Microprocessor and Computer Architecture Laboratory

UE19CS256

4th Semester, Academic Year 2020-21

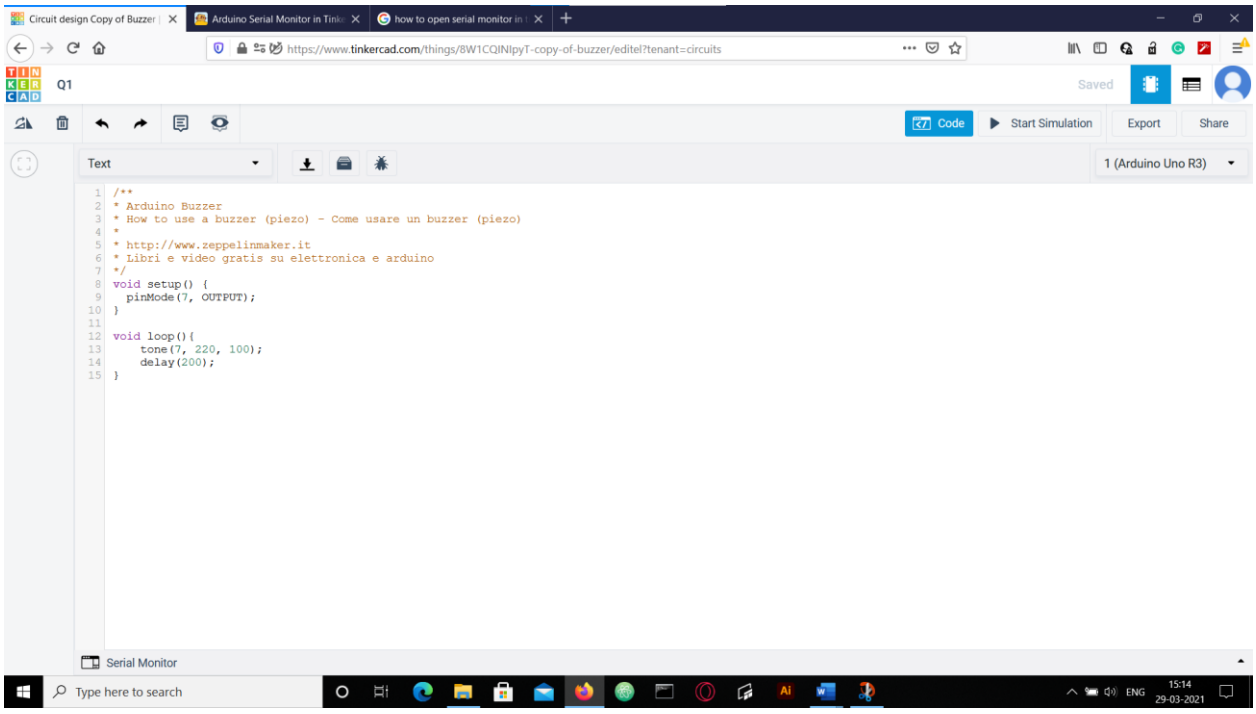
Date:29/03/2021

Name: OP JOY JEFFERSON	SRN:PES2UG19CS27O	Section:E

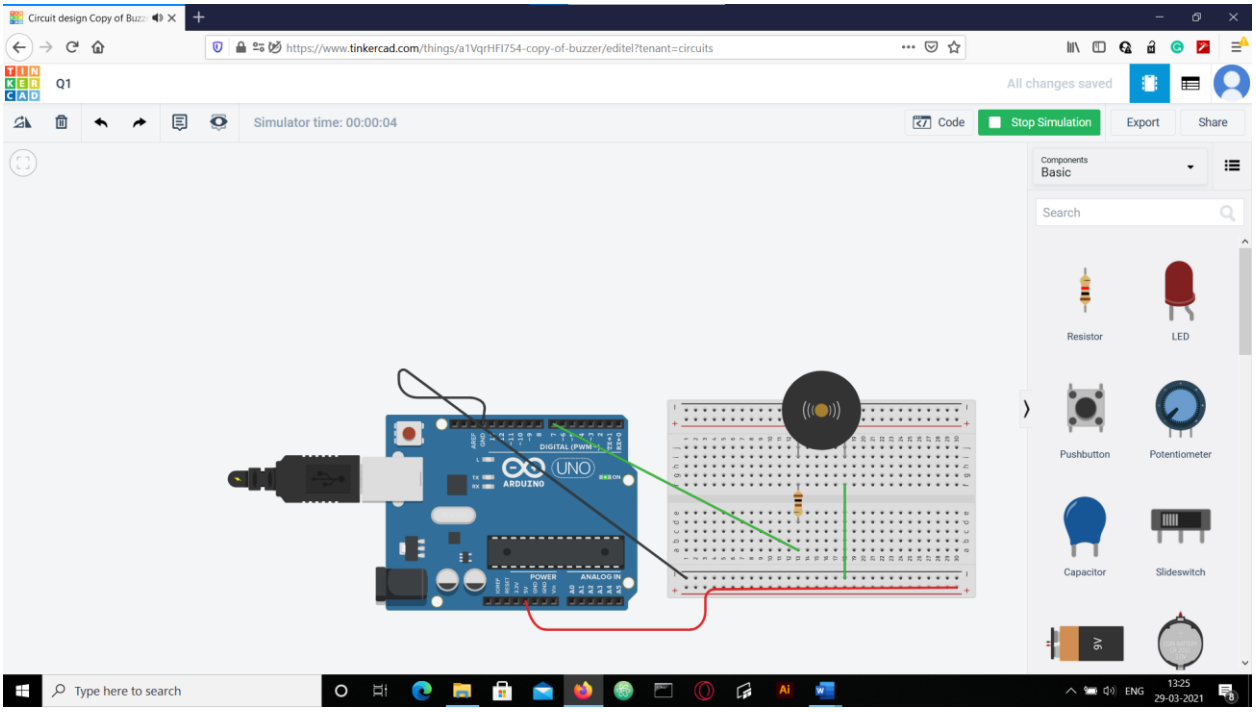
Week#____8_____ Program Number: ____1__

1. **Implement a Buzzer with Arduino Simulation in Tinkercad**

   Arduino Code (1).



