Assignment -1

Arduino Programming

Assignment Date	15 September 2022
Student Name	Mr. GOWTHAM S
Student Roll Number	GCTC1914113
Maximum Marks	2 Marks

Question-1:

Make a smart home with 2-3 sensors, LED , Buzzer. in single code and connections

Solution:

```
// C++ code
//SMART HOME

const int pingPin = 7; // Trigger Pin of Ultrasonic Sensor
const int echoPin = 6; // Echo Pin of Ultrasonic Sensor
int tempPin=0;
void setup()
{
 Serial.begin(9600); // Starting Serial Terminal
 pinMode(LED_BUILTIN, OUTPUT);
 pinMode(3,OUTPUT);
}

void loop()
{
 long distcm,duration;
 float temp;
 temp=analogRead(tempPin);
 temp=temp*0.4882815;
 if(temp>70)
 {
        digitalWrite(3, HIGH);
 }
 else
 {
        digitalWrite(3,LOW);
 }

 delay(1000);
 pinMode(pingPin, OUTPUT);
 digitalWrite(pingPin, LOW);
 delayMicroseconds(2);
 digitalWrite(pingPin, HIGH);
```

```
  delayMicroseconds(10);
  digitalWrite(pingPin, LOW);
  pinMode(echoPin, INPUT);
  duration = pulseIn(echoPin, HIGH);

  distcm = duration*0.0343/2;
  // Turns the LED ON when the water level drops below 100cm.
  if(distcm<100)
  {
          digitalWrite(LED_BUILTIN, HIGH);
  }
  else
  {
          digitalWrite(LED_BUILTIN, LOW);
  }
}
```