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#include <SoftwareSerial.h>
#include <Wire.h>
int trig = 13;
int echo = 12;
int in1 = 3;
int in2 = 5;
int in3 = 6;
int in4 = 9;
SoftwareSerial I2CBT(10,11); //定義 Arduino PIN10 及 PIN11 分別為 RX 及 TX 腳位
//請注意 Arduino 的 TX 要接藍牙模組的 RX, 反之亦然

void setup() {
  Serial.begin(9600);
  I2CBT.begin(9600); //bluetooth baud rate
  pinMode(trig, OUTPUT);
  pinMode(echo, INPUT);
  pinMode(in1, OUTPUT);
  pinMode(in2, OUTPUT);
  pinMode(in3, OUTPUT);
  pinMode(in4, OUTPUT);
}

void loop() {
  byte cmmd[20];
  int insize;
  while(1){
    //read message from bluetooth
    if ((insize=(I2CBT.available()))>0){
      Serial.print("input size = ");
      Serial.println(insize);
      for (int i=0; i<insize; i++){
        Serial.print(cmmd[i]=char(I2CBT.read()));
        Serial.print("\n");
      }
    }
    //根據所收到訊號執行對應動作
    switch (cmmd[0]) {
      case 97:
        digitalWrite(in1,HIGH);
        digitalWrite(in2,LOW);
        digitalWrite(in3,LOW);
        digitalWrite(in4,HIGH);
        break;

      case 98:
        digitalWrite(in1,LOW);
        digitalWrite(in2,HIGH);
        digitalWrite(in3,HIGH);
    }
  }
}

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digitalWrite(in4,LOW);
break;

case 99:
digitalWrite(in1,LOW);
digitalWrite(in2,LOW);
digitalWrite(in3,LOW);
digitalWrite(in4,HIGH);
break;

case 100:
digitalWrite(in1,HIGH);
digitalWrite(in2,LOW);
digitalWrite(in3,LOW);
digitalWrite(in4,LOW);
break;

case 115:
digitalWrite(in1,LOW);
digitalWrite(in2,LOW);
digitalWrite(in3,LOW);
digitalWrite(in4,LOW);
break;

case 116:
digitalWrite(trig, LOW);
delayMicroseconds(2);
digitalWrite(trig, HIGH);
delayMicroseconds(5);
digitalWrite(trig, LOW);
int duration = pulseIn(echo, HIGH);
int cm = duration / 29 / 2;
if(cm>50){
    digitalWrite(in1,HIGH);
digitalWrite(in2,LOW);
digitalWrite(in3,LOW);
digitalWrite(in4,HIGH);
} else {
digitalWrite(in1,HIGH);
digitalWrite(in2,LOW);
digitalWrite(in3,LOW);
digitalWrite(in4,LOW);
}
break;

} //Switch
} //while
}

```