Output Screen Shot (1)



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4th Semester, Academic Year 2020-21

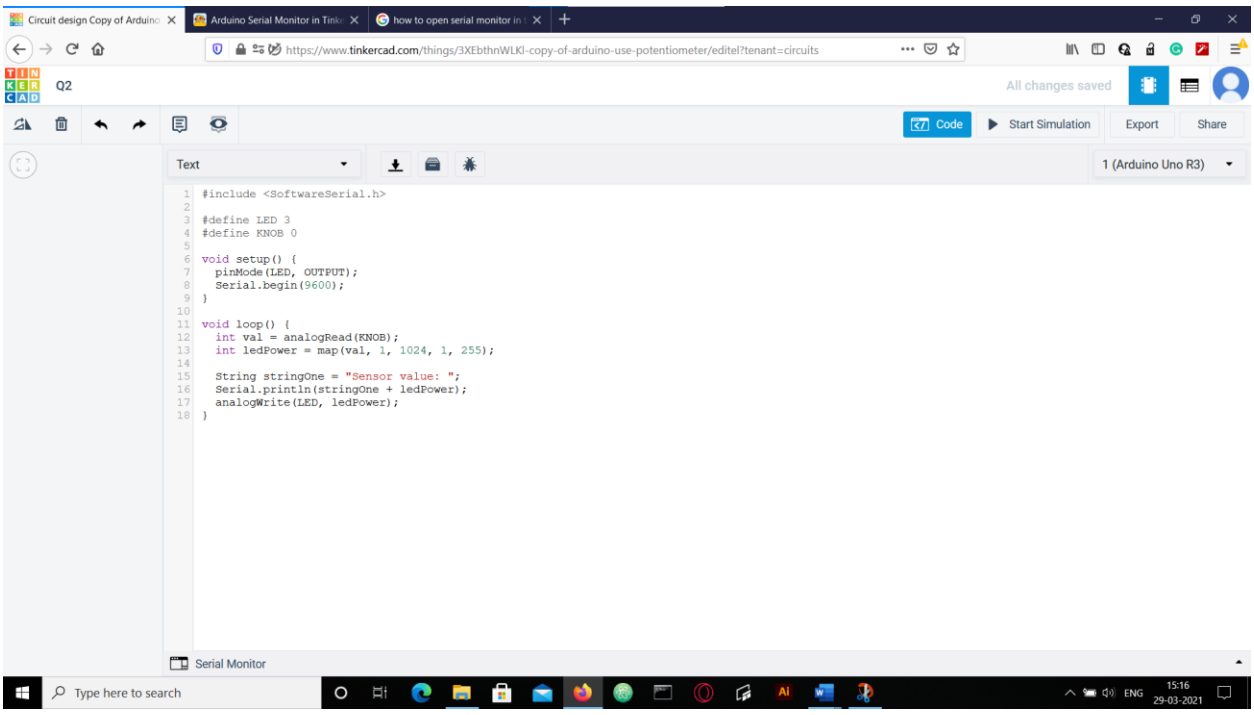
Date:

