

ASSIGNMENT-1

**Er.Perumal Manimekalai College of Engineering
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STUDENT NAME : B.SOWMYA

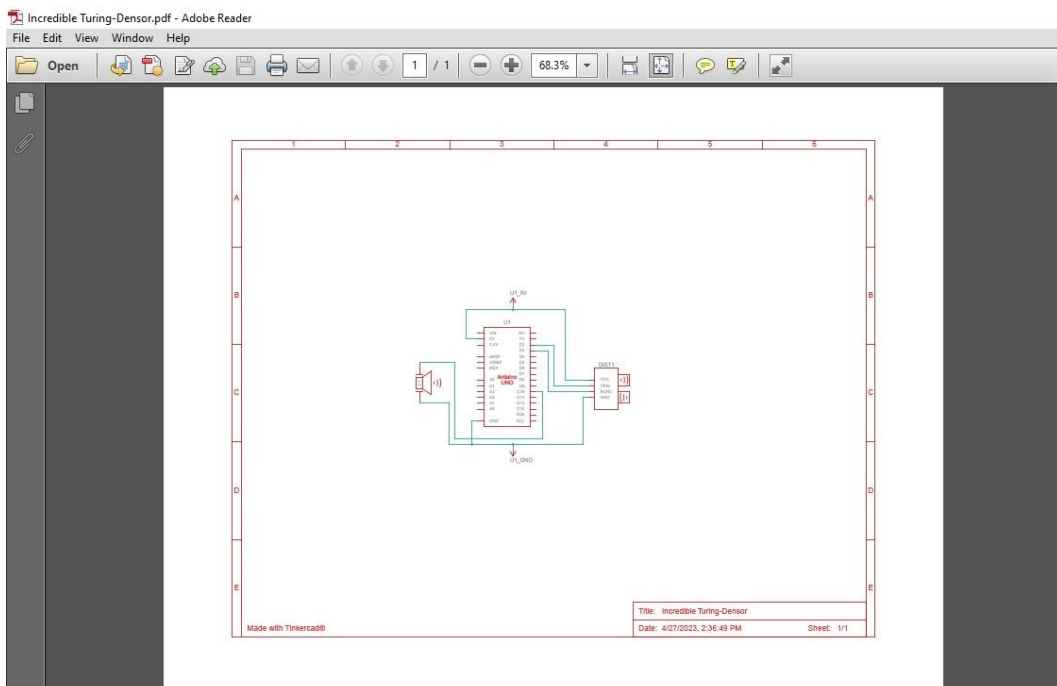
DEPARTMENT : ECE III YEAR

SUBJECT : IBM

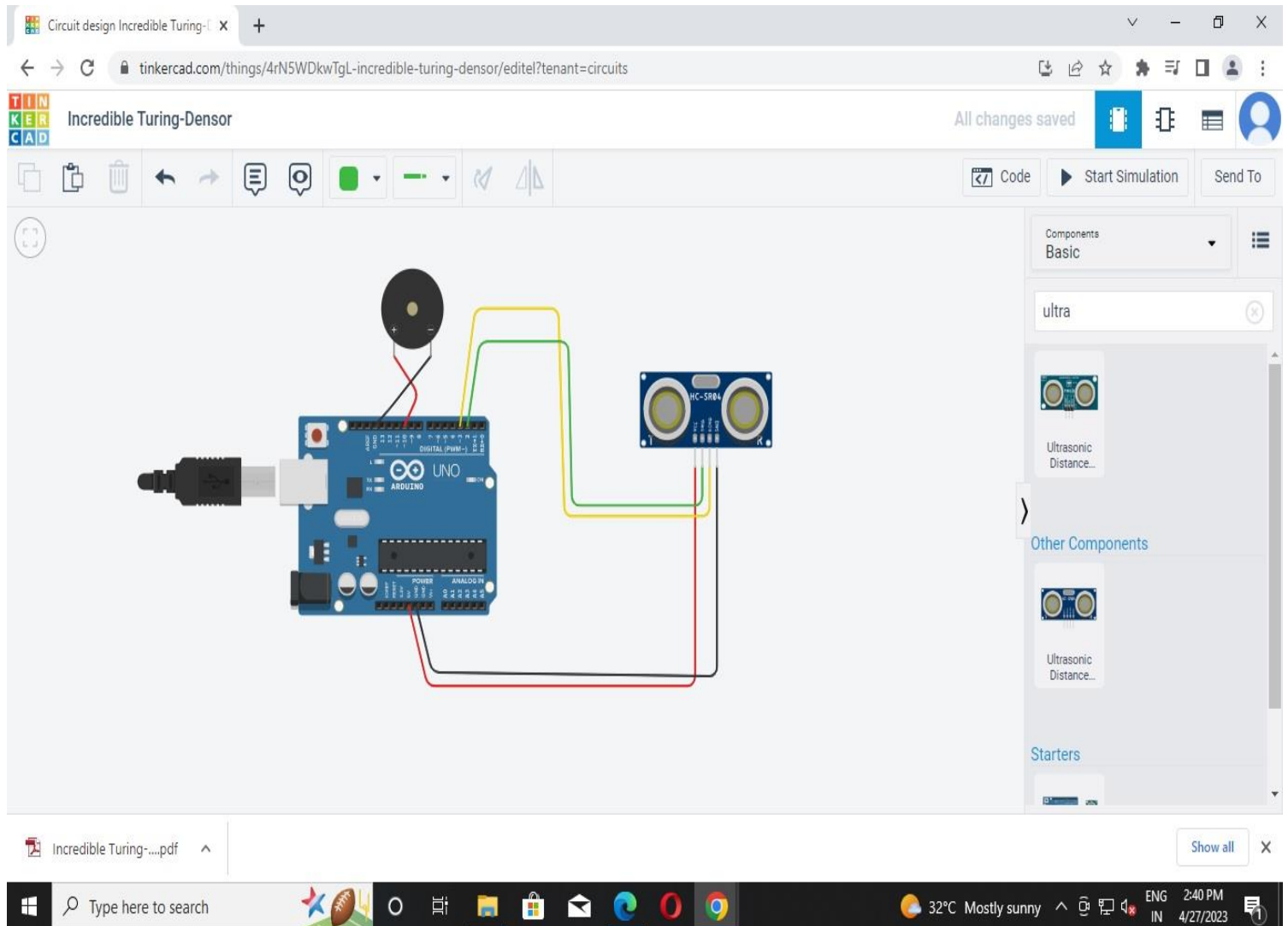
REGISTER NO :610820106050

**Build a smart home in wokwi with minimum 2
sensors, Led, buzzer**

PIN DIAGRAM



DESIGN PART



BUZZER VIBRATING

Circuit design Incredible Turing-Densor

tinkercad.com/things/4rN5WDkwTgI-incredible-turing-densor/editel?tenant=circuits

All changes saved

Simulator time: 00:00:17

Code Stop Simulation Send To

1 (Arduino Uno R3)

```
1 int trigger_pin = 2;
2 int echo_pin = 3;
3 int buzzer_pin = 10;
4 int time;
5 int distance;
6 void setup()
7 {
8     Serial.begin (9600);
9     pinMode (trigger_pin, OUTPUT);
10    pinMode (echo_pin, INPUT);
11    pinMode (buzzer_pin, OUTPUT);
12 }
13 void loop()
14 {
15     digitalWrite (trigger_pin, HIGH);
16     delayMicroseconds (10);
17     digitalWrite (trigger_pin, LOW);
18     time = pulseIn (echo_pin, HIGH);
19     distance = (time * 0.034) / 2;
```

