ASSIGNMENT -1

Python Programming

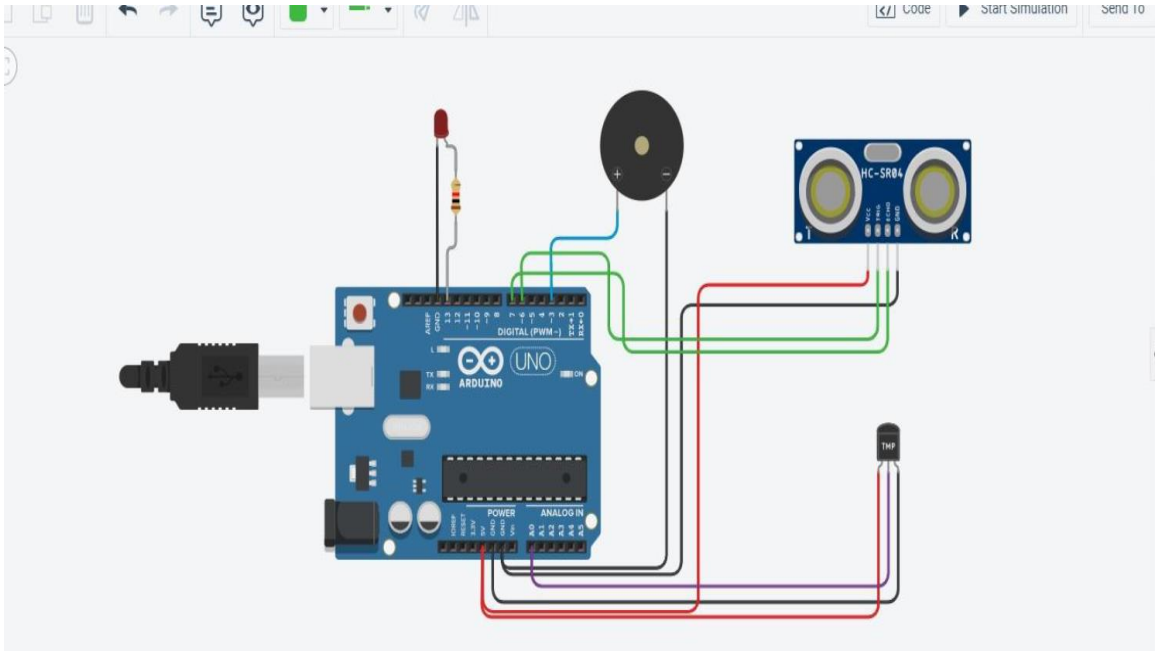
Team ID	PNT2022TMID19330
Maximum Marks	2 Marks

QUESTION-1:

Build a smart home in Thinkercad with 2 sensors, an Led, buzzer and submit it.

SOLUTION:

CIRCUIT DIAGRAM:



SOURCE CODE:

```
const int pingPin = 6; // Trigger Pin of Ultrasonic Sensor

const int echoPin = 7; // Echo Pin of Ultrasonic Sensor

double tempPin=A0;

void setup()
```

```
{
Serial.begin(9600); // Starting Serial Terminal
pinMode(LED_BUILTIN, OUTPUT);
pinMode(3,OUTPUT);
 }
void loop()
{
long distcm,duration;
double temp;
temp=analogRead(tempPin);
temp=(((temp/1024)*5)-0.5)*100; //converting analog reading to celcius
//Turn on the buzzer when temparature increases above 70 celcius
 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);
}
}
```