Name: OP JOY JEFFERSON	SRN: PES2UG19CS270	Section:E

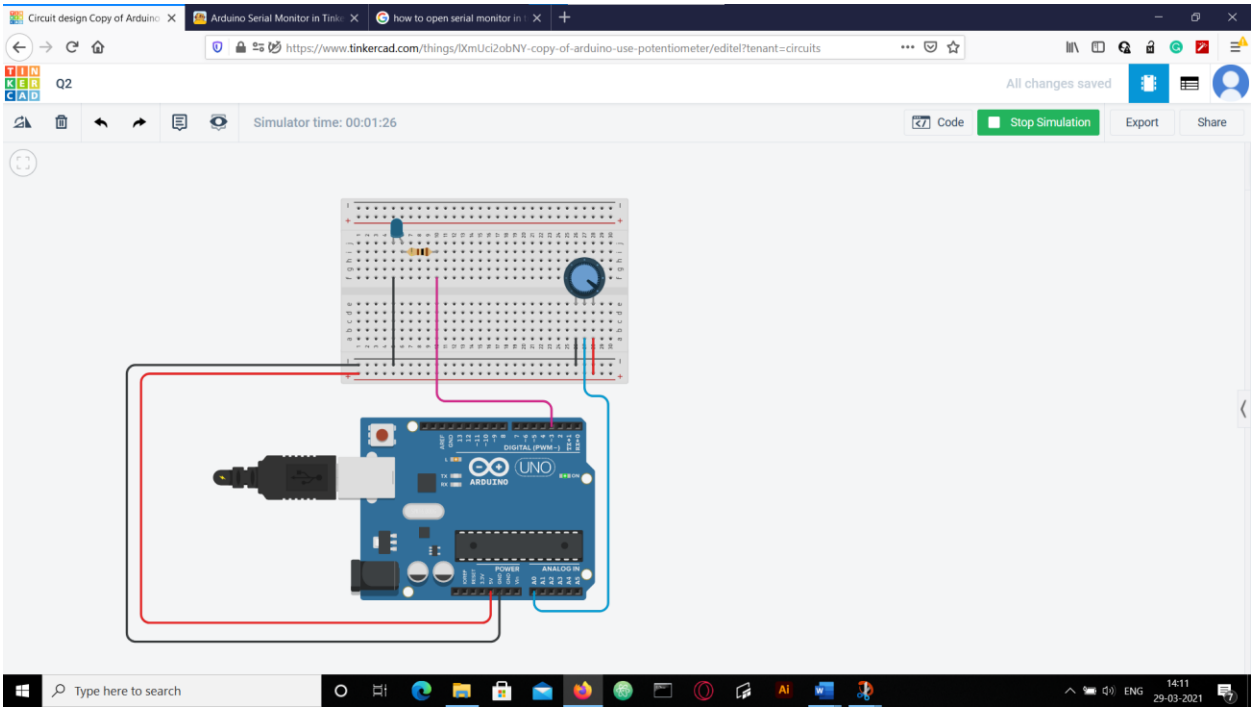
Week#____8_____ Program Number: ____2__

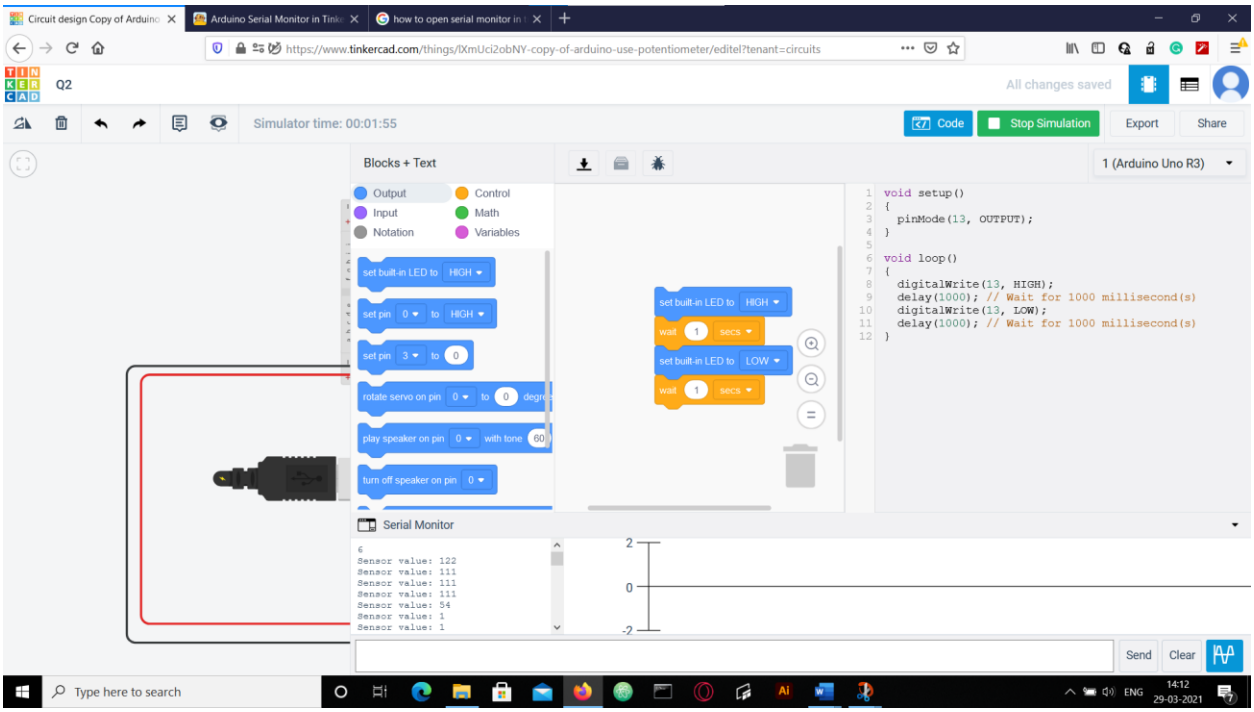
Implement a Tinkercad simulation that will read the value of a potentiometer and display it in serial monitor.

Arduino Code (1).



Output Screen Shot (1)





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Date:

