Assignment 1

Assignment Date	19 September2022
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Maximum Mark	2 Mark
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QUESTION:

Build a smart home in Thinkercad with 2 sensors, an Led, buzzer and submit it.int set_waterlevel = 0;

CODE:

```
int waterlevel = 0;
int moisture_data = 0;

long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin, OUTPUT);
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  return pulseIn(echoPin, HIGH);
}

void setup()
{
   pinMode(A0, INPUT);
  Serial.begin(9600);
  pinMode(8, OUTPUT);
  pinMode(10, OUTPUT);
  pinMode(6, OUTPUT);
}

void loop()
{
  waterlevel = 0.01723 * readUltrasonicDistance(3, 2);

  Serial.print(waterlevel);
  Serial.println("WATER LEVEL");
  if (waterlevel > 200) {
  digitalWrite(8, HIGH);
  digitalWrite(10, LOW);
  digitalWrite(6, LOW);
  }
  if (waterlevel < 100) {
    digitalWrite(8, HIGH);
    digitalWrite(10, HIGH);
    digitalWrite(6, HIGH);
```

```
}
if (waterlevel <=200)
{
  digitalWrite(8,HIGH);
digitalWrite(10,LOW);
digitalWrite(6, LOW);
```

```
  delay(10);
  }
 moisture_data = analogRead(A0);
Serial.print(moisture_data);
Serial.println("Moisture data");
  if (moisture_data < 12) {
    digitalWrite(10,   HIGH);
    digitalWrite(6, HIGH);
  } else {
    digitalWrite(10,   LOW);
    digitalWrite(6, LOW);
  }
  delay(10); //
}
```