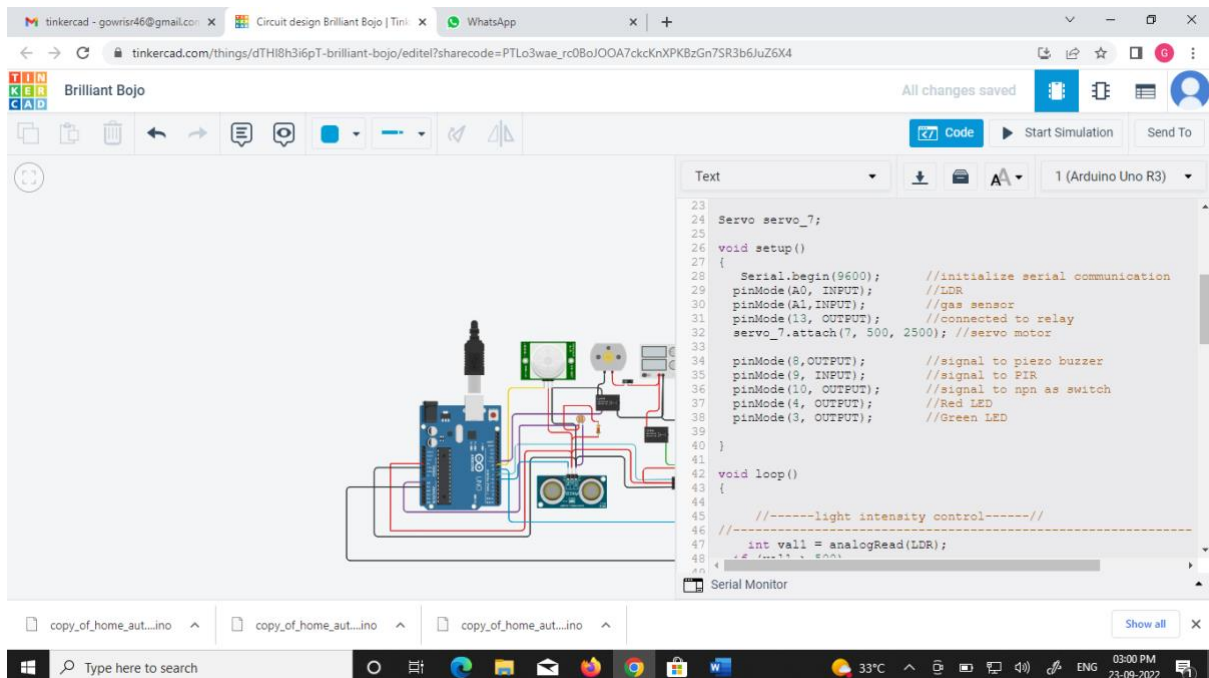
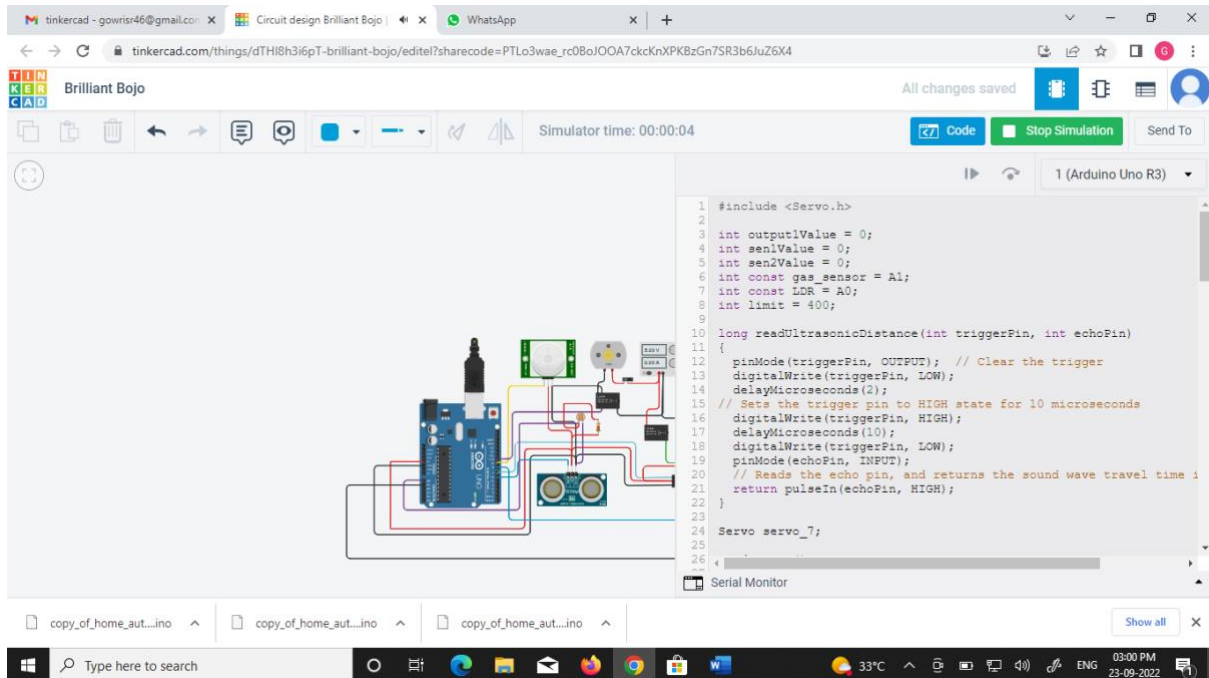


