## 732720106037

## V.KESHUVARDHAN

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                                                                                               Simulation
  sketch.ino diagram.json Library Manager 🔻
          #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");
     22
          void loop() {
   // Read the PIR sensor
            int pirValue = digitalRead(PIR_PIN);
            \ensuremath{//} If motion is detected, turn on the LED and play a tone
            if (pirValue == HIGH) {
                    O Z
```

```
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#include <DHT.h>
#define PIR PIN 2
#define DHT_PIN 3
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#define SERVO_PIN 6
DHT dht(DHT_PIN, DHT11);
Servo servo;
void setup() {
  pinMode(PIR_PIN, INPUT);
  pinMode(LED_PIN, OUTPUT);
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  servo.attach(SERVO_PIN);
  Serial.begin(9600);
  Serial.println("Smart Home System Ready");
```

```
}
void loop() {
  int pirValue = digitalRead(PIR_PIN);
  if (pirValue == HIGH) {
    digitalWrite(LED_PIN, HIGH);
    tone(BUZZER_PIN, 1000, 1000);
    Serial.println("Motion detected!");
  } else {
   digitalWrite(LED_PIN, LOW);
    noTone(BUZZER PIN);
  }
  float temperature = dht.readTemperature();
  float humidity = dht.readHumidity();
  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 (temperature > 30) {
    Serial.println("Temperature too high, unlocking door");
    servo.write(90);
    delay(1000);
    servo.write(0);
  }
 delay(100);
}
```