

PROJECT DEVELOPMENT - DELIVERY OF SPRINT 4

Date:	09 November 2022
Team ID:	PNT2022TMID00966
Name:	Real-Time River Water Quality Monitoring and Control System

Coding for sprint 4:

SPRINT 4

```
#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=b
uf[i];
buf[i]=buf[
j];
buf[j]=tem
p;
}
} } 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);
}

```



