Project Development Phase
Project Development Template (Sprint-6)

Date	19 November 2022
Team ID	PNT2022TMID29879
Project Name	Project - Real Time River Water Monitoring and Control system
Maximum Marks	Marks

Arduino code:

```
#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);
}
```