ASSIGNMENT-1

Er.Perumal Manimekalai College of Engineering
Hosur

STUDENT NAME : G.AJITH KUMAR

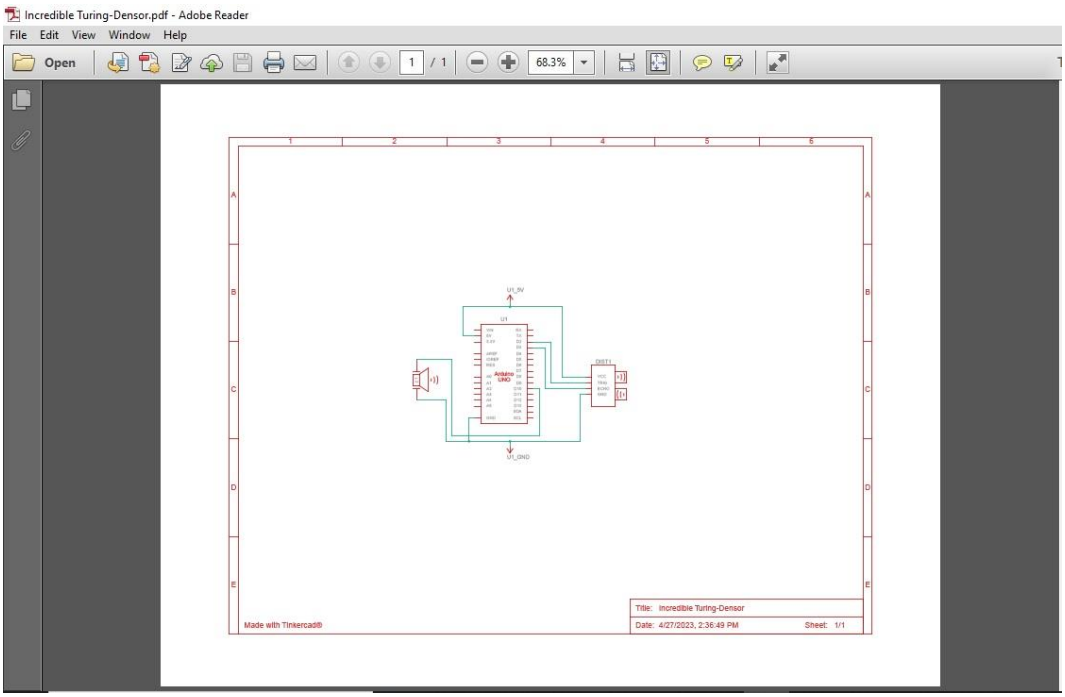
DEPARTMENT : ECE III YEAR

SUBJECT : IBM

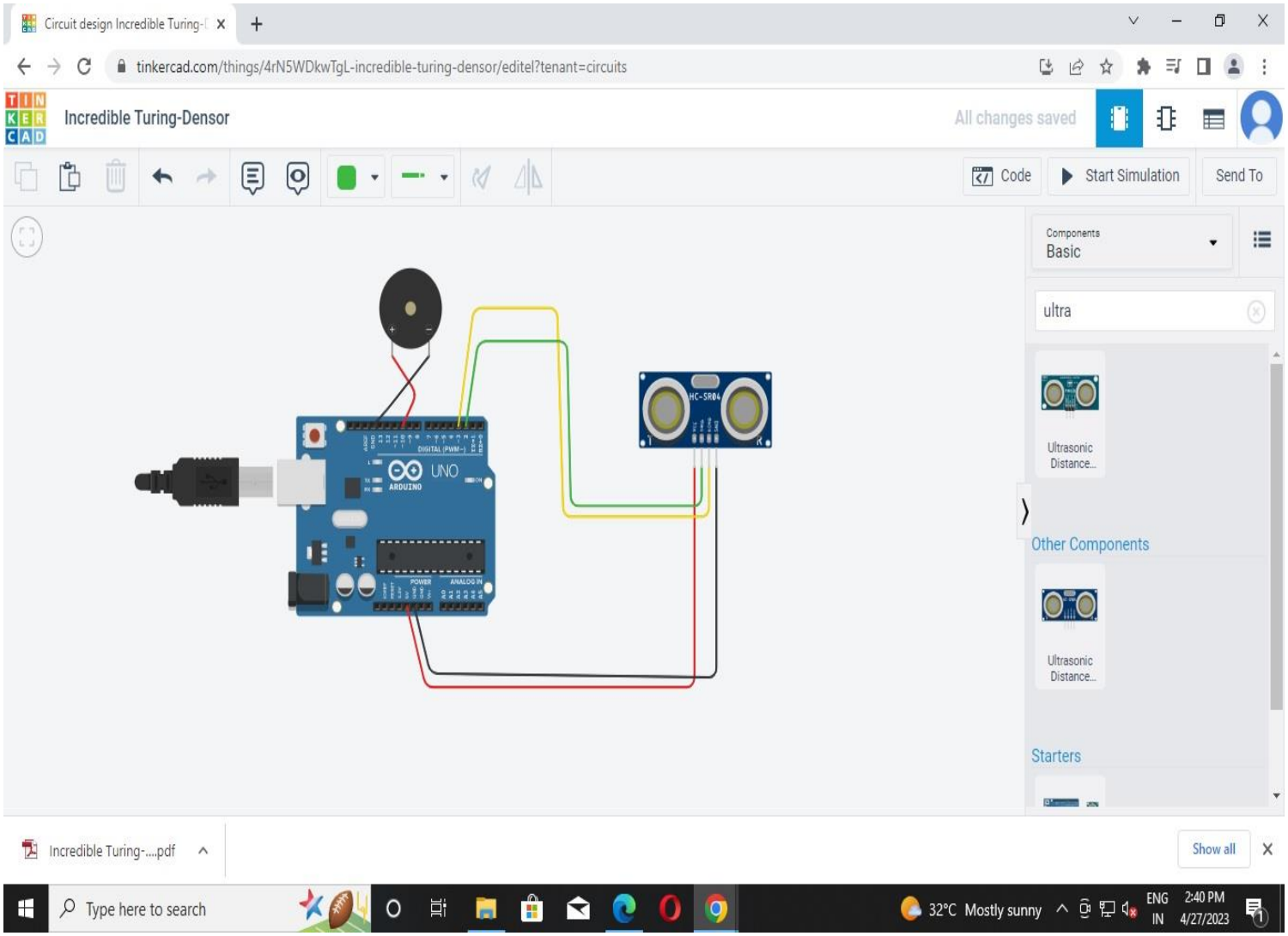
