SPRINT-4

CODE FOR ARDUINO

TEAM ID	PNT2022TMID24241
PROJECT TITLE	Real-Time River Water Quality Monitoring and Control System
TEAM LEADER	PATHAKAMURI SAIPRATHAP
TEAM MEMBER 1	VASANTHA
TEAM MEMBER 2	RISHI U
TEAM MEMBER 3	SATHISHKUMAR M

```
#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);
}
```