SMART HOME

COMPONENTS USED:

- Arduino uno
- Bread board
- Servo motor
- Pir sensor
- Ultrasonic sensor
- Led&resister
- Bulb
- Temperature sensor

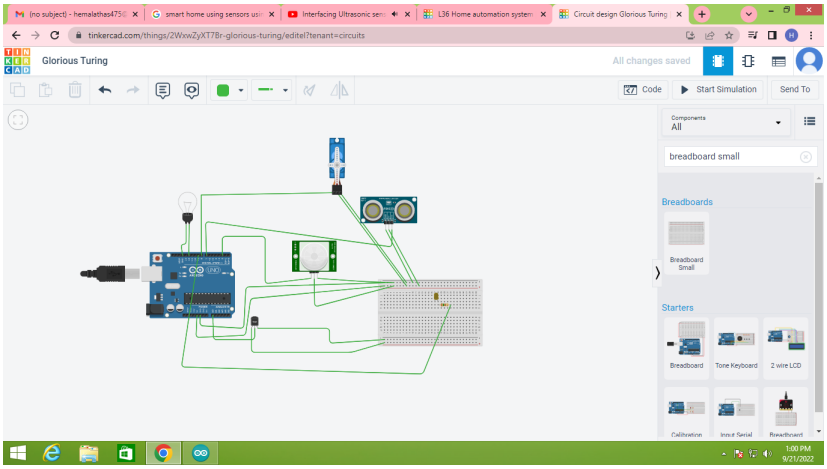
DESCRIPTION:

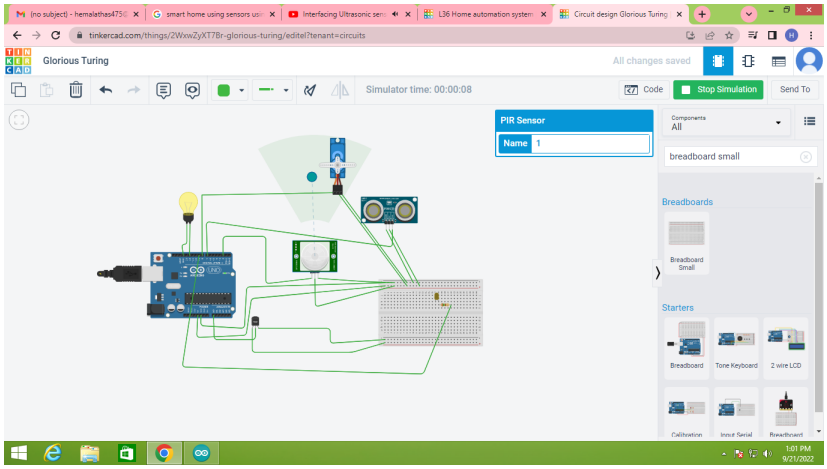
Here I used ultrasonic sensor to detect the distance and on the fan automatically if it is less than 100cm.

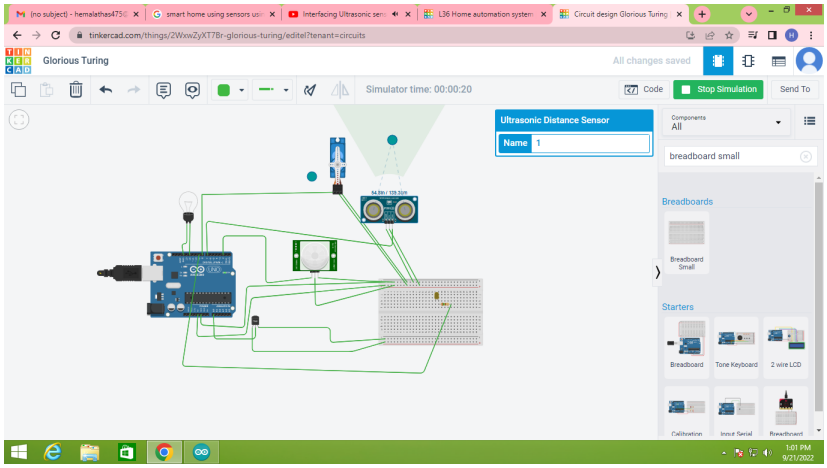
Also, I used pir sensor to detect the object movement and on the light if the object is detected.

Additionally , I used temperature sensor to sense the temperature of the object entering into the specified area.

SIMULATION:







CODE:

```
 include <Servo.h>

int dist = 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);
}

Servo servo_8;

void setup()
{
  servo_8.attach(8, 500, 2500);
  pinMode(2, INPUT);
  pinMode(12, OUTPUT);
  pinMode(A0, INPUT);
  pinMode(9, OUTPUT);
}

void loop()
{
```

```
  dist = 0.01723 * readUltrasonicDistance(7, 7);
  if (dist <= 100) {
    servo_8.write(90);
    delay(1000);
  } else {
    servo_8.write(0);
    delay(1000);
  }
  if (digitalRead(2) == 1) {
    digitalWrite(12, HIGH);
    delay(1000);
  } else {
    digitalWrite(12, LOW);
    delay(1000);
  }
  if (analogRead(A0) > 200) {
    digitalWrite(9, HIGH);
    delay(1000);
  } else {
    digitalWrite(9, LOW);
    delay(1000);
  }
}
```