REGISTER NO :610820106006

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

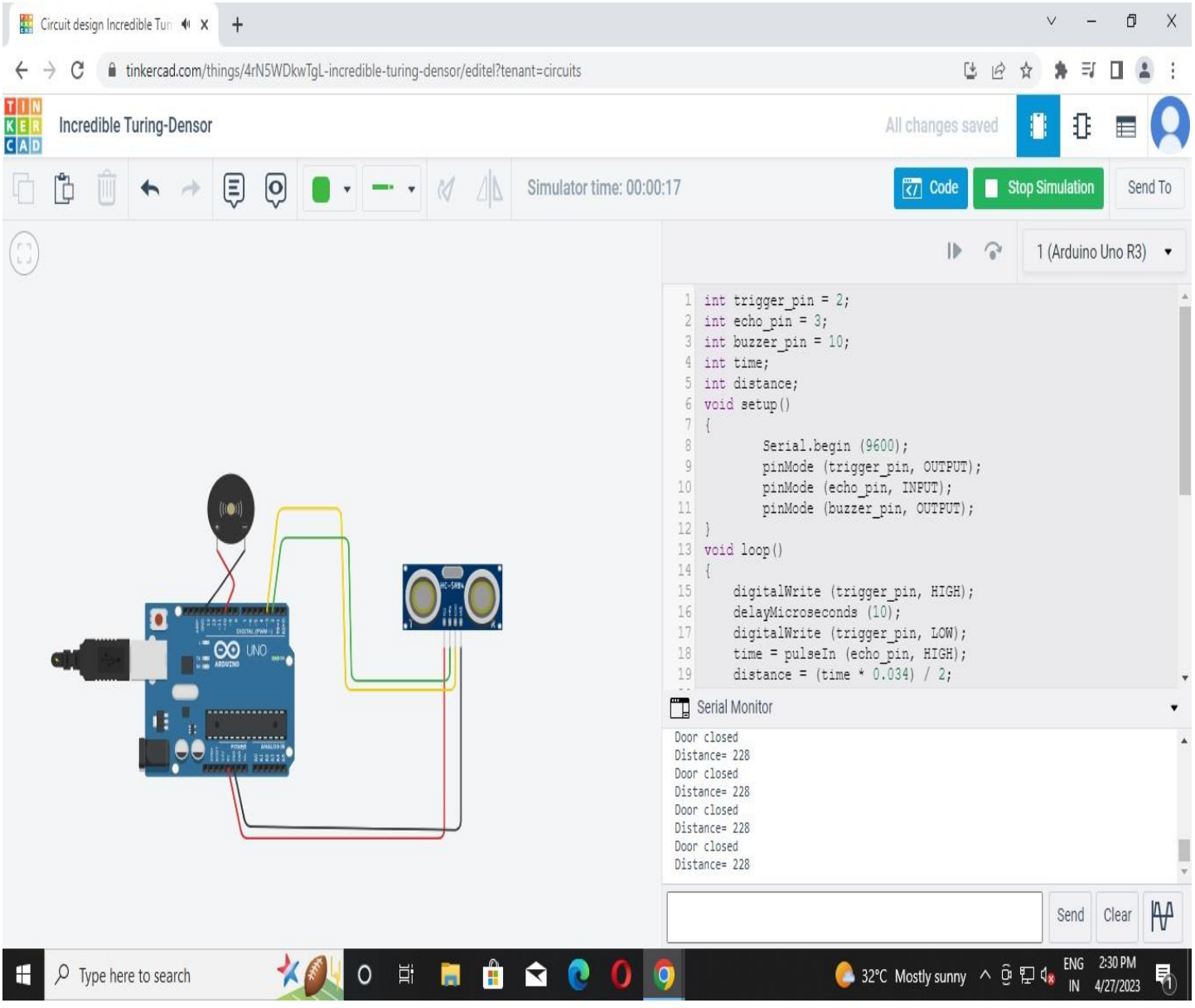
PIN DIAGRAM



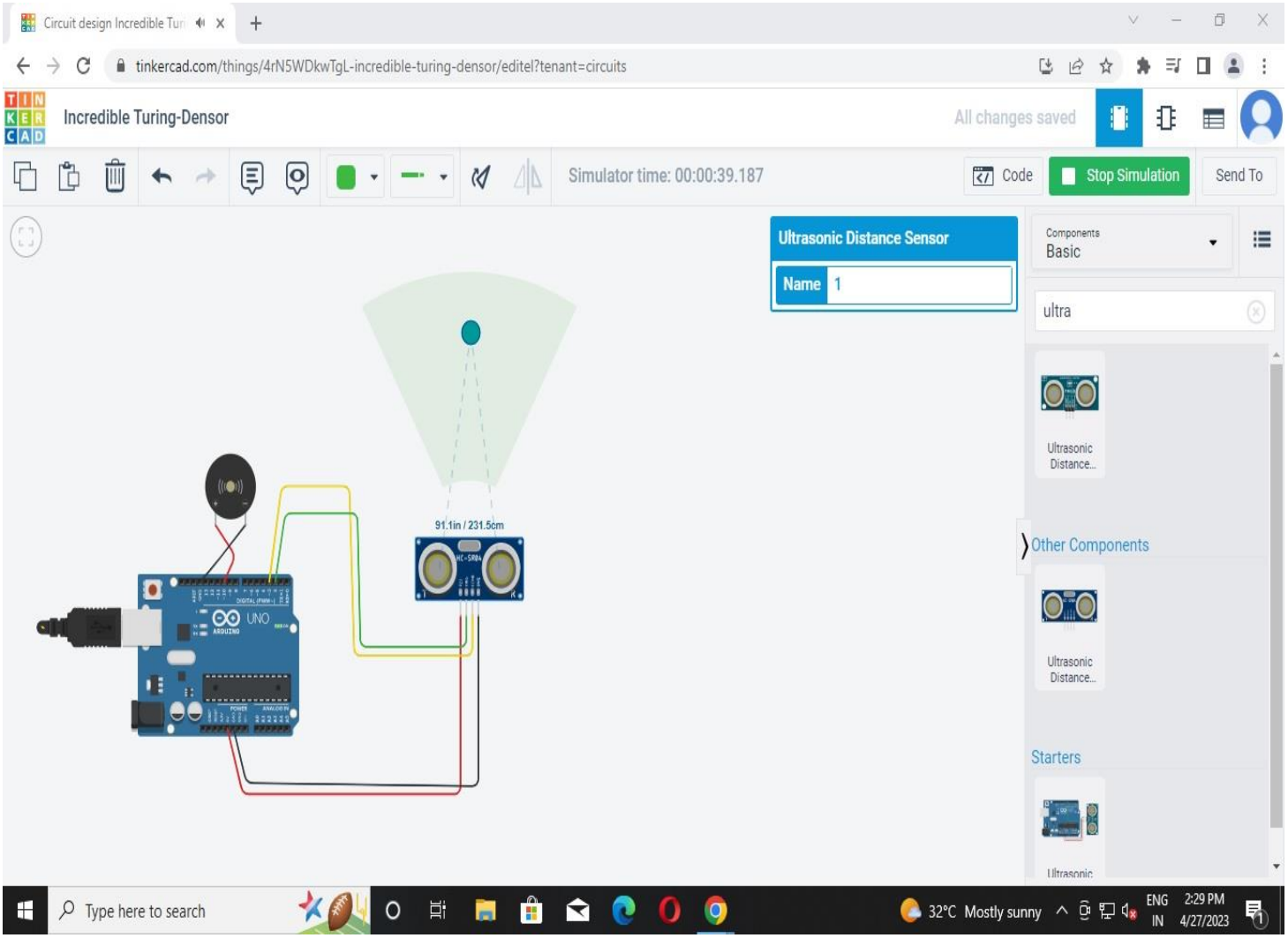
DESIGN PART


Circuit design Incredible Turing-
tinkercad.com/things/4rN5WDkwTgL-incredible-turing-densor/editel?tenant=circuits
Incredible Turing-Densor
All changes saved
Code
Start Simulation
Send To
Components
Basic
ultra
Ultrasonic Distance...
Other Components
Ultrasonic Distance...
Starters
HC-SR04
UNO
ARDUINO
Incredible Turing-....pdf
Show all
Type here to search
32°C Mostly sunny
ENG
IN
2:40 PM
4/27/2023

