

Assignment - 1

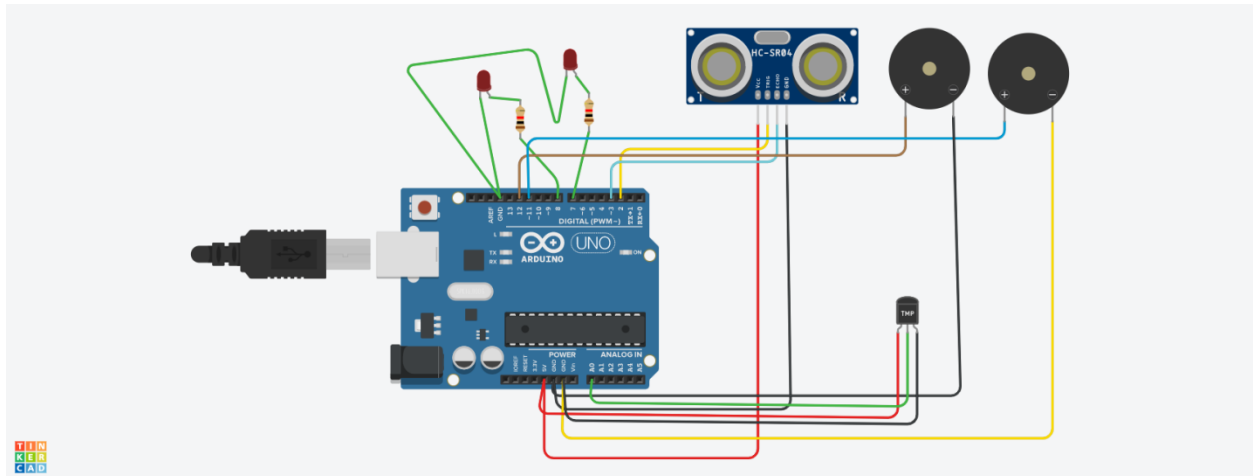
Assignment Date	18 SEPTEMBER 2022
Student Name	VINOTH KUMAR B
Student Roll Number	513419106045
Maximum Marks	2 marks

Question-1:

Write code and Make a Smart Home in Tinkercad, using 2+sensors, LED, Buzzer in single code & Circuit.

solution

Circuit diagram:



Code:

```
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);
}
```