Arduino-LCD

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LCD位址說明

0,0	1,0	2,0	3,0	4,0	5,0	.....		15,0
0,1	1,1	2,1	3,1	4,1	5,1	.....		15,1

1602LCD位址圖

0,0	1,0	2,0	3,0	4,0	5,0	.....		19,0
0,1	1,1	2,1	3,1	4,1	5,1	.....		19,1
0,2	1,2	2,2	3,2	4,2	5,2	.....		19,2
0,3	1,3	2,3	3,3	4,3	5,3	.....		19,3

2004LCD位址圖

LCD162

```
//Import Wire.h.h and LiquidCrystal_I2C.h
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
//LCD接線設定
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  //SDA->A4SCL->A5
void setup()
{
lcd.begin(16,2);  //設定螢幕長寬
  lcd.backlight(); //開啟背光
    delay(250);
  lcd.noBacklight(); //關掉背光
      delay(250);
  lcd.backlight();
  lcd.setCursor(0,0);       //設定哪個點開始
  lcd.print( “HELLO” );     //從設定點開始顯示文字
  delay(100);
}
void loop(){}
```

LCD讀取DHT11的溫度

```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <dht.h>        //匯入DHT函示庫
#define dht_dpin 8 //定義DHT訊號要從Pin 8 進來
dht DHT;
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  //SDA->A4SCL->A5
```

```
void setup()
{
 Serial.begin(9600);
   delay(300);
Serial.println("Humidity and temperature\n\n");
   delay(700);
   lcd.begin(16,2);
   lcd.noBacklight();
   lcd.backlight();
   lcd.setCursor(0,0);
   lcd.print("HELLO");
   delay(100);
}
```

```
void loop()
{
DHT.read11(dht_dpin);
  lcd.setCursor(0,1);
  lcd.print(DHT.temperature);
  delay(100);
  lcd.setCursor(5,1);
  lcd.print("C");
  delay(100);
  lcd.setCursor(8,1);
  lcd.print(DHT.humidity);
  lcd.setCursor(14,1);
  lcd.print("%");
  delay(100);
Serial.print("Humidity = ");
Serial.print(DHT.humidity);
Serial.print("% ");
Serial.print("temperature = ");
Serial.print(DHT.temperature);
Serial.println("C ");
}
```

LCDsound→28015REV C超音波

```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  //SDA->A4SCL->A5
const int pingPin = 7; //定義超音波訊號要從Pin 7 進來
```

```
void setup()
{
  Serial.begin(9600);
  lcd.begin(16,2);
  lcd.noBacklight();
  lcd.backlight();
}
long microsecondsToInches(long microseconds) {
  return microseconds / 74 / 2;
}//英吋
long microsecondsToCentimeters(long microseconds) {
  return microseconds / 29 / 2;
}//公分
```

```
void loop() {
  long duration, inches, cm;//宣告變數
  pinMode(pingPin, OUTPUT); //宣告腳位輸出
  digitalWrite(pingPin, LOW);//給低訊號
  delayMicroseconds(2);       //延遲兩毫秒
  digitalWrite(pingPin, HIGH);//給高訊號
  delayMicroseconds(5);
  digitalWrite(pingPin, LOW);
  pinMode(pingPin, INPUT);     //宣告腳位輸入
  duration = pulseIn(pingPin, HIGH);
  inches = microsecondsToInches(duration);//英吋
  cm = microsecondsToCentimeters(duration);//公分
```

```
if (cm<10){//小於10的LCD歸零
   lcd.setCursor(1,0);
   lcd.print(" ");
   lcd.setCursor(2,0);
   lcd.print(" ");
 }else if(cm<100){//小於100的LCD歸零
   lcd.setCursor(2,0);
   lcd.print(" ");
     }
 if (inches<10){
   lcd.setCursor(1,1);
   lcd.print(" ");
   lcd.setCursor(2,1);
   lcd.print(" ");
 }else if(inches<100){
   lcd.setCursor(2,1);
   lcd.print(" ");
     }
```

```
lcd.setCursor(0,0);
 lcd.print(cm);
 lcd.setCursor(3,0);
 lcd.print("cm");
 lcd.setCursor(0,1);
 lcd.print(inches);
 lcd.setCursor(3,1);
 lcd.print("inches");
 Serial.print(inches);
 Serial.print("in, ");
 Serial.print(cm);
 Serial.print("cm");
 Serial.println();
 delay(100);
   }
```

LCDsou_c

```
//熱敏一端接電阻->A0
//熱敏另一端接5V
//電阻另一端接GND
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <Thermistor.h>
Thermistor temp(0);
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  //SDA->A4 SCL->A5
const int pingPin = 7;  //SIG->7
```

