GOWTHAM S

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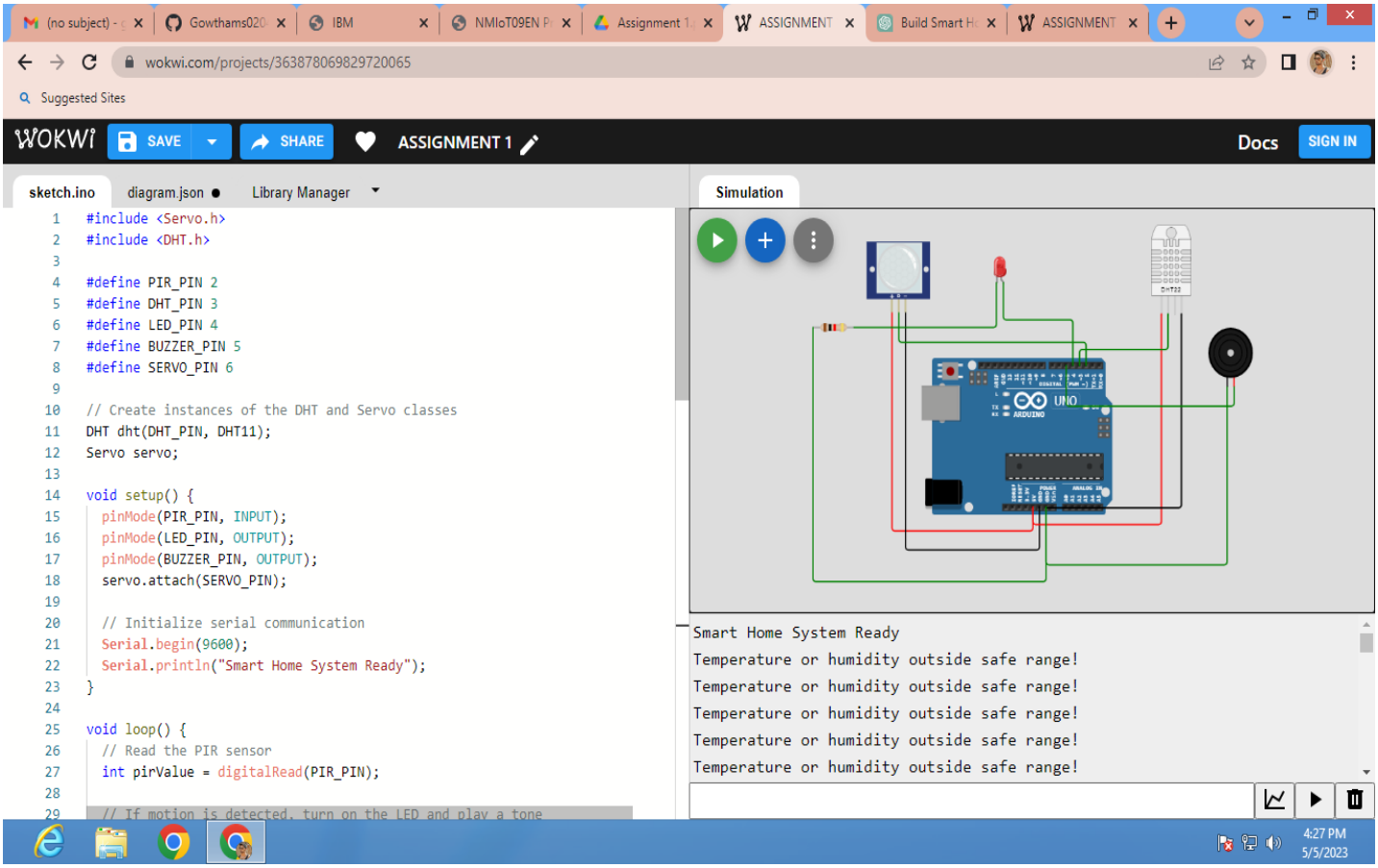
https://wokwi.com/projects/363882517585338369



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);
}
```