

SPRINT 4

PNT2022TMID11003

```
#include
<OneWire.h>

#include <DallasTemperature.h>
#define ONE_WIRE_BUS 5
OneWire oneWire(ONE_WIRE_BUS);
DallasTemperature sensors(&oneWire);
float Celcius=0;
float Fahrenheit=0;
float voltage=0;
const int analogInPin = A0;
int sensorValue = 0;
unsigned long int avgValue;
float b;
int buf[10],temp;
void setup(void)
{

    Serial.begin(9600);
    sensors.begin();
    int sensorValue = analogRead(A1);
    voltage = sensorValue * (5.0 / 1024.0);
}
void loop(void)
{
    sensors.requestTemperatures();
    Celcius=sensors.getTempCByIndex(0);
    Fahrenheit=sensors.toFahrenheit(Celcius);
    for(int i=0;i<10;i++)
    {
        buf[i]=analogRead(analogInPin);
        delay(10);
    }
    for(int i=0;i<9;i++)
    {
        for(int j=i+1;j<10;j++)
        {
            if(buf[i]>buf[j])
            {
```

```
temp=buf[i];
buf[i]=buf[j];
buf[j]=temp;
}
}
}
for(int i=2;i<8;i++)
avgValue+=buf[i];
float pHVol=(float)avgValue*5.0/1024/6;
float pHValue = -5.70 * pHVol + 21.34;
Serial.println(pHValue);
Serial.print("pH");
```

```
Serial.print(" C ");
Serial.print(Celcius);
```

```
Serial.print(voltage);
Serial.print("V");
delay(10000);
}
```