**SPRINT 4**

**ARDUINO CODE**

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| TEAM ID | PNT2022TMID44500 |
| PROJECT TITLE | Real-Time River Water Quality Monitoring and Control system |
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#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);

}