**Source code:**

#include <LiquidCrystal.h>

#include <SoftwareSerial.h>

LiquidCrystal lcd(13, 12, 11, 10, 9, 8);

SoftwareSerial mySerial(2, 3);

#include<DHT.h>

#define DHTPIN A0

#define DHTTYPE DHT11

DHT dht ( DHTPIN, DHTTYPE ) ;

#define BUZ 4

#define PUMP 5

String textMessage;

const int S1 = A1;

int memsx=0,memsy=0;

int hbtc=0,hbtc1=0,rtrl=0;

unsigned char rcv,count,gchr='x',gchr1='x',robos='s';

char rcvmsg[10],pastnumber[11];

//char pastnumber1[11],pastnumber2[11];//pastnumber3[11];

int ii=0,rchkr=0;

float tempc=0,weight=0;

float vout=0;

int sti=0;

String inputString = ""; // a string to hold incoming data

boolean stringComplete = false; // whether the string is complete

void okcheck()

{

unsigned char rcr;

do{

rcr = mySerial.read();

}while(rcr != 'K');

}

void setup()

{

digitalWrite(BUZ,LOW);

digitalWrite(PUMP,HIGH);

lcd.setCursor(0,0);

lcd.print(" WELCOME ");

lcd.setCursor(0,1);

lcd.print(" USING GSM ");

Serial.println("Initializing...");

gsminit();

serialEvent();

lcd.clear();

}

char memss='x';

void loop()

{

int GAS = digitalRead(S1); // read new state

int MOI = digitalRead(A2);

float humi;

float temp;

int s=random(71,90);

Serial.print ( " Temp is " ) ;

Serial.print ( temp ) ;

Serial.println ( " \*C " ) ;

Serial.print ( " Humidity in % is : " ) ;

Serial.print ( humi ) ;

Serial.print ( " % \t " ) ;

lcd.setCursor(0,0);

lcd.print("H: T:");

lcd.setCursor(0,1);

lcd.print("L:");

lcd.setCursor(9,1);

lcd.print("M:");

if(textMessage.indexOf("ON")>=0)

{

digitalWrite(PUMP,LOW);

delay(1000);

Serial.println("Relay set to ON");

textMessage = "";

}

delay(1000);

if(textMessage.indexOf("FF")>=0){

digitalWrite(PUMP,HIGH);

delay(1000);

Serial.println("Relay set to OFF");

textMessage = "";

}

delay(1000);

if(GAS==HIGH&&MOI==LOW)

{

lcd.setCursor(3,0);

lcd.print(humi);

lcd.setCursor(11,0);

lcd.print(temp);

lcd.setCursor(3,1);

lcd.print("LOW");

lcd.setCursor(11,1);

lcd.print("WET");

delay(2000);

lcd.clear();

lcd.print("WATER LEVEL LOW");

delay(1000);

lcd.setCursor(0, 1);

lcd.print("DETECTED....");

delay(1000);

digitalWrite(BUZ,HIGH);

delay(1500);

digitalWrite(BUZ,LOW);

digitalWrite(PUMP,LOW);

mySerial.write("AT+CMGS=\"");

mySerial.write(pastnumber);

mySerial.write("\"\r\n"); delay(3000);

mySerial.write("WATER LEVEL LOW ALERT..");

mySerial.write(0x1A);delay(4000);delay(4000);

lcd.clear();

}

if(MOI==HIGH&&GAS==HIGH||MOI==HIGH)

{

lcd.setCursor(3,0);

lcd.print(humi);

lcd.setCursor(11,0);

lcd.print(temp);

lcd.setCursor(3,1);

lcd.print("LOW");

lcd.setCursor(11,1);

lcd.print("DRY");

delay(2000);

lcd.clear();

lcd.print("SOIL DRY");

delay(1000);

lcd.setCursor(0, 1);

lcd.print("DETECTED....");

delay(1000);

digitalWrite(BUZ,HIGH);

delay(1500);

digitalWrite(BUZ,LOW);

digitalWrite(PUMP,LOW);

mySerial.write("AT+CMGS=\"");

mySerial.write(pastnumber);

mySerial.write("\"\r\n"); delay(3000);

mySerial.write("SOIL DRY ALERT..");

mySerial.write(0x1A);delay(4000);delay(4000);

lcd.clear();