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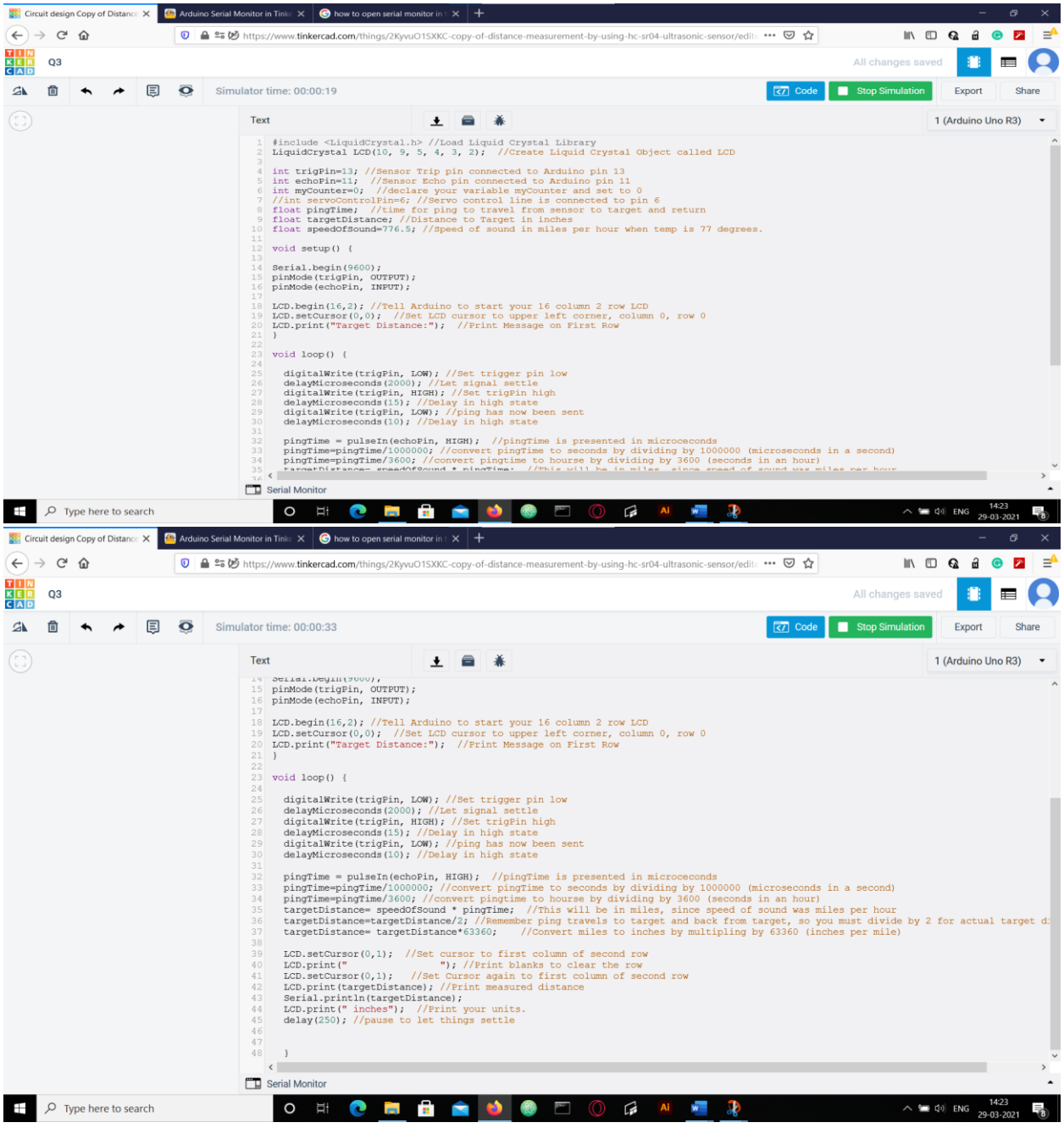
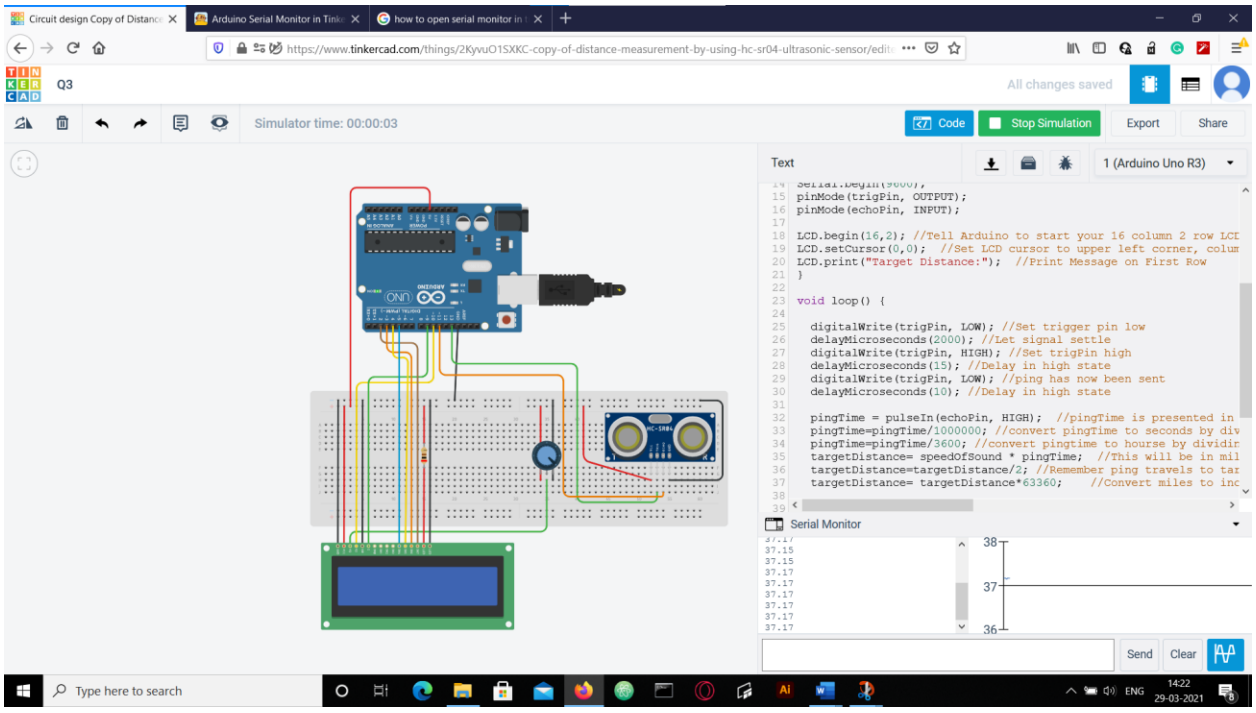
Week#____8_____ Program Number: ____3__