SMART HOME AUTOMATION

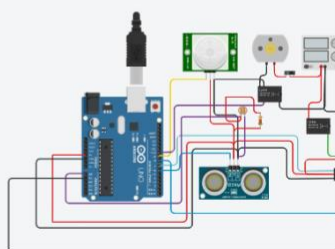


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Brilliant Bojo All changes saved

Code Start Simulation Send To



```
43 //-----light intensity control-----//
44 //-----light intensity control-----//
45 int val1 = analogRead(LDR);
46 if (val1 > 500)
47 {
48   digitalWrite(13, LOW);
49   Serial.print("Bulb ON = ");
50   Serial.print(val1);
51 }
52 else
53 {
54   digitalWrite(13, HIGH);
55   Serial.print("Bulb OFF = ");
56   Serial.print(val1);
57 }
58 //-----light & fan control-----//
59 //-----light & fan control-----//
60 //-----light & fan control-----//
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95 //-----light & fan control-----//
96 //-----light & fan control-----//
97 //-----light & fan control-----//
98 //-----light & fan control-----//
99 //-----light & fan control-----//
100 //-----light & fan control-----//
```

Serial Monitor

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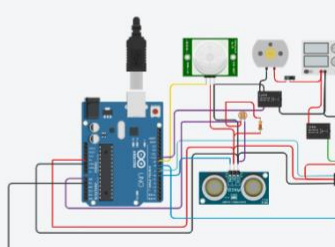
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Brilliant Bojo All changes saved