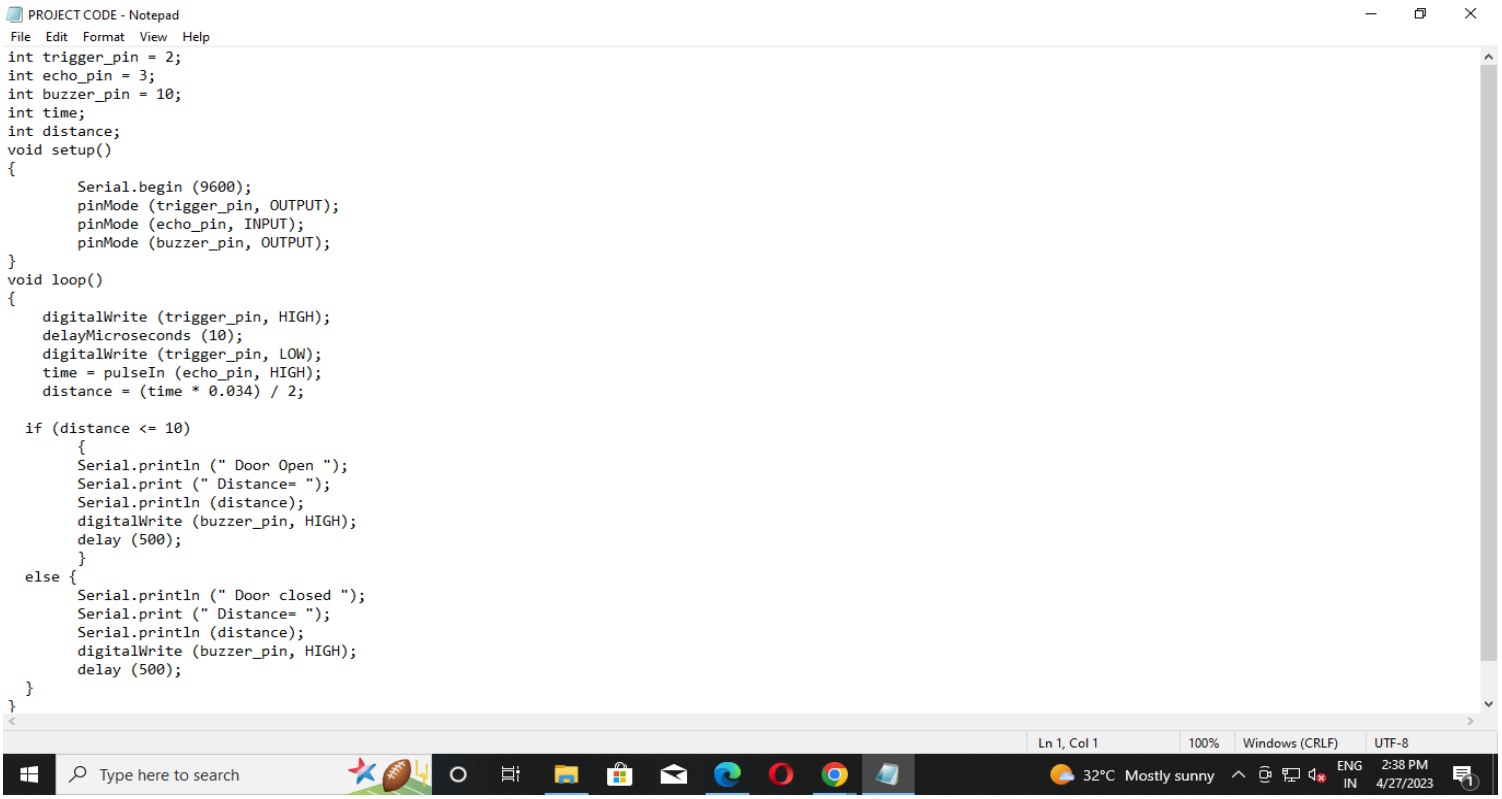
BUZZER VIBRATING



DISTANCE


Circuit design Incredible Tur
tinkercad.com/things/4rN5WDkwTgL-incredible-turing-densor/editel?tenant=circuits
Incredible Turing-Densor
All changes saved
Simulator time: 00:00:39.187
Code
Stop Simulation
Send To
Ultrasonic Distance Sensor
Name 1
Components
Basic
ultra
Ultrasonic Distance...
Other Components
Ultrasonic Distance...
Starters
91.1in / 231.5cm
HC-SR04
UNO
ARDUINO
Type here to search
32°C Mostly sunny
ENG
IN
2:29 PM
4/27/2023

