**Assignment -1**

Arduino Programming

|  |  |
| --- | --- |
| Assignment Date | 13 September 2022 |
| Student Name | Gopi Krishnan V |
| Student Roll Number | 9517201904044 |
| Maximum Marks | 2 Marks |

**Question-1:**

Make a Smart Home in Tinkercad, using 2+ sensors, Led, Buzzer in single code and circuit.

**Program:**

int t=2;

int e=3;

void setup()

{

Serial.begin(9600);

pinMode(t,OUTPUT);

pinMode(e,INPUT);

pinMode(12,OUTPUT);

}

void loop()

{

//ultrasonic sensor

digitalWrite(t,LOW);

digitalWrite(t,HIGH);

delayMicroseconds(10);

digitalWrite(t,LOW);

float dur=pulseIn(e,HIGH);

float dis=(dur\*0.0343)/2;

Serial.print("Distance is: ");

Serial.println(dis);

//LED ON

if(dis>=100)

{

digitalWrite(8,HIGH);

digitalWrite(7,HIGH);

}

//Buzzer For ultrasonic Sensor

if(dis>=100)

{

for(int i=0; i<=30000; i=i+10)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

//Temperate Sensor

double a= analogRead(A0);

double t=(((a/1024)\*5)-0.5)\*100;

Serial.print("Temp Value: ");

Serial.println(t);

delay(1000);

//LED ON

if(t>=100)

{

digitalWrite(8,HIGH);

digitalWrite(7,HIGH);

}

//Buzzer for Temperature Sensor

if(t>=100)

{

for(int i=0; i<=30000; i=i+10)

{

tone(12,i);

delay(1000);

noTone(12);

delay(1000);

}

}

//LED OFF

if(t<100)

{

digitalWrite(8,LOW);

digitalWrite(7,LOW);

}

}

**Output:**