Serial Monitor

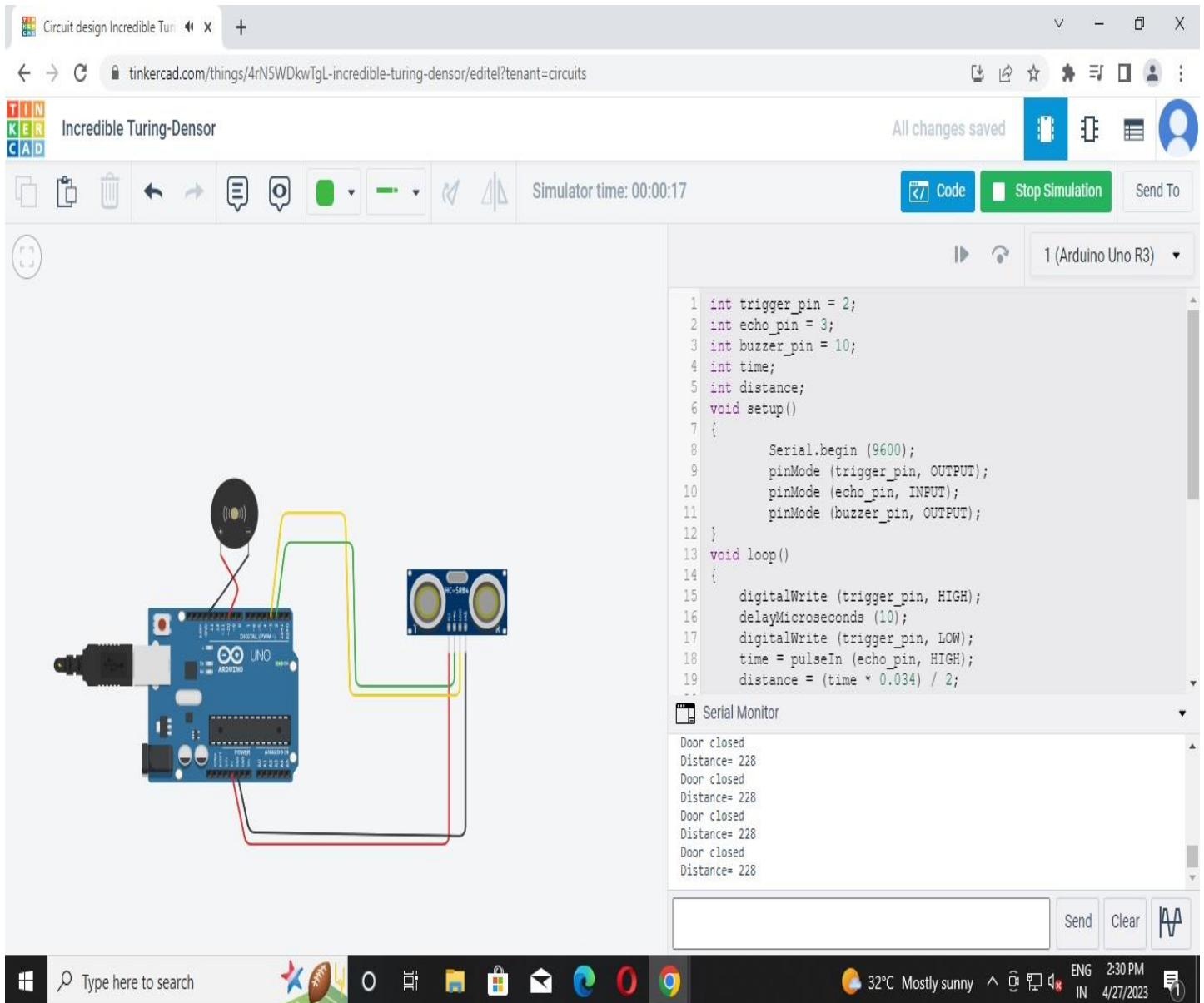
Door closed
Distance= 228
Door closed
Distance= 228
Door closed
Distance= 228
Door closed
Distance= 228