CODING PART

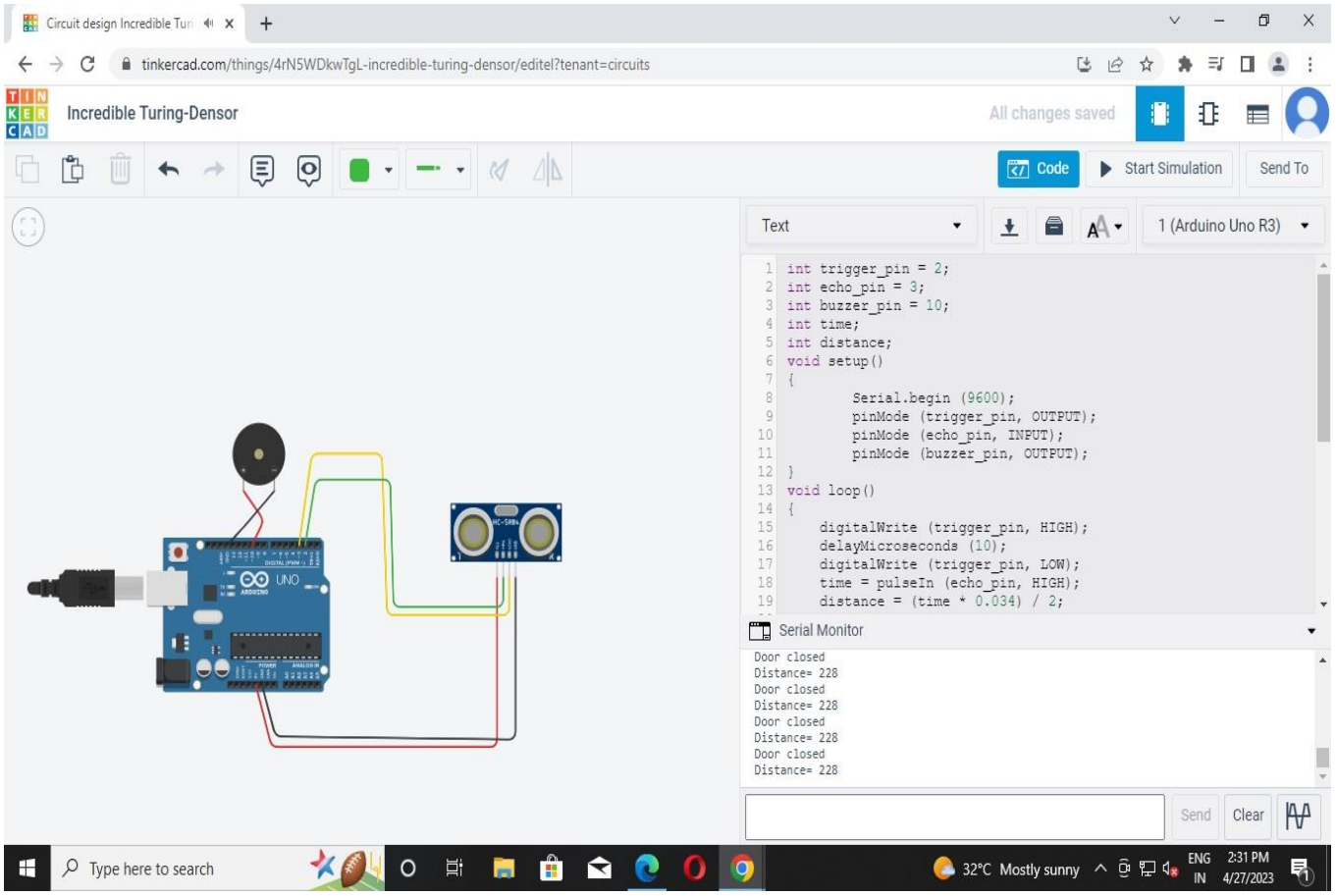



```
int trigger_pin = 2;
int echo_pin = 3;
int buzzer_pin = 10;
int time;
int distance;
void setup()
{
        Serial.begin (9600);
        pinMode (trigger_pin, OUTPUT);
        pinMode (echo_pin, INPUT);
        pinMode (buzzer_pin, OUTPUT);
}
void loop()
{
   digitalWrite (trigger_pin, HIGH);
   delayMicroseconds (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);
 }
}
```

SERIAL PORT


Circuit design Incredible Tur
tinkercad.com/things/4rN5WDkwTgL-incredible-turing-densor/editel?tenant=circuits
Incredible Turing-Densor
All changes saved
Code
Start Simulation
Send To
Text
1 (Arduino Uno R3)
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;
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
ENG
IN
2:31 PM
4/27/2023