Code Start Simulation Send To

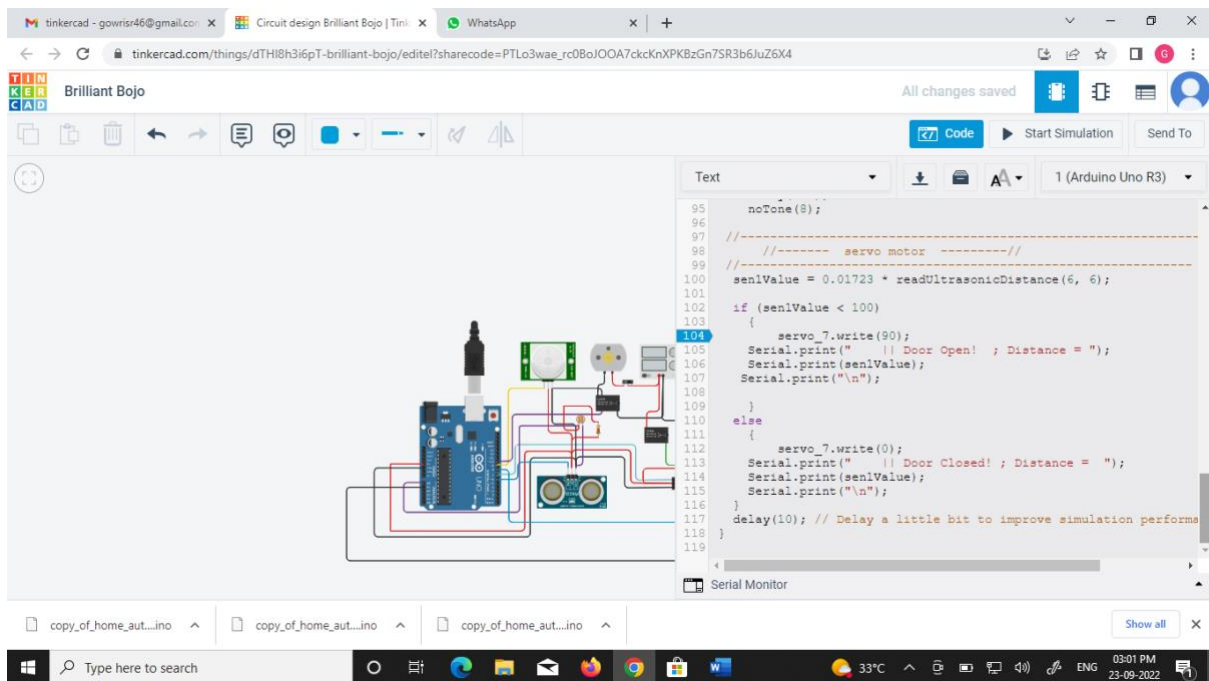
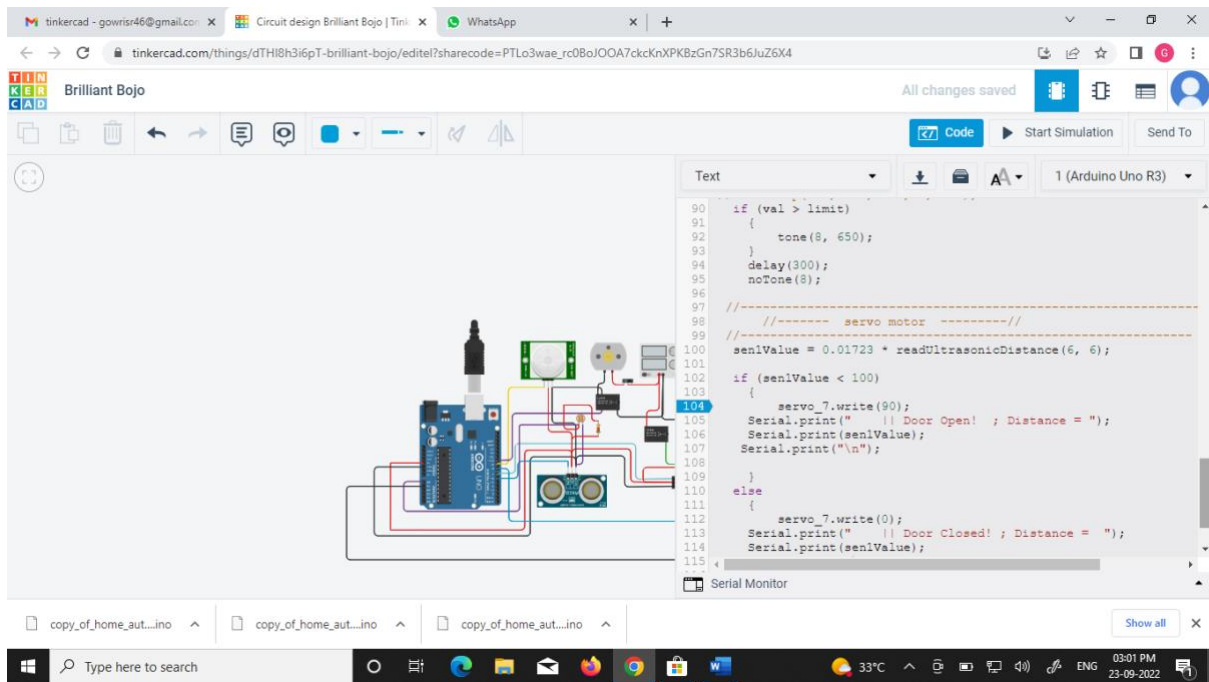


```
68 digitalWrite(4, HIGH); // Red LED ON, indicating no motion
69 digitalWrite(3, LOW); // Green LED OFF, since no Motion de
70 Serial.print(" || NO Motion Detected " );
71 }
72 //-----light & fan control-----//
73 //-----light & fan control-----//
74 //-----light & fan control-----//
75 //-----light & fan control-----//
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95 //-----light & fan control-----//
96 //-----light & fan control-----//
97 //-----light & fan control-----//
98 //-----light & fan control-----//
99 //-----light & fan control-----//
100 //-----light & fan control-----//
```

