



19 DHT11温湿度模块实验

1 实验操作过程:

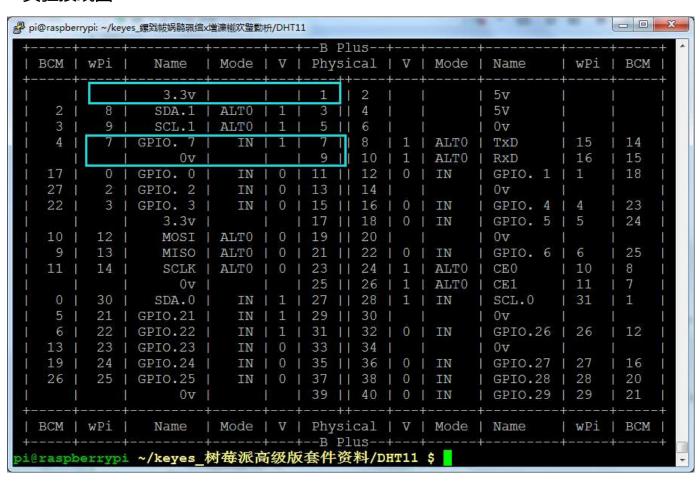
```
Pi@raspberrypi ~/keyes_树莓派高级版套件资料/DHT11 $ ls
DHT11.c Makefile
pi@raspberrypi ~/keyes_树莓派高级版套件资料/DHT11 $ make
cc -c-o DHT11.c DHT11.c
gcc DHT11.c -o DHT11 -lwiringPi
pi@raspberrypi ~/keyes_树莓派高级版套件资料/DHT11 $ ls
DHT11 DHT11.c DHT11.o Makefile
pi@raspberrypi ~/keyes_树莓派高级版套件资料/DHT11 $ sudo ./DHT11
RH:35,TEMP:31
pi@raspberrypi ~/keyes_树莓派高级版套件资料/DHT11 $

Pi@raspberrypi ~/keyes_树莓派高级版套件资料/DHT11 $
```

2 实验源程序:

```
- - X
P pi@raspberrypi: ~/keyes_螺戣帗娲鹃珮绾x增濓椾欢豎勬枡/DHT11
#include <wiringPi.h>
#include <stdio.h>
#include <stdlib.h>
#include <stdint.h>
#define MAX TIME 85
#define DHT11PIN 7
#define ATTEMPTS 5
                                    //retry 5 times when no response
int dht11 val[5]={0,0,0,0,0};
int dht11 read val(){
    uint8 t lststate=HIGH;
                                    //last state
    uint8 t counter=0;
    uint8_t j=0,i;
    for(i=0;i<5;i++)
        dht11 val[i]=0;
    //host send start signal
    pinMode(DHT11PIN,OUTPUT);
                                    //set pin to output
    digitalWrite(DHT11PIN,LOW);
                                    //set to low at least 18ms
    delay(18);
    digitalWrite(DHT11PIN, HIGH);
                                    //set to high 20-40us
    delayMicroseconds (40);
    //start recieve dht response
                                    //set pin to input
    pinMode(DHT11PIN, INPUT);
    for(i=0;i<MAX TIME;i++)</pre>
"DHT11.c" 68L, 2396C
                                                     1,1
                                                                    Top
```

3 实验接线图



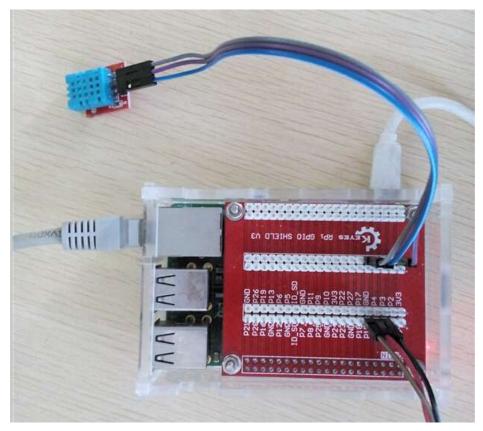
```
实验接线图:

VCC-----3.3V

GND-----GND

S------<mark>7</mark>

~
```



4 实验结果