Código do alarme. Versão simplificada

```
const signed int buttonPin = 2; // Pin connected to the button
const signed int sensorPin = 3; // Pin connected to the door sensor
const signed int hz = 2500;

signed int buttonState = 0;     // Current state of the button
signed int lastButtonState = 0; // Previous state of the button
signed bool toggleVariable = 0; // Variable to toggle the alarm (on or off)
signed int sensorState = 0;

void setup() {
    pinMode(sensorPin, INPUT_PULLUP); // Use internal pull-up resistor
    pinMode(buttonPin, INPUT_PULLUP); // Set button pin as input with pull-up resistor
}

void display_print(String mensagem) {
    display.println(mensagem); // Display text
}

void loop() {
    sensorState = digitalRead(sensorPin);
    buttