

ASSIGNMENT -1

Assignment Date	19 September 2022
Student Name	SHALINI S
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Maximum Marks	2 Marks

Question-1:

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

Solution:

```
int LevelSensorVal = 0;

int echoPin = 0;

int triggerPin = 0;

long readUltrasonicDistance(int triggerPin, int echoPin)
{
    pinMode(triggerPin, OUTPUT); // Clear the trigger
    digitalWrite(triggerPin, LOW);
    delayMicroseconds(2);
    // Sets the trigger pin to HIGH state for 10 microseconds
    digitalWrite(triggerPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(triggerPin, LOW);
    pinMode(echoPin, INPUT);
    // Reads the echo pin, and returns the sound wave travel time in microseconds
    return pulseIn(echoPin, HIGH);
}

void setup()
{
    Serial.begin(9600);
```

```
pinMode(8, OUTPUT);  
pinMode(9, OUTPUT);  
pinMode(5, OUTPUT);  
}  
  
void loop()  
{  
    echoPin = 3;  
    triggerPin = 2;  
    LevelSensorVal = 0.01723 * readUltrasonicDistance(2, 3);  
    Serial.println("Level Control System");  
    Serial.println(LevelSensorVal);  
    if (LevelSensorVal <= 40) {  
        Serial.println("Tank is FULL");  
        digitalWrite(8, HIGH);  
        digitalWrite(9, HIGH);  
        tone(5, 19, 1000); // play tone 3 (D#0 = 19 Hz)  
    }  
    if (LevelSensorVal >= 300) {  
        Serial.println("Tank is EMPTY");  
        digitalWrite(8, LOW);  
        digitalWrite(9, HIGH);  
    }  
    delay(10); // Delay a little bit to improve simulation performance  
}
```

