

PROJECT DEVELOPMENT - DELIVERY OF SPRINT 4

Date:	09 November 2022
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Name:	Real-TimeRiverWaterQuality 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);
}

```



