## Assignment -1

## **Arduino Programming**

Assignment Date	15 September 2022
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Student Roll Number	GCTC1914105
Maximum Marks	2 Marks

## Question-1:

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

```
Solutio
n:
           // 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);
 }
Circuit design Surprising Elzir X S IBM
                                                       x | Le HC-SR04 Ultrasonic Distance x | G LEDbuilt in in arduino - Goog x | +
                                    X Arduino - Blinking LED
 \leftarrow \rightarrow {\tt C} {\tt \hat{G}} tinkercad.com/things/4qm3M4SiN09-surprising-elzing/editel?tenant=circuits
    Surprising Elzing
                                                                                        All changes saved
Code
                                                                                                  ▶ Start Simulation
 SMART HOME.ino
```