

```

#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);
```

```
}
```