}

if( temp>40)

{

lcd.setCursor(3,0);

lcd.print(humi);

lcd.setCursor(11,0);

lcd.print(temp);

lcd.setCursor(3,1);

lcd.print("HIGH");

lcd.setCursor(11,1);

lcd.print("WET");

delay(2000);

digitalWrite(BUZ,HIGH);

delay(1500);

digitalWrite(BUZ,LOW);

digitalWrite(PUMP,HIGH);

mySerial.write("AT+CMGS=\"");

mySerial.write(pastnumber);

mySerial.write("\"\r\n"); delay(3000);

mySerial.write("ALERT TEMPERATURE HIGH DETECTED");

mySerial.write(0x1A);delay(4000);delay(4000);

lcd.clear();

}

if( humi>75)

{

lcd.setCursor(3,0);

lcd.print(humi);

lcd.setCursor(11,0);

lcd.print(temp);

lcd.setCursor(3,1);

lcd.print("HIGH");

lcd.setCursor(11,1);

lcd.print("WET");

delay(2000);

digitalWrite(BUZ,HIGH);

delay(1500);

digitalWrite(BUZ,LOW);

digitalWrite(PUMP,HIGH);

mySerial.write("AT+CMGS=\"");

mySerial.write(pastnumber);

mySerial.write("\"\r\n"); delay(3000);

mySerial.write("ALERT HUMIDITY HIGH DETECTED");

mySerial.write(0x1A);delay(4000);delay(4000);

lcd.clear();

}

if(GAS==LOW&&humi<75&&temp<40&&MOI==LOW)

{

lcd.setCursor(3,0);

lcd.print(humi);

lcd.setCursor(11,0);

lcd.print(temp);

lcd.setCursor(3,1);

lcd.print("HIGH");

lcd.setCursor(11,1);

lcd.print("WET");

delay(2000);

digitalWrite(PUMP,HIGH);

digitalWrite(BUZ,LOW);

lcd.clear();

}

if(mySerial.available()>0)

{

textMessage = mySerial.readString();

Serial.print(textMessage);

delay(10);

}

}

void serialEvent()

{

while (mySerial.available())

{

char inChar = (char)mySerial.read();

//sti++;

//inputString += inChar;

if(inChar == '\*')

{sti=1;

inputString += inChar;

// stringComplete = true;

// gchr = inputString[sti-1]

}

if(sti == 1)

{

inputString += inChar;

}

if(inChar == '#')

{sti=0;

stringComplete = true;

}

}

}

int readSerial(char result[])

{

int i = 0;

while (1)

{

while (mySerial.available() > 0)

{

char inChar = mySerial.read();

if (inChar == '\n')

{

result[i] = '\0';

mySerial.flush();

return 0;

}

if (inChar != '\r')

{

result[i] = inChar;

i++;

}

}

}

}

int readSerial1(char result[])

{

int i = 0;

while (1)

{

while (mySerial.available() > 0)

{

char inChar = mySerial.read();

if (inChar == '\*')

{

result[i] = '\0';

mySerial.flush();

return 0;

}

if (inChar != '\*')

{

result[i] = inChar;

i++;

}

}

}

}

void gsminit()

{

Serial.print("SEND MSG STORE");

Serial.print("MOBILE NUMBER");

lcd.clear();

lcd.print("SEND MSG STORE");

lcd.setCursor(0, 1);

lcd.print("MOBILE NUMBER");

do{

rcv = mySerial.read();

}while(rcv != '\*');

readSerial(pastnumber);

pastnumber[10]='\0';

Serial.print(pastnumber);

lcd.clear();

lcd.print(pastnumber);

delay(1000);

mySerial.write("AT+CMGS=\"");

mySerial.write(pastnumber);

mySerial.write("\"\r\n"); delay(3000);

mySerial.write("Mobile no. registered\r\n");

mySerial.write(0x1A);

delay(4000);delay(5000);

//delay(1000);

}