SPRINT 4

ARDUINO CODE

TEAM ID	PNT2022TMID09601
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);
}
```