SPRINT 4

Team ID : PTN2022TMID16162

Project Name : Real-Time River Water Quality Monitoring and Control System

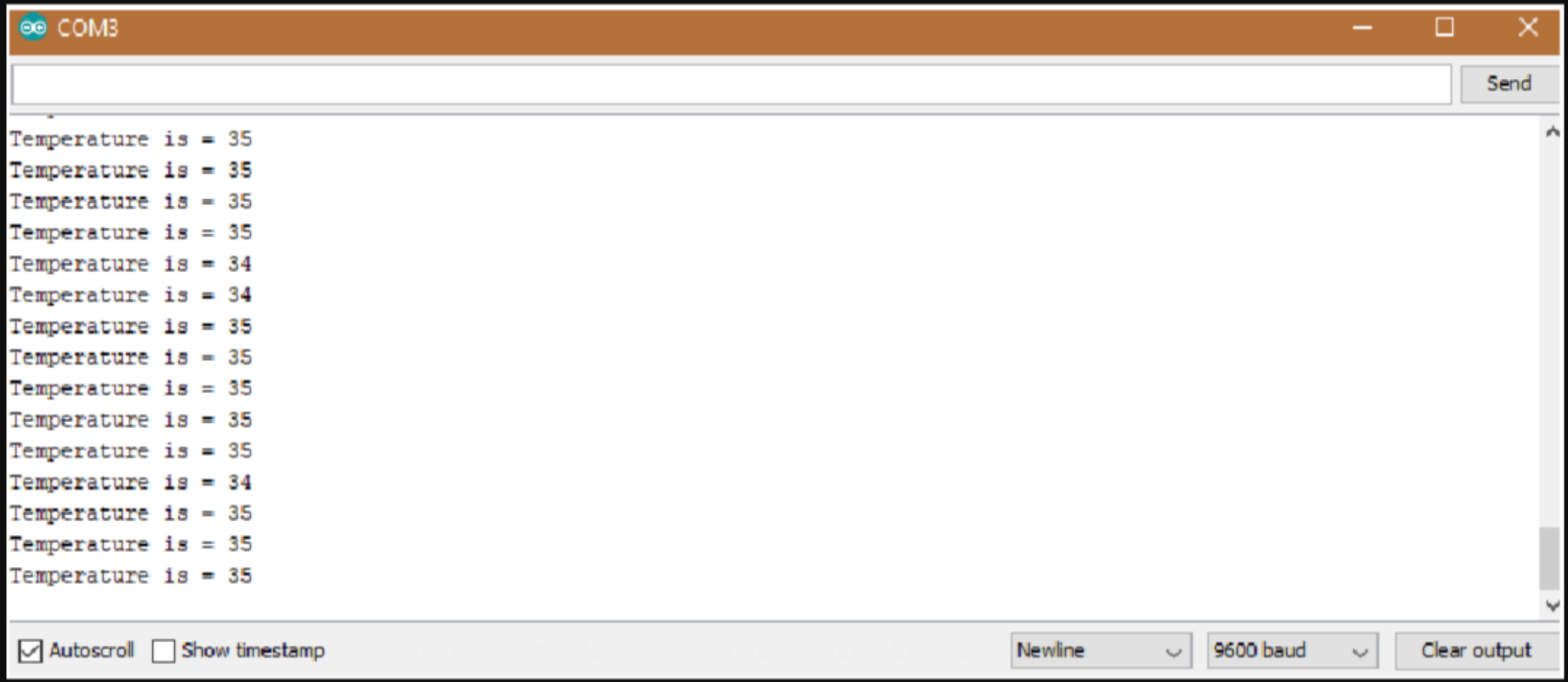
```
#include
<OneWire.h>
              #include <DallasTemperature.h>
              #define ONE_WIRE_BUS 5
              OneWire oneWire(ONE_WIRE_BUS);
              DallasTemperature sensors(&oneWire);
              float Celcius=0;
              float Fahrenheit=0;
              float voltage=0;
              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);
}
```


COM3
Send
Temperature is = 35
Temperature is = 35
Temperature is = 35
Temperature is = 35
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Temperature is = 35
Temperature is = 35
Temperature is = 35
Temperature is = 35
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Temperature is = 35
Temperature is = 34
Temperature is = 35
Temperature is = 35
Temperature is = 35
Autoscroll
Show timestamp
Newline
9600 baud
Clear output