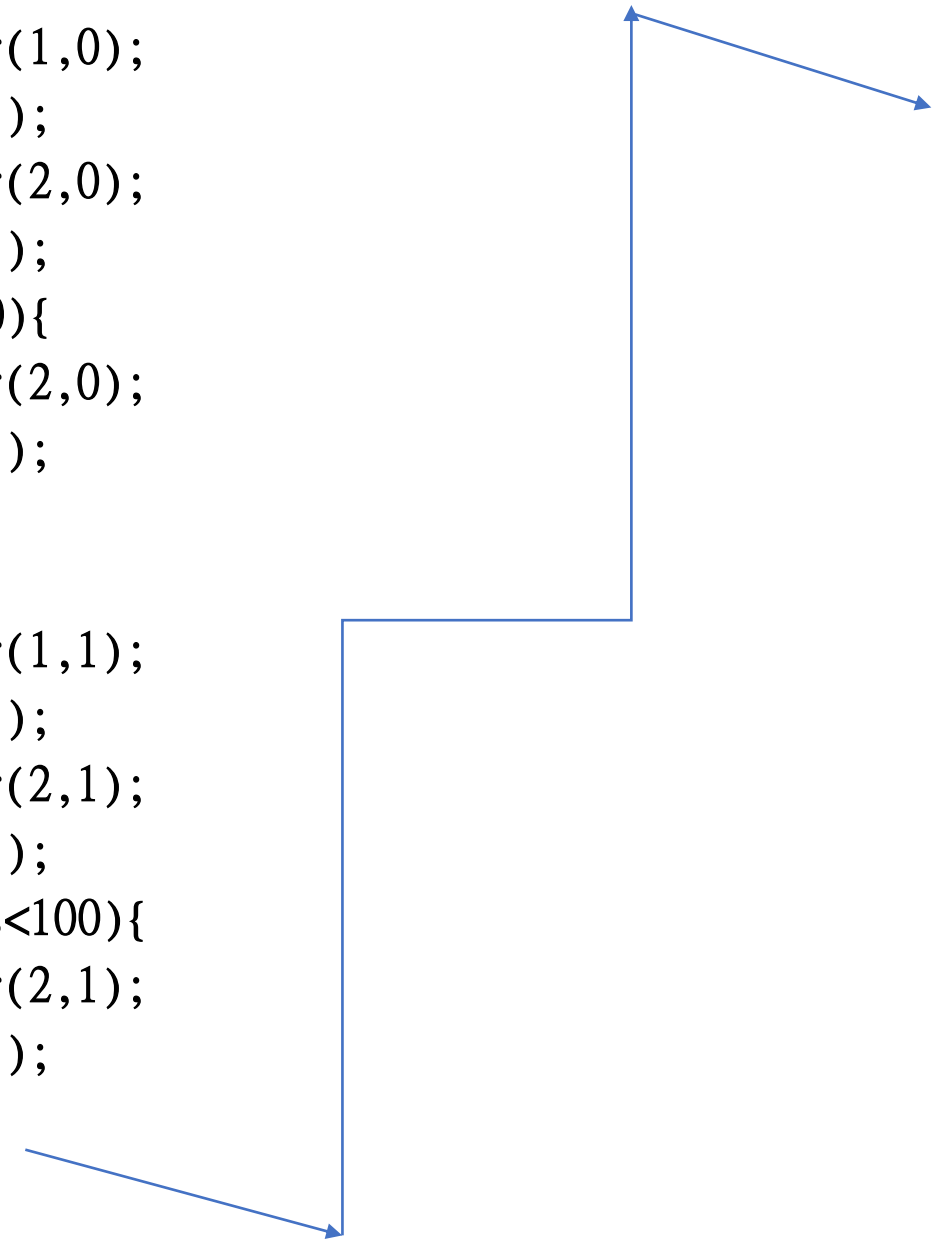
```
void setup()
{
  Serial.begin(9600);
   lcd.begin(16,2);
  lcd.noBacklight();
  lcd.backlight();
}
long microsecondsToInches(long microseconds) {
  return microseconds / 74 / 2;
}

long microsecondsToCentimeters(long microseconds) {
  return microseconds / 29 / 2;
}
```

```
void loop() {
  int temperature = temp.getTemp();
  Serial.print("The sensor temperature is: ");
  Serial.print(temperature);
  Serial.println("C");
  lcd.setCursor(10,0);
  lcd.print(temperature);
  lcd.setCursor(12,0);
  lcd.print("C");
```

```
long duration, inches, cm;
  pinMode(pingPin, OUTPUT);
  digitalWrite(pingPin, LOW);
  delayMicroseconds(2);
  digitalWrite(pingPin, HIGH);
  delayMicroseconds(5);
  digitalWrite(pingPin, LOW);
  pinMode(pingPin, INPUT);
  duration = pulseIn(pingPin, HIGH);
  inches = microsecondsToInches(duration);
  cm = microsecondsToCentimeters(duration);
```

```
if (cm<10){
    lcd.setCursor(1,0);
    lcd.print(" ");
    lcd.setCursor(2,0);
    lcd.print(" ");
  }else if(cm<100){
    lcd.setCursor(2,0);
    lcd.print(" ");
      }
  if (inches<10){
    lcd.setCursor(1,1);
    lcd.print(" ");
    lcd.setCursor(2,1);
    lcd.print(" ");
  }else if(inches<100){
    lcd.setCursor(2,1);
    lcd.print(" ");
      }
```



```
 lcd.setCursor(0,0);
  lcd.print(cm);
  lcd.setCursor(3,0);
  lcd.print("cm");
  lcd.setCursor(0,1);
  lcd.print(inches);
  lcd.setCursor(3,1);
  lcd.print("inches");

Serial.print(inches);
  Serial.print("in,
");
  Serial.print(cm);
  Serial.print("cm");
  Serial.println();
  delay(500);
    }
```

