# Description:

Write a program to send an SMS (only once) on temperature rise.

# Source Code:

// include the library code:

#include <LiquidCrystal.h>

#include <SimpleDHT.h>

//DTH11 connected on Pin 6 i.e. D6 in IomaTic

int pinDHT11 = 6;

SimpleDHT11 dht11;

// initialize the library with the numbers of the interface pins

LiquidCrystal lcd(11, 12, 14, 15, 16, 17);

char PhoneNo[]="+91xxxxxxxxxx";

int sendStatus=0;

void setup()

{

//SIM808 wakeup connected on pin 13 in IomaTic board

pinMode(13,OUTPUT);

//Initialize the SIM808 Module

digitalWrite(13, HIGH);

delay(1000);

//Sending wake up signal to SIM808 Module

digitalWrite(13, LOW);

delay(1000);

//Keeping SIM808 in active/wakeup state

digitalWrite(13, HIGH);

delay(10000);

//Initialize the LCD in 16x2 mode

lcd.begin(16, 2);

delay(1000);

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,0);

//Print the message as metioned cursor location

lcd.print(" IomaTic ");

//Initialize a serial communication with baud rate 9600

Serial.begin(9600);

delay(1000);

//Keeping SIM808 in active/wakeup state

pinMode(4, OUTPUT);

}

void loop()

{

byte temperature = 0;

byte humidity = 0;

int err = SimpleDHTErrSuccess;

if ((err = dht11.read(pinDHT11, &temperature, &humidity, NULL)) != SimpleDHTErrSuccess)

{

Serial.print("Read DHT11 failed, err="); Serial.println(err);delay(1000);

return;

}

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,1);

//Print the message as metioned cursor location

lcd.print("Val:");

lcd.print((int)temperature);

//Print the message as metioned cursor location

lcd.print(" \*C, ");

lcd.print((int)humidity);

lcd.print(" H");

delay(500);

if ((int)temperature>=22)

{

if(sendStatus==0)

{

digitalWrite(4,HIGH);

lcd.print(" H");

//Set cursor at first character/coloumn of first line/row

lcd.setCursor(0,1);

//Print the message as metioned cursor location

lcd.print("Triggering SMS....");

//Initialize a serial communication with baud rate 9600

Serial.begin(9600);

delay(1000);

//Initialize the GSM modem

Serial.println("AT+CMGF=1");

delay(2000);

//Send dial a phone AT command

Serial.print("AT+CMGS=\"");

//Send SMS receiver's phone number

Serial.print(PhoneNo);

//Hex code equivalent to "

Serial.write(0x22);

//Hex code equivalent to carriage return i.e. \r

Serial.write(0x0D);

//Hex code equivalent to new line char i.e. \n

Serial.write(0x0A);

delay(2000);

//Test SMS Message Body to Send

Serial.print("Temperature is High: ");

Serial.print((int)temperature);

delay(500);

Serial.println(char(26));

sendStatus=1;

}

}

else

{

lcd.print(" L");

sendStatus=0;

digitalWrite(4,LOW);

}

// if()

// {

// lcd.setCursor(0,1); //Set cursor at first character/coloumn of first line/row

// lcd.print("Triggering SMS...."); //Print the message as metioned cursor location

// Serial.begin(9600); //Initialize a serial communication with baud rate 9600

// delay(1000);

// Serial.println("AT+CMGF=1"); //Initialize the GSM modem

// delay(2000);

// Serial.print("AT+CMGS=\""); //Send dial a phone AT command

// Serial.print(PhoneNo); //Send SMS receiver's phone number

// Serial.write(0x22); //Hex code equivalent to "

// Serial.write(0x0D); //Hex code equivalent to carraige return i.e. \r

// Serial.write(0x0A); //Hex code equivalent to new line char i.e. \n

// delay(2000);

// Serial.print("IomaTic Send SMS Test...."); //Test SMS Message Body to Send

// delay(500);

// Serial.println(char(26));

// }

}

# Libraries:

*SimpleDHT.h:*

It is a library for handling Standard DHT sensors (DHT11 and DHT22).

# Functions:

*lcd.print((float)temperature):*

Print temperature value in float.

*lcd.print((float)humidity):*

Print humidity value in float.

*AT Commands:*

AT Commands are commands which are used to control the modems where AT stands for Attention.