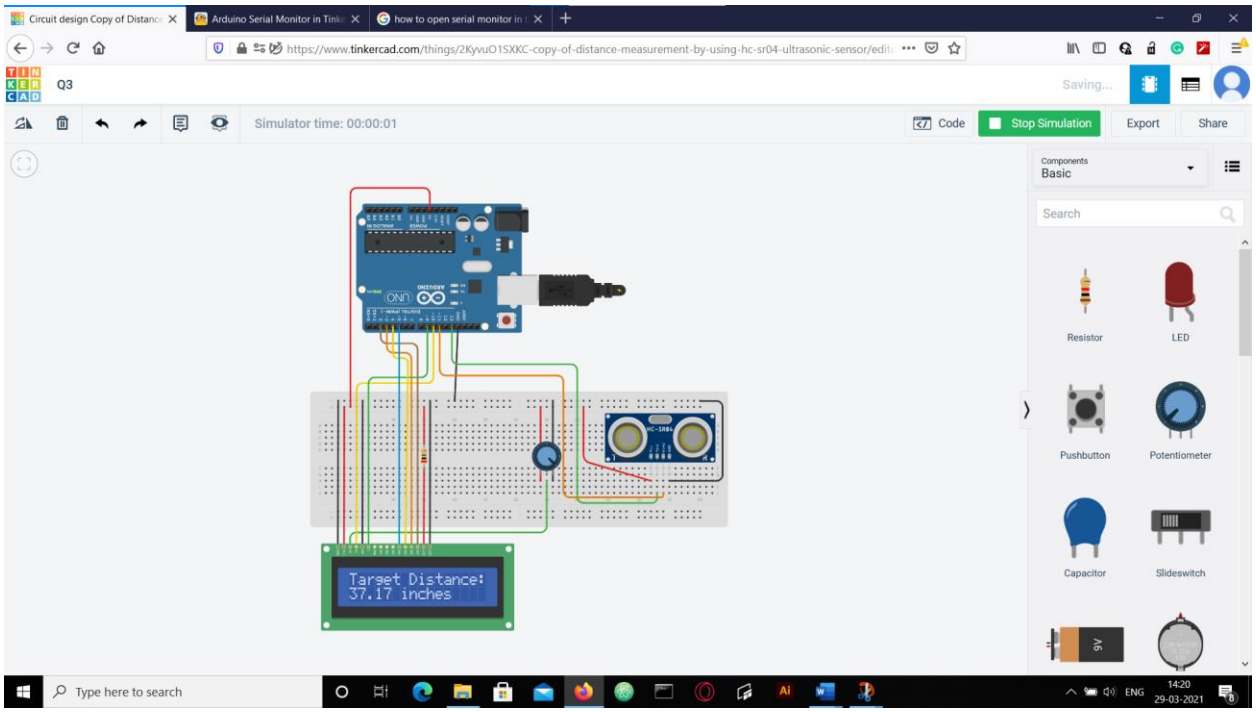
Implement a Tinkercad simulation to measure a distance with the HC-SR04 ultrasonic sensor and show the result on the serial monitor.

Arduino Code (1).



Output Screen Shot (1)


Circuit design Copy of Distanc
Arduino Serial Monitor in Tinke
how to open serial monitor in t
https://www.tinkercad.com/things/2KyvuO1SXKC-copy-of-distance-measurement-by-using-hc-sr04-ultrasonic-sensor/edit
Q3
All changes saved
Simulator time: 00:00:03
Code
Stop Simulation
Export
Share
Text
1 (Arduino Uno R3)
pinMode(trigPin, OUTPUT);
pinMode(echoPin, INPUT);
LCD.begin(16,2); //Tell Arduino to start your 16 column 2 row LCD
LCD.setCursor(0,0); //Set LCD cursor to upper left corner, colum
LCD.print("Target Distance:"); //Print Message on First Row
}
void loop() {
digitalWrite(trigPin, LOW); //Set trigger pin low
delayMicroseconds(2000); //Let signal settle
digitalWrite(trigPin, HIGH); //Set trigPin high
delayMicroseconds(15); //Delay in high state
digitalWrite(trigPin, LOW); //ping has now been sent
delayMicroseconds(10); //Delay in high state
pingTime = pulseIn(echoPin, HIGH); //pingTime is presented in
pingTime=pingTime/1000000; //convert pingTime to seconds by div
pingTime=pingTime/3600; //convert pingtime to hourse by dividir
targetDistance= speedOfSound * pingTime; //This will be in mil
targetDistance=targetDistance/2; //Remember ping travels to tar
targetDistance= targetDistance*63360; //Convert miles to inc
Serial Monitor
38
37
36
Send
Clear
Type here to search
ENG
14:22
29-03-2021


Circuit design Copy of Distanc
Arduino Serial Monitor in Tinke
how to open serial monitor in t
https://www.tinkercad.com/things/2KyvuO1SXKC-copy-of-distance-measurement-by-using-hc-sr04-ultrasonic-sensor/edit
Q3
Saving...
Simulator time: 00:00:01
Code
Stop Simulation
Export
Share
Target Distance:
37.17 inches
Components
Basic
Search
Resistor
LED
Pushbutton
Potentiometer
Capacitor
Slideswitch
9V
Type here to search
ENG
14:20
29-03-2021

