

SPRINT 4

ARDUINO CODE

TEAM ID	PNT2022TMID09598
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);
}

```