PROJECT DEVELOPMENT - DELIVERY OF SPRINT 4

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| Team ID: | PNT2022TMID03218 |
| 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=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);

}