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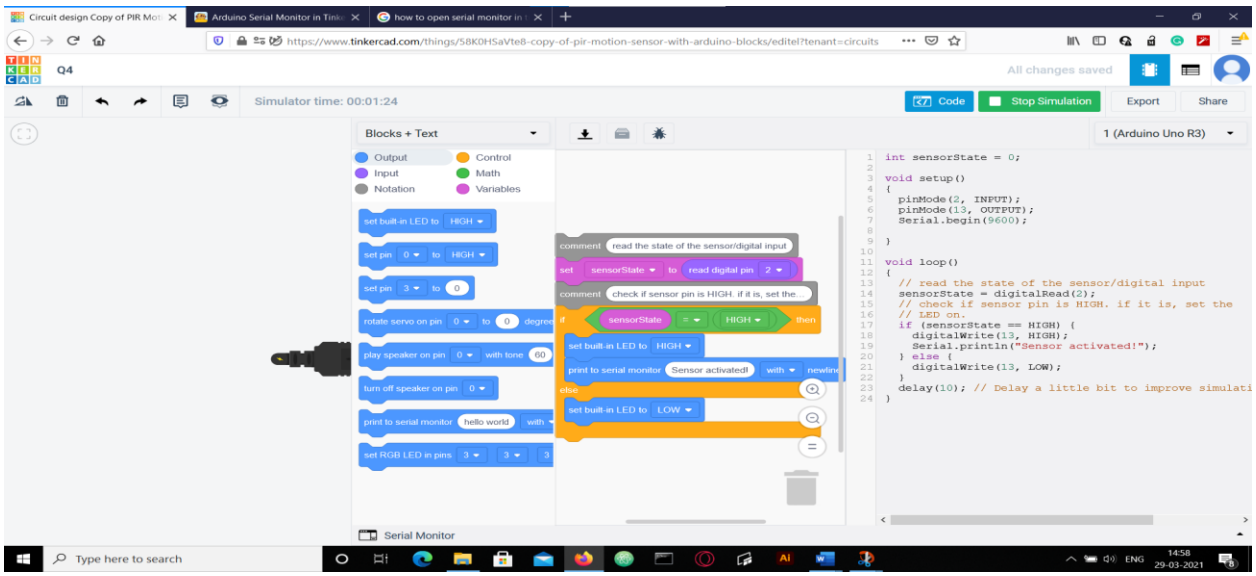
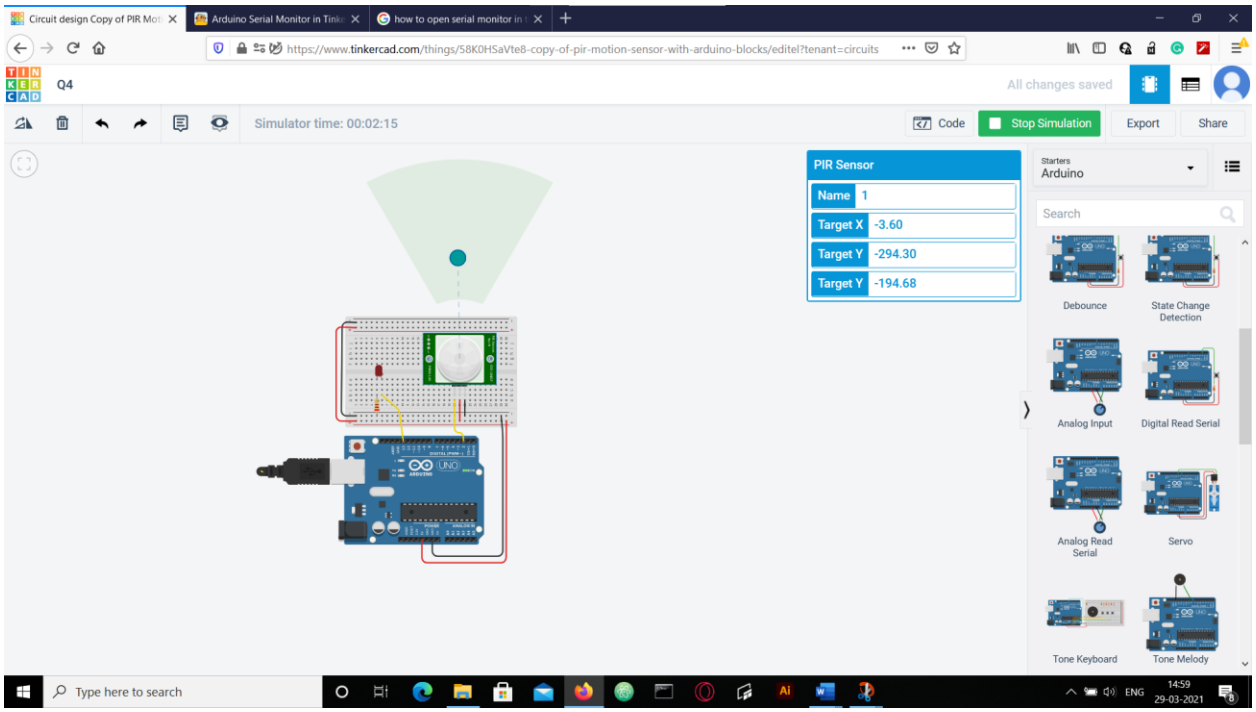
Week#____8_____ Program Number: ___4__