Hot

```
#include <Thermistor.h>
#include <Wire.h>  // Comes with Arduino IDE
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);   //SDA->A4    SCL->A5
Thermistor temp(0);
void setup() {
Serial.begin(9600);
delay(300);             //Let system settle
Serial.println("Humidity and temperature\n\n");
delay(700);
  lcd.begin(16,2);
  lcd.noBacklight();
      delay(250);
  lcd.backlight();
  lcd.setCursor(2,0);
  lcd.print("temperature");
  delay(100);
}
```

```
void loop() {
int temperature = temp.getTemp();
Serial.print("holle");
Serial.print("The sensor temperature is: ");
Serial.print(temperature);
Serial.println("C");
delay(1000);
lcd.setCursor(5,1);
  lcd.print(temperature);
  delay(100);
  lcd.setCursor(8,1);
  lcd.print("C");
  delay(100);
}
```

lcd-c-call-phone

```
#include <SoftwareSerial.h>
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <dht.h>
#define dht_dpin 8
dht DHT;
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);//SDA->A4SCL->A5
SoftwareSerial I2CBT(10,11);//定義PIN10及PIN11分別為RX及TX腳位藍芽
int LED1 = 13;
int LED2 = 2;
int LED3 = 3;
```

LCD-read-V

```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);  //SDA->A4SCL->A5
int p=A1;
void setup()
{ lcd.begin(16,2);
    /*lcd.backlight();
    delay(250);*/
  lcd.noBacklight();
      delay(250);
  lcd.backlight();
  lcd.setCursor(0,0);
  lcd.print("HELLO");
  delay(100);
}
```

```
void loop()
{  int sv =analogRead(p);
float tt=sv*(5.0/1023.0);
if(sv<1000){
  lcd.setCursor(3,1);
    lcd.print(" ");
  }
  if(sv<100){
    lcd.setCursor(2,1);
    lcd.print(" ");
    }
    if(sv<10){
      lcd.setCursor(1,1);
    lcd.print(" ");
      }
  lcd.setCursor(0,1);
 // lcd.print(sv,DEC);
 lcd.print(tt);
 lcd.print("V");
}
```

```
void setup(){
Serial.begin(9600);
I2CBT.begin(9600);
pinMode(LED1,OUTPUT);
lcd.begin(16,2);
lcd.backlight();
delay(250);
lcd.noBacklight();
delay(250);
   lcd.backlight();
   lcd.setCursor(0,0);
   lcd.print("HELLO");
   delay(500);
}
```

```
void loop() {
  DHT.read11(dht_dpin);
  lcd.setCursor(0,1);
  lcd.print(DHT.temperature);
  lcd.setCursor(5,1);
  lcd.print("C");
  lcd.setCursor(8,1);
  lcd.print(DHT.humidity);
  lcd.setCursor(14,1);
  lcd.print("%");
Serial.print("Humidity = ");
Serial.print(DHT.humidity);
Serial.print("% ");
Serial.print("temperature = ");
Serial.print(DHT.temperature);
Serial.println("C ");
led();
String a="H:"+String(DHT.humidity)+"\n"+"T:"+String(DHT.temperature)+"\n";
I2CBT.print(a);
   delay(500);
}
```

```
void led(){
int t=DHT.temperature;
int h=DHT.humidity;
  if(t>=30){
  digitalWrite(LED1, HIGH);
  }else{
    digitalWrite(LED1, LOW);
    }
}
```