Assignment -1

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

Question:

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

```
int baselineTemp = 0;
int celsius = 0;
int fahrenheit = 0;
int sensorState = 0;

void setup()
{
 pinMode(A0, INPUT);


 pinMode(2, OUTPUT);
 pinMode(3, OUTPUT);
 pinMode(4, OUTPUT);
 pinMode(7, INPUT);
 pinMode(8, OUTPUT);
 Serial.begin(9600);
}

void loop()
{
 baselineTemp = 40;

 celsius =
map(((analogRead(A0)
- 20) * 3.04), 0, 1023, -
40, 125);

  fahrenheit = ((celsius
* 9) / 5 + 32);
 Serial.print(celsius);
 Serial.print(" C, ");

Serial.print(fahrenheit);
 Serial.println(" F");
```

```
  if (celsius <
baselineTemp) {
   digitalWrite(2, LOW);
   digitalWrite(3, LOW);
   digitalWrite(4, LOW);
 }
 if (celsius >=
baselineTemp &&
celsius < baselineTemp
+ 10) {
   digitalWrite(2,
HIGH);
   digitalWrite(3, LOW);
   digitalWrite(4, LOW);
 }
 if (celsius >=
baselineTemp + 10 &&
celsius < baselineTemp
+ 20) {
   digitalWrite(2,
HIGH);
   digitalWrite(3,
HIGH);
   digitalWrite(4, LOW);
 }
 if (celsius >=
baselineTemp + 20 &&
celsius < baselineTemp
+ 30) {
   digitalWrite(2,
HIGH);
   digitalWrite(3,
HIGH);
   digitalWrite(4,
HIGH);
 }
 if (celsius >=
baselineTemp + 30) {
   digitalWrite(2,
HIGH);
   digitalWrite(3,
HIGH);
   digitalWrite(4,
HIGH);
 }
```

```
  sensorState =
digitalRead(7);

  if (sensorState ==
HIGH) {
    digitalWrite(8,
HIGH);
    Serial.println("Sensor
activated!");
  } else {
    digitalWrite(8, LOW);
  }

}
```

OUTPUT:-