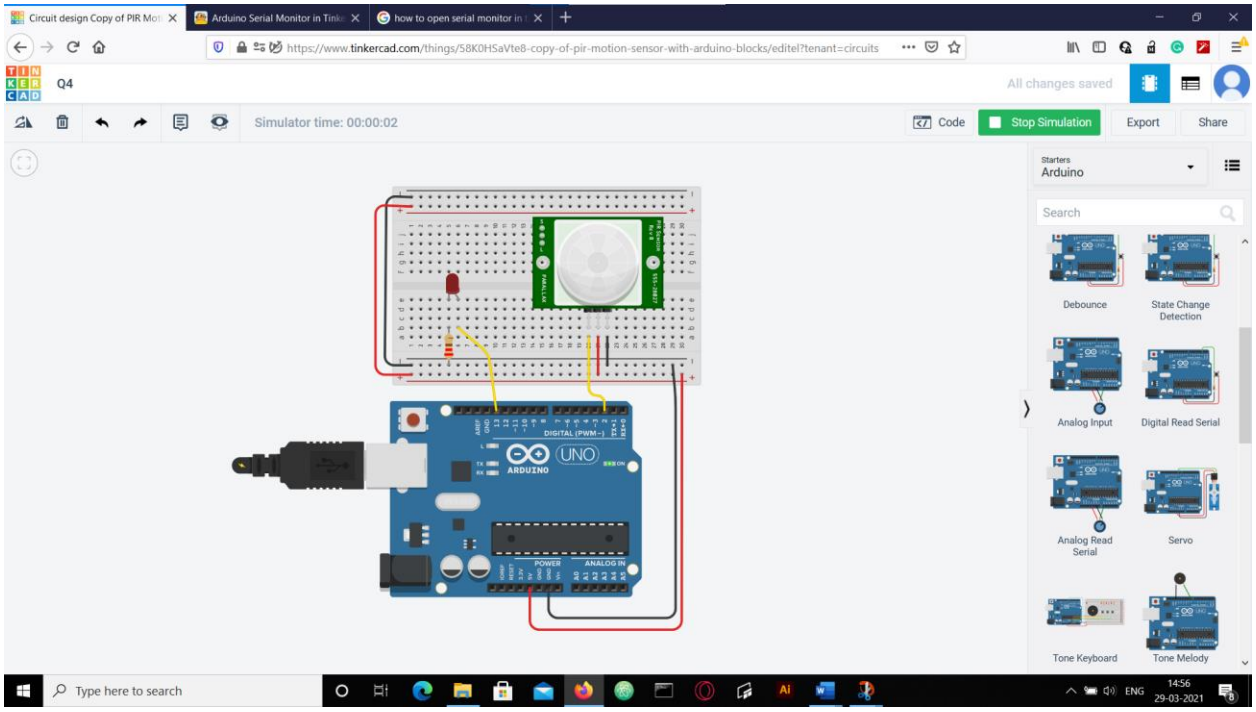
Implement a Tinkercad simulation to sense movement in a room with a PIR motion sensor and Arduino's digital input.

Arduino Code (1).



Output Screen Shot (1)





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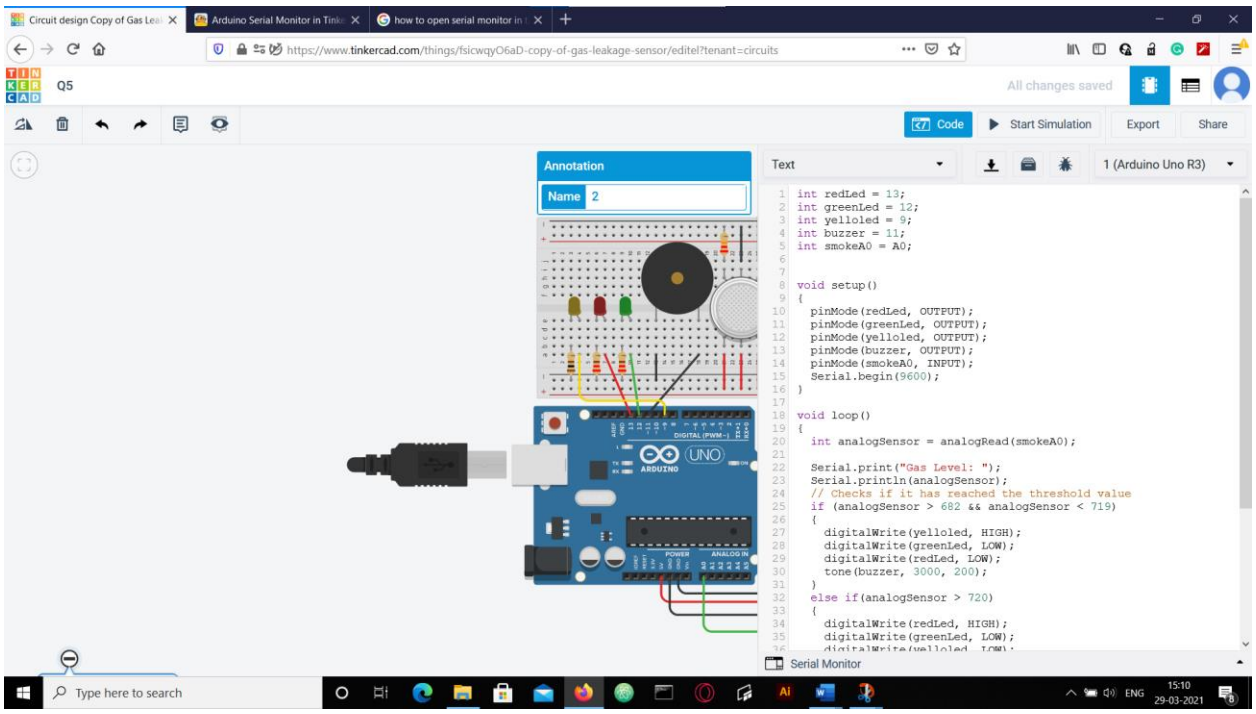
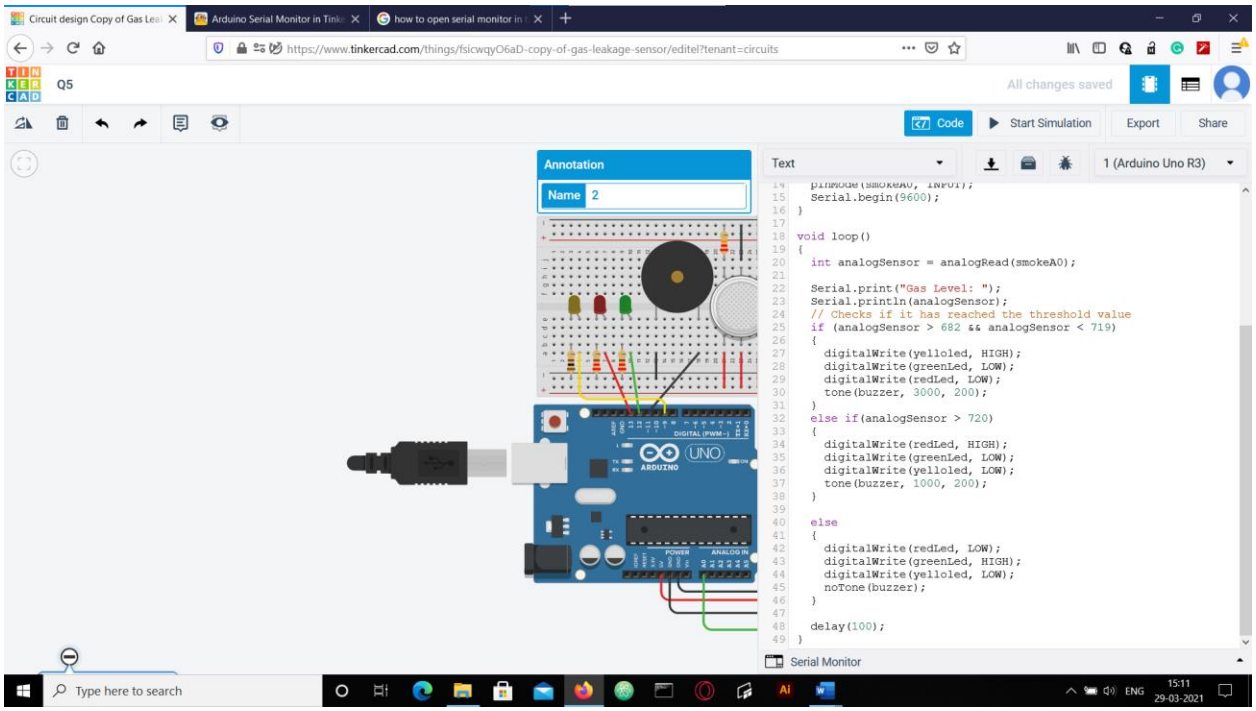
Week#____8_____ Program Number: ___5__

