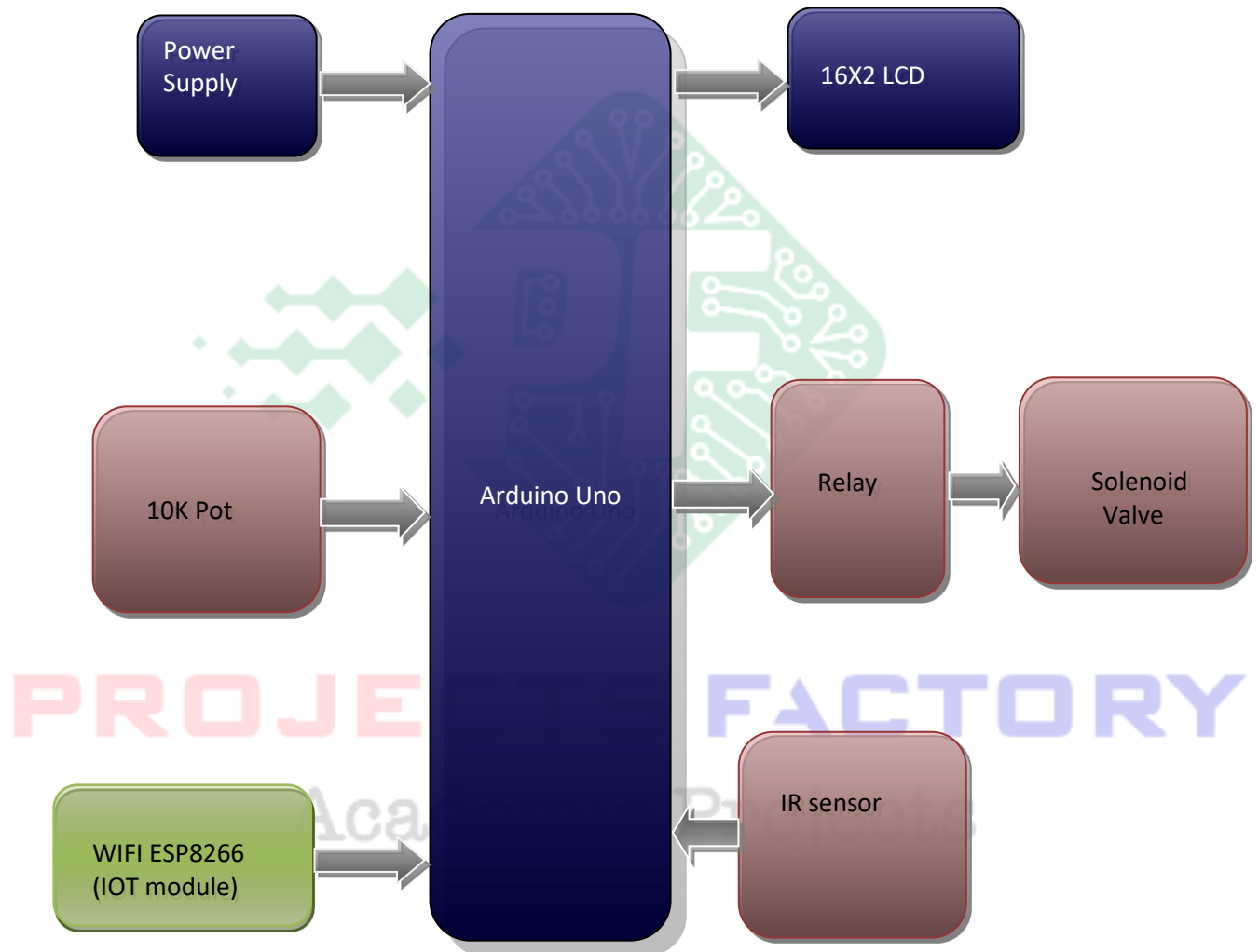
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

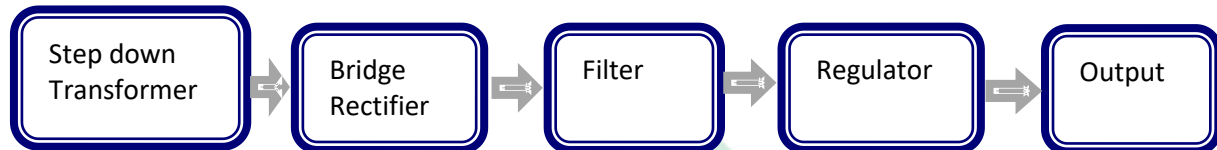
APPLICATIONS:

- Hospital Management
- Shopping malls
- Crowded Areas
- Apartments
- Offices
- Schools
- Collages

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered WIFI (ESP8266/IOT) module interfacing
- IR sensor interface
- Relay and Solenoid valve

PROJECTS FACTORY
Academic Projects