# include <Wire.h>  
# include <dht11.h> // DHT11库  
# include <LiquidCrystal.h> // LCD控制相关库  
   
// 定义引脚  
# define DHT11PIN 6  
# define EMPIN 7  
   
LiquidCrystal lcd(12, 11, 5, 4, 3, 2); // 初始化LCD  
dht11 DHT11;  
String str = ""; // 定义字符串str，接收学号  
int length\_, last = 0;  
int setHumidity, realHumidity = 0;  
   
void setup() {  
 // put your setup code here, to run once:  
 Serial.begin(9600); // 初始化串口，设置波特率为9600  
 lcd.begin(16, 2);  
 pinMode(EMPIN, OUTPUT); // 设置连接直流电机引脚工作模式  
}  
   
void loop() {  
 // put your main code here, to run repeatedly:  
 DHT11.read(DHT11PIN);  
 realHumidity = (int)DHT11.humidity;  
 lcd.print("ID:");  
   
 if (Serial.available() > 0) { // 串口接收到数据  
 while (Serial.available() > 0) {  
 str += (char)Serial.read();  
 delay(10);   
 }  
 lcd.println(str);  
   
 length\_ = str.length();  
 last = str.substring(length\_ - 3, length\_ - 2).toInt(); // 取末尾数字  
 setHumidity = 30 + last;  
   
 str = "";  
 length\_ = 0;  
 last = 0;  
 }  
   
 lcd.setCursor(0, 1); // 将光标定位在第0列，第1行  
 lcd.print("RH:");  
 lcd.print(realHumidity);  
 lcd.println("%");  
 lcd.home(); // 光标返回左上角  
   
 Serial.print("Humidity:");  
 Serial.print(realHumidity);   
 Serial.println("%");  
   
 if (realHumidity <= setHumidity) {  
 digitalWrite(EMPIN, HIGH); // 电机转动  
 } else {  
 digitalWrite(EMPIN, LOW);  
 }  
   
 delay(1000);  
}