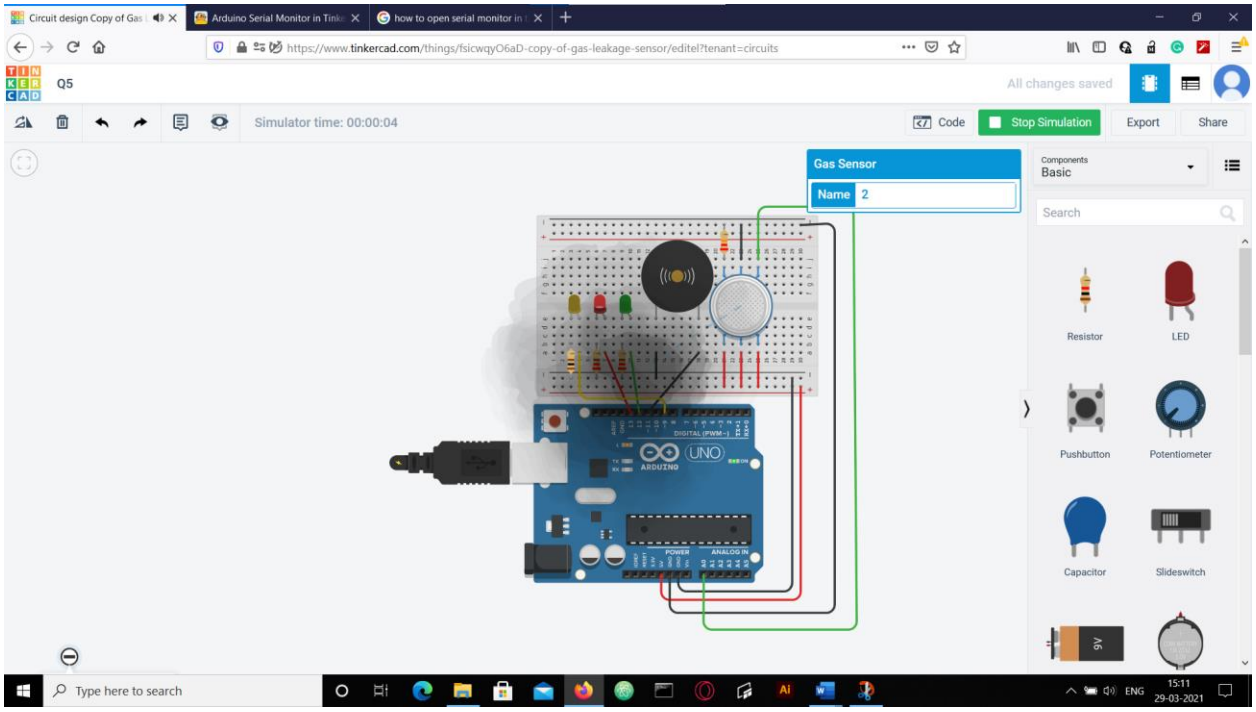
Implement a Tinkercad simulation for gas leakage detection with buzzer system using Arduino

Arduino Code (1).





Output Screen Shot (1)



Disclaimer:

- The programs and output submitted is duly written, verified and executed by me.
- I have not copied from any of my peers nor from the external resource such as internet.
- If found plagiarized, I will abide with the disciplinary action of the University.

Signature:
Name:
SRN:
Section:
Date: