**Module 1**

#define IR 2

#define RELAY 3

void setup()

{

pinMode(RELAY, OUTPUT);

pinMode(IR,INPUT);

}

void loop()

{

if (digitalRead(IR)== LOW)

{

digitalWrite(RELAY, LOW);

delay(500);

digitalWrite(RELAY, HIGH);

delay(5000);

}

else

{

digitalWrite(RELAY, HIGH);

}

}

**Module 2**

#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

const int triggerPin = D5;

const int echo = D6;

long duration;

int distance;

char auth[] = "5HnVjgNcjeBU1uklMGE0LP63Y4vEDc\_i";

char ssid[] = "vivo 1723";

char pass[] = "04d81d9efb42";

void setup(){

Serial.begin(1000);

Blynk.begin(auth, ssid, pass);

pinMode(triggerPin, OUTPUT); // Sets the trigPin as an Output

pinMode(echo, INPUT); // Sets the echoPin as an Input

}

void loop(){

Blynk.run();

digitalWrite(triggerPin, LOW);

delayMicroseconds(2);

digitalWrite(triggerPin, HIGH);

delayMicroseconds(10);

digitalWrite(triggerPin, LOW);

duration = pulseIn(echo, HIGH);

distance= duration\*0.034/2;

Blynk.virtualWrite(V5, distance);

Serial.print("Distance: ");

Serial.println(distance);

if (distance >= 12){

Blynk.notify("Sanitizer Level -> Empty");

delay(3000);

}

else if (distance >= 9 ){

Blynk.notify("Sanitizer Level -> 25%");

delay(3000);

}

else if (distance >= 7){

Blynk.notify("Sanitizer Level -> 50%");

delay(3000);

}

else if (distance >= 4){

Blynk.notify("Sanitizer Level -> 75%");

delay(3000);

}

else if (distance >= 2){

Blynk.notify("Sanitizer Level -> 100%");

delay(3000);

}

Serial.print("Distance: ");

Serial.println(distance);

}

**Module 3**

#include <Adafruit\_MLX90614.h>

Adafruit\_MLX90614 mlx = Adafruit\_MLX90614();

#include <Wire.h>

#include <LCD.h>

#include <LiquidCrystal\_I2C.h>

LiquidCrystal\_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE); // Addr, En, Rw, Rs, d4, d5, d6, d7, backlighpin, polarity

#define RELAY 5 // the number of the relay pin

int trigPin = 10;

int echoPin = 11;

long duration;

int distance;

int buzzer = 9;

void setup() {

Serial.begin(1000);

mlx.begin();

lcd.begin(16,2);

lcd.backlight(); // Enable or Turn On the backlight

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(RELAY, OUTPUT);

pinMode(buzzer, OUTPUT);

// initialize the pushbutton pin as an input:

}

void loop() {

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration = pulseIn(echoPin, HIGH);

distance= duration\*0.034/2;

Serial.print(distance);

Serial.println("CM");

if(distance<=5)

{

Serial.print("\*C\tObject = "); Serial.print(mlx.readObjectTempC()); Serial.println("\*C");

Serial.print("\*F\tObject = "); Serial.print(mlx.readObjectTempF()); Serial.println("\*F");

if (mlx.readObjectTempF() <= 98){

lcd.setCursor(0, 0);

lcd.print("Temp = ");

lcd.print(mlx.readObjectTempF());

lcd.print(" F");

lcd.setCursor(0, 1);

lcd.print(" WELCOME");

digitalWrite(buzzer,HIGH);

delay(1000);

digitalWrite(buzzer,LOW);

digitalWrite(RELAY, LOW);

delay(5000);

digitalWrite(RELAY, HIGH);

delay(3000);

lcd.clear();

}

else

{

lcd.setCursor(0, 0);

lcd.print("Temp = ");

lcd.print(mlx.readObjectTempF());

lcd.print(" F");

lcd.setCursor(0, 1);

lcd.print(" NOT ALLOWED");

digitalWrite(RELAY, HIGH);

digitalWrite(buzzer,HIGH);

delay(200);

digitalWrite(buzzer,LOW);

delay(200);

digitalWrite(buzzer,HIGH);

delay(200);

digitalWrite(buzzer,LOW);

delay(200);

digitalWrite(buzzer,HIGH);

delay(200);

digitalWrite(buzzer,LOW);

delay(200);

digitalWrite(buzzer,HIGH);

delay(200);

digitalWrite(buzzer,LOW);

delay(200);

digitalWrite(buzzer,HIGH);

delay(200);

digitalWrite(buzzer,LOW);

delay(200);

digitalWrite(buzzer,HIGH);

delay(200);

digitalWrite(buzzer,LOW);

delay(5000);

lcd.clear();

}

}

else

{

digitalWrite(RELAY, HIGH);

}

}