Send Clear

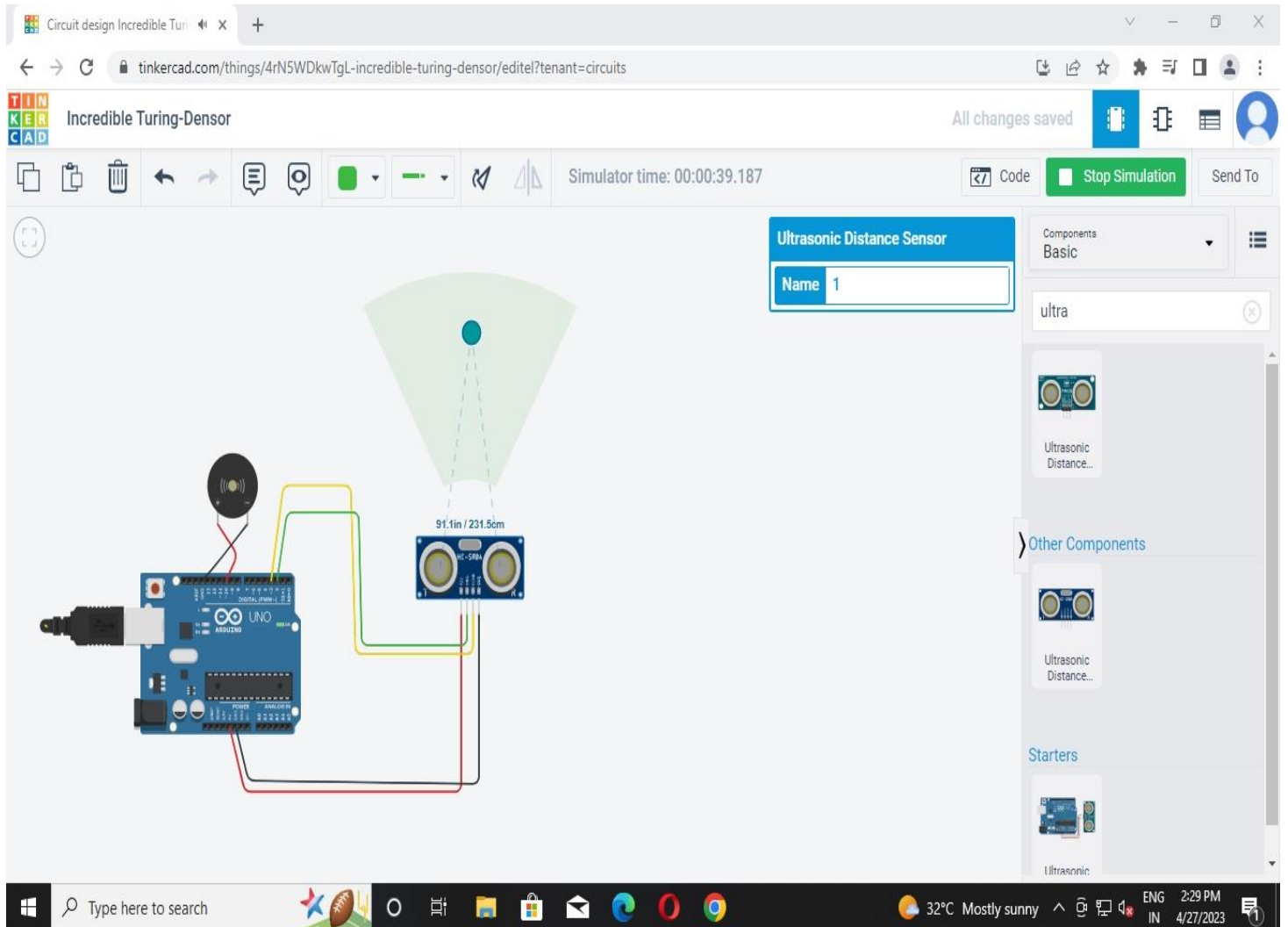
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32°C Mostly sunny

