```
const int soundSensorPin = A0; // Analog pin connected to sound sensor OUT
const int ledPin = 13;       // Digital pin connected to the LED

// Threshold value for sound detection
const int soundThreshold = 200;

void setup() {
  // Initialize the LED pin as an output
  pinMode(ledPin, OUTPUT);

  // Initialize serial communication for debugging
  Serial.begin(9600);
}

void loop() {
  // Read the sound sensor value
  int soundValue = analogRead(soundSensorPin);

  // Print the sound value to the Serial Monitor for debugging
  Serial.print("Sound Level: ");
  Serial.println(soundValue);
```

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d
 // Check if the sound level exceeds the threshold
  if (soundValue > soundThreshold) {
    // Turn the LED ON
    digitalWrite(ledPin, HIGH);
  } else {
    // Turn the LED OFF
    digitalWrite(ledPin, LOW);
  }

  // Small delay to stabilize the readings
  delay(100);
}
```