SMART FARMER- IOT ENABLED SMART FARMING APPLICATION

CODINGS

K.VANASUNDARI (952319106035)

J.MANISHA (952319106018)

M.SUBA (952319106034)

I.ESAI MALATHI (952319106008)

I.ARTHI (952319106002)

```
#include "DHT.h"

#define DHTPIN A1

#define DHTTYPE DHT11   // DHT 11



DHT dht(DHTPIN, DHTTYPE);

#include <LiquidCrystal.h> // initialize the library with the numbers of the interface pins
#include <SoftwareSerial.h>
SoftwareSerial ESP11 = SoftwareSerial(2,3); // RX, TX
```

```
LiquidCrystal lcd(8, 9, 4, 5, 6, 7);
#define DEBUG true
int pump = 10;
// WIFI SHIELD DECLARATION
String ssid = "\"wifi002\"";
String pass = "\"12345678\"";
String tcp = "\"TCP\"";
String remoteip = "\"webapp2022-
23.000webhostapp.com\"";
String portnum = "80";
int soil=A0;
int sm=0;
int mode=2;
int in=0;
float tp,mv=0;
int cel=0;
```

```
int h=0;
String st="";
void setup() {

  dht.begin();
  lcd.begin(16,2);
  ESP11.begin(115200);
  Serial.begin(115200);

 pinMode(pump,OUTPUT);
 digitalWrite(pump,LOW);

 lcd.setCursor(0,0);
  lcd.print("IRRIGATION IoT");
  lcd.setCursor(0,1);
  delay(2000);
```

```
  lcd.clear();
  lcd.setCursor(0,0);
  lcd.print("  Loading!....");

sendData("AT+CWMODE=3\r\n",2000,DEBUG); // configure as access point and Client
 lcd.setCursor(0,1);
  lcd.print("      20%   ");
  sendData("AT+RST\r\n",2000,DEBUG); // reset module
 lcd.setCursor(0,1);
  lcd.print("      40%   ");

  sendData("AT+CWLAP\r\n",3,DEBUG); // List all available AP's*/
  lcd.setCursor(0,1);
```

```
  lcd.print("      60%  ");


  sendData("AT+CWJAP=" + ssid + "," +
pass + "\r\n",3,DEBUG); // Connect to AP


 lcd.setCursor(0,1);
  lcd.print("      90%   ");
  sent();
  lcd.clear();
  lcd.setCursor(0,0);
  lcd.print("SM:       I:");
  lcd.setCursor(0,1);
  lcd.print("HM:       T:");


}
```

```
void loop() {



  h = dht.readHumidity();
 cel = dht.readTemperature();

  if(cel>100)
   cel=100;

 lcd.setCursor(12,1);
 lcd.print("     ");
 lcd.setCursor(12,1);
 lcd.print(cel);

 lcd.setCursor(3,1);
 lcd.print("     ");
```

```
lcd.setCursor(3,1);
lcd.print(h);

   sm = analogRead(soil);
   sm/=10;
   if(sm>100)
   sm=100;

    sm = 100-sm;


lcd.setCursor(3,0);
lcd.print("     ");
lcd.setCursor(3,0);
lcd.print(sm);
```

```
in=digitalRead(A2);
if(in==1)
{
    lcd.setCursor(12,0);
lcd.print("     ");
lcd.setCursor(12,0);
lcd.print("DT");


  }
else if(in==0)
{
    lcd.setCursor(12,0);
lcd.print("     ");
lcd.setCursor(12,0);
lcd.print("ND");
```

```
    }


  sent();
}


String sendData(String command, const
int timeout, boolean debug)
{

    String response = ""; // ESP8266
sendData String
    Serial.print(command); // send the read
character to the esp8266
}
```

```
void sent()
{
  String getStr = "GET http://webapp2022-23.000webhostapp.com/irrigation/update.php?sm="; // Getting info from my online database through my online website
  //int s=1;
  getStr+=sm;
  getStr+="temp=";
  getStr+=cel;
  getStr+="hum=";
  getStr+=h;
  getStr+="in=";
  getStr+=in;
}
```