**Crack the COVID-19Crises**

**(NASSCOM Future Skills and IBM)**

**\*Source code\***

**TEAM NAME:18ITIMP-05**

**Project Source Code :**

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**//Program to**

**#include <SoftwareSerial.h>**

**#include <LiquidCrystal.h>**

**#include <dht.h> // include dht sensor library**

**LiquidCrystal lcd(10, 9, 5, 4, 3, 2);**

**dht DHT;**

**float t=0;**

**float h=0;**

**#define DHT11\_PIN 8**

**#define LDR\_PIN A1**

**#define MQ3\_PIN A0**

**char data = 0;**

**int ldr\_read = 0;**

**int gas\_read = 0;**

**// replace with your channel's thingspeak API key**

**String apiKey = "[API KEY FROM THINGSPEAK]";**

**// connect 10 to TX of Serial USB**

**// connect 11 to RX of serial USB**

**SoftwareSerial ser(12,13); // RX, TX**

**void setup()**

**{**

**// enable software serial**

**ser.begin(9600);**

**lcd.begin(16,2);**

**// pinMode(LDR\_PIN, INPUT);**

**//pinMode(MQ3\_PIN, INPUT);**

**lcd.setCursor(1,0);**

**lcd.print("\*\*SmarT FooD\*\*");**

**lcd.setCursor(3,1);**

**lcd.print("MonitorinG");**

**Serial.begin(9600);**

**// reset ESP8266 WiFi connection AT+CIPMUX=1 AT+CWJAP**

**ser.println("AT");**

**delay(1000);**

**ser.println("AT+GMR");**

**delay(1000);**

**ser.println("AT+CWMODE=3");**

**delay(1000);**

**ser.println("AT+RST");**

**delay(5000);**

**ser.println("AT+CIPMUX=1");**

**delay(1000);**

**String cmd="AT+CWJAP="[YOUR SSID]","[PASSWORD]"";**

**ser.println(cmd);**

**delay(1000);**

**ser.println("AT+CIFSR");**

**delay(1000);**

**}**

**// the loop**

**void loop()**

**{**

**lcd.clear();**

**ldr\_read = analogRead(LDR\_PIN);**

**lcd.setCursor(0,0);**

**lcd.print("LDR-");**

**lcd.setCursor(4,0);**

**lcd.print(ldr\_read);**

**lcd.setCursor(0,1);**

**lcd.print("MQ3-");**

**gas\_read = analogRead(MQ3\_PIN);**

**lcd.setCursor(4,1);**

**lcd.print(gas\_read);**

**int chk = DHT.read11(DHT11\_PIN);**

**Serial.print("Temperature = ");**

**t = DHT.temperature;**

**//lcd.clear();**

**lcd.setCursor(8,0);**

**lcd.print("Tem-");**

**lcd.setCursor(12,0);**

**lcd.print(t);**

**Serial.println(t);**

**Serial.print("Humidity = ");**

**h = DHT.humidity;**

**lcd.setCursor(8,1);**

**lcd.print("Hum-");**

**lcd.setCursor(12,1);**

**lcd.print(h);**

**Serial.println(h);**

**esp\_8266();**

**}**

**void esp\_8266()**

**{**

**//**

**TCP connection AT+CIPSTART=4,"TCP","184.106.153.149",80**

**String cmd = "AT+CIPSTART=4,"TCP","";**

**cmd += "184.106.153.149"; //**

**cmd += "",80";**

**ser.println(cmd);**

**Serial.println(cmd);**

**if(ser.find("Error"))**

**{**

**Serial.println("AT+CIPSTART error");**

**return;**

**}**

**//**

**String getStr = "GET /update?api\_key=";**

**getStr += apiKey;**

**getStr +="&field1=";**

**getStr +=String(t);**

**getStr +="&field2=";**

**getStr +=String(h);**

**getStr +="&field3=";**

**getStr +=String(ldr\_read);**

**getStr +="&field4=";**

**getStr +=String(gas\_read);**

**getStr += "rnrn";**

**// send data length**

**cmd = "AT+CIPSEND=4,";**

**cmd += String(getStr.length());**

**ser.println(cmd);**

**Serial.println(cmd);**

**delay(1000);**

**ser.print(getStr);**

**Serial.println(getStr);**

**// thingspeak needs 15 sec delay between updates**

**delay(3000);**

**}**