Serial Monitor

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CODE:

```

#include <Servo.h>
int output1Value = 0;
int sen1Value = 0;
int sen2Value = 0;
int const gas_sensor = A1;
int const LDR = A0;
int limit = 400;
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);
}
Servo servo_7;
void setup()
{
  Serial.begin(9600);           //initialize serial communication
  pinMode(A0, INPUT);           //LDR
  pinMode(A1, INPUT);           //gas sensor
  pinMode(13, OUTPUT);          //connected to relay
  servo_7.attach(7, 500, 2500); //servo motor
  pinMode(8, OUTPUT);           //signal to piezo buzzer
  pinMode(9, INPUT);            //signal to PIR
  pinMode(10, OUTPUT);          //signal to npn as switch
  pinMode(4, OUTPUT);           //Red LED
  pinMode(3, OUTPUT);           //Green LED
}
void loop()
{
  //-----light intensity control-----//
  //-----
  int val1 = analogRead(LDR);
  if (val1 > 500)
  {
    digitalWrite(13, LOW);
    Serial.print("Bulb ON = ");
    Serial.print(val1);
  }
  else
  {
    digitalWrite(13, HIGH);
    Serial.print("Bulb OFF = ");
    Serial.print(val1);
  }
  //-----
  //----- light & fan control -----//
  //-----
  sen2Value = digitalRead(9);
  if (sen2Value == 0)
  {
    digitalWrite(10, LOW); //npn as switch OFF
    digitalWrite(4, HIGH); // Red LED ON, indicating no motion
    digitalWrite(3, LOW); //Green LED OFF, since no Motion detected
    Serial.print("    || NO Motion Detected    ");
  }
}

```

```

    if (sen2Value == 1)
    {
        digitalWrite(10, HIGH); //npn as switch ON
        delay(3000);
        digitalWrite(4, LOW); // RED LED OFF
        digitalWrite(3, HIGH); //GREEN LED ON , indicating motion detected
        Serial.print("        || Motion Detected!        ");
    }
    delay(300);

//-----
//        Gas Sensor        //
//-----
int val = analogRead(gas_sensor); //read sensor value
    Serial.print("|| Gas Sensor Value = ");
    Serial.print(val); //Printing in serial monitor
//val = map(val, 300, 750, 0, 100);
    if (val > limit)
    {
        tone(8, 650);
    }
    delay(300);
    noTone(8);

//-----
//        servo motor        //
//-----
sen1Value = 0.01723 * readUltrasonicDistance(6, 6);
if (sen1Value < 100)
{
    servo_7.write(90);
    Serial.print("        || Door Open! ; Distance = ");
    Serial.print(sen1Value);
    Serial.print("\n");

}
else
{
    servo_7.write(0);
    Serial.print("        || Door Closed! ; Distance = ");
    Serial.print(sen1Value);
    Serial.print("\n");
}
    delay(10); // Delay a little bit to improve simulation performance
}

```