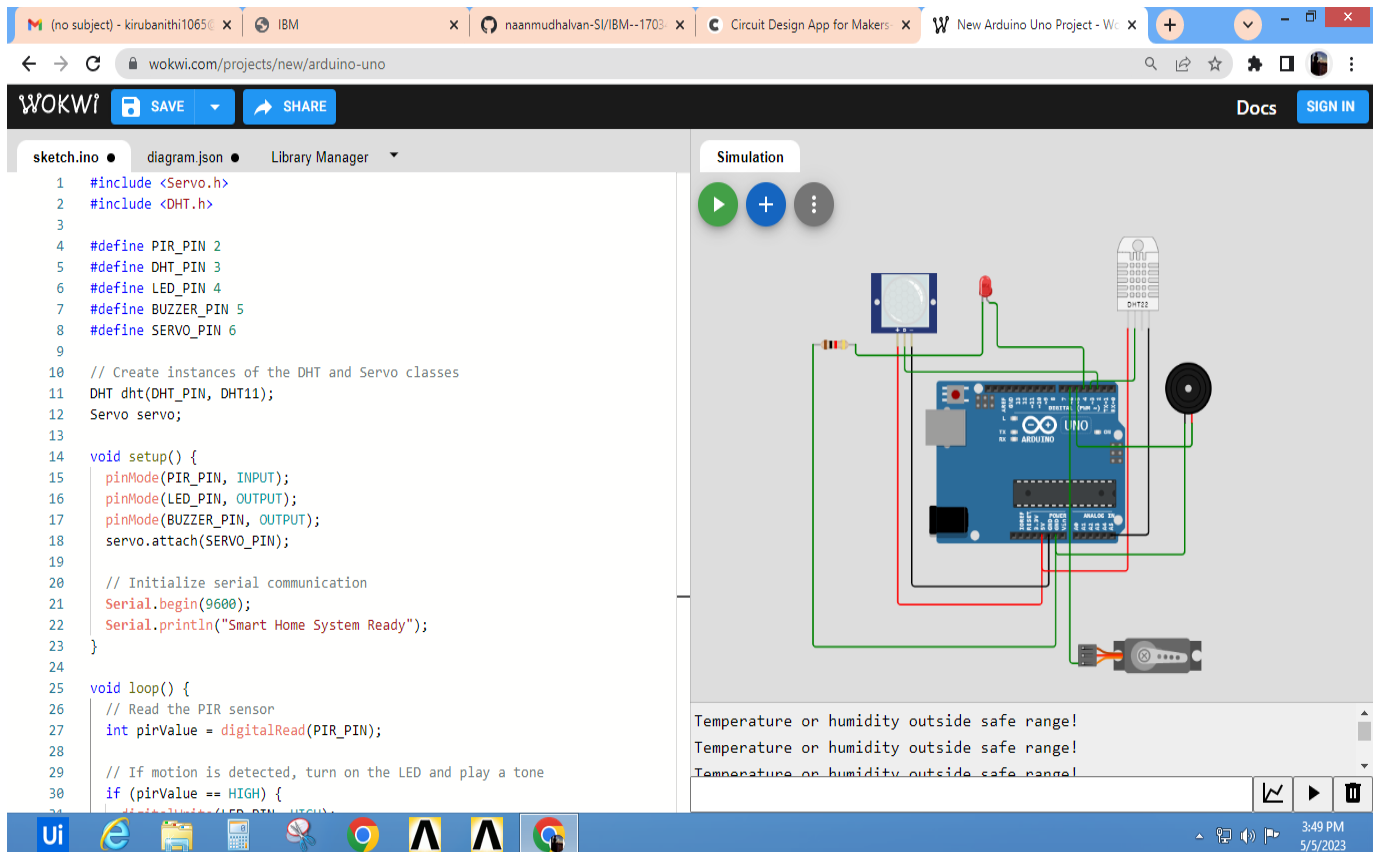


<https://wokwi.com/projects/363880033499187201>



SKETCH.INFO

```
#include <Servo.h>
#include <DHT.h>
```

```
#define PIR_PIN 2
#define DHT_PIN 3
#define LED_PIN 4
#define BUZZER_PIN 5
#define SERVO_PIN 6
```

```
// Create instances of the DHT and Servo classes
DHT dht(DHT_PIN, DHT11);
Servo servo;
```

```
void setup() {
```

```

pinMode(PIR_PIN, INPUT);
pinMode(LED_PIN, OUTPUT);
pinMode(BUZZER_PIN, OUTPUT);
servo.attach(SERVO_PIN);

// Initialize serial communication
Serial.begin(9600);
Serial.println("Smart Home System Ready");
}

void loop() {
    // Read the PIR sensor
    int pirValue = digitalRead(PIR_PIN);

    // If motion is detected, turn on the LED and play a tone
    if (pirValue == HIGH) {
        digitalWrite(LED_PIN, HIGH);
        tone(BUZZER_PIN, 1000, 1000);
        Serial.println("Motion detected!");
    } else {
        digitalWrite(LED_PIN, LOW);
        noTone(BUZZER_PIN);
    }

    // Read the temperature and humidity values from the DHT11 sensor
    float temperature = dht.readTemperature();
    float humidity = dht.readHumidity();

    // If the temperature or humidity is outside the safe range, play a tone
    if (temperature < 20 || temperature > 30 || humidity < 40 || humidity > 60) {
        tone(BUZZER_PIN, 2000, 1000);
        Serial.println("Temperature or humidity outside safe range!");
    } else {
        noTone(BUZZER_PIN);
    }

    // If the temperature is too high, unlock the door
    if (temperature > 30) {
        Serial.println("Temperature too high, unlocking door");
        servo.write(90);
        delay(1000);
        servo.write(0);
    }

    // Wait for a short period before repeating the loop
    delay(100);
}

```