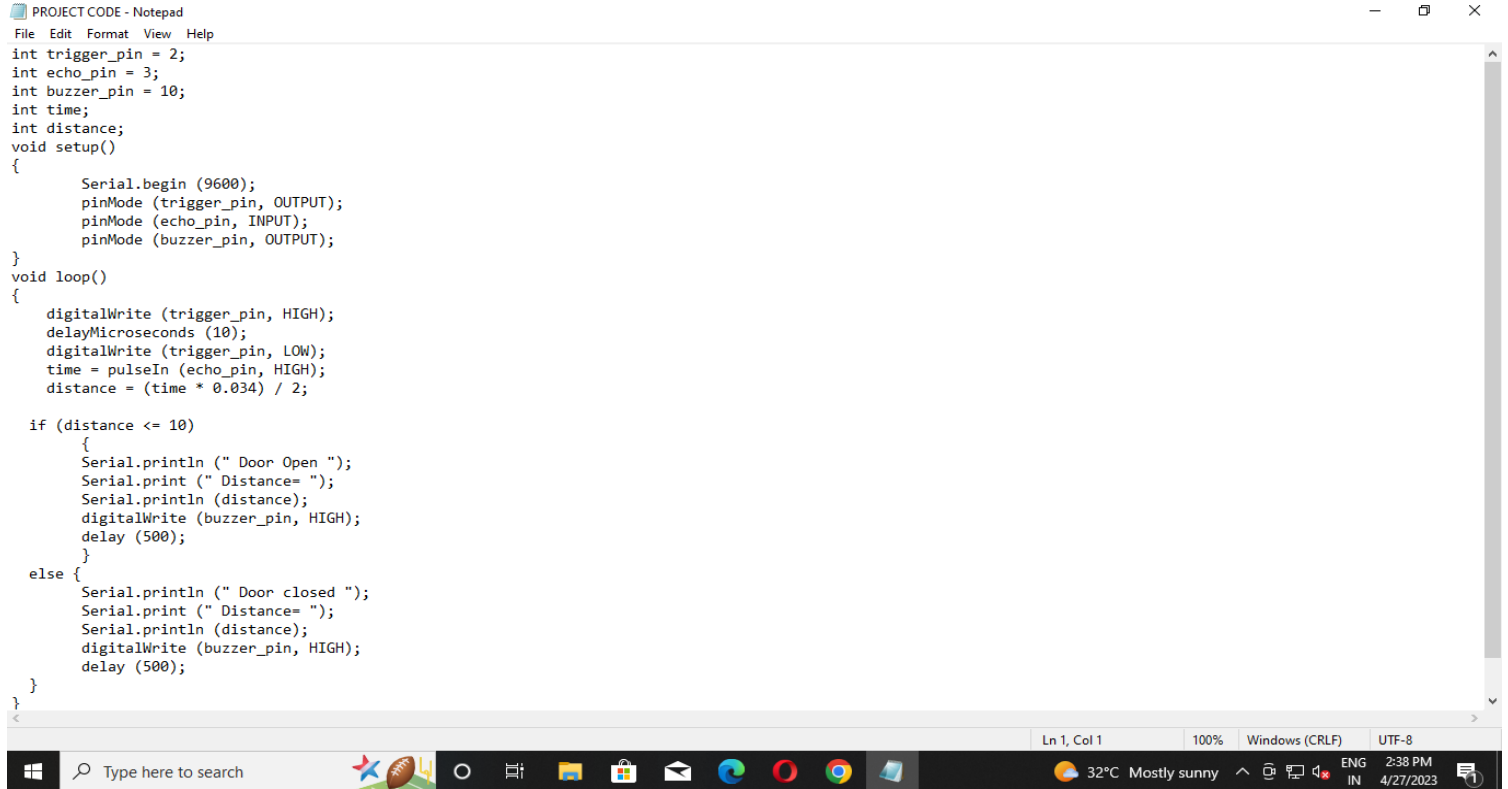
ENG IN 2:30 PM 4/27/2023



DISTANCE



CODING PART



```
PROJECT CODE - Notepad
File Edit Format View Help
int trigger_pin = 2;
int echo_pin = 3;
int buzzer_pin = 10;
int time;
int distance;
void setup()
{
    Serial.begin (9600);
    pinMode (trigger_pin, OUTPUT);
    pinMode (echo_pin, INPUT);
    pinMode (buzzer_pin, OUTPUT);
}
void loop()
{
    digitalWrite (trigger_pin, HIGH);
    delayMicroseconds (10);
    digitalWrite (trigger_pin, LOW);
    time = pulseIn (echo_pin, HIGH);
    distance = (time * 0.034) / 2;

    if (distance <= 10)
    {
        Serial.println (" Door Open ");
        Serial.print (" Distance= ");
        Serial.println (distance);
        digitalWrite (buzzer_pin, HIGH);
        delay (500);
    }
    else {
        Serial.println (" Door closed ");
        Serial.print (" Distance= ");
        Serial.println (distance);
        digitalWrite (buzzer_pin, HIGH);
        delay (500);
    }
}
```

```
int trigger_pin = 2;
int echo_pin = 3;
int buzzer_pin = 10;
int time;
int distance;
void setup()
{
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}
void loop()
{
    digitalWrite (trigger_pin, HIGH);
    delayMicroseconds (10);
    digitalWrite (trigger_pin, LOW);
```

```
time = pulseIn (echo_pin, HIGH);  
distance = (time * 0.034) / 2;
```

```
if (distance <= 10)
```

```
{  
  Serial.println (" Door Open ");  
  Serial.print (" Distance= ");  
  Serial.println (distance);  
  digitalWrite (buzzer_pin, HIGH);  
  delay (500);  
}
```

```
else {
```

```
  Serial.println (" Door closed ");  
  Serial.print (" Distance= ");  
  Serial.println (distance);  
  digitalWrite (buzzer_pin, HIGH);  
  delay (500);
```

```
}
```

```
}
```

SERIAL PORT

Circuit design Incredible Turing-Densor

tinkercad.com/things/4rN5WDkwTgL-incredible-turing-densor/edit?tenant=circuits

All changes saved

Code Start Simulation Send To

Text 1 (Arduino Uno R3)

```
1 int trigger_pin = 2;
2 int echo_pin = 3;
3 int buzzer_pin = 10;
4 int time;
5 int distance;
6 void setup()
7 {
8     Serial.begin (9600);
9     pinMode (trigger_pin, OUTPUT);
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19     distance = (time * 0.034) / 2;
```

Serial Monitor

Door closed
Distance= 228
Door closed
Distance= 228
Door closed
Distance= 228
Door closed
Distance= 228

Send Clear

Type here to search 32°C Mostly sunny 2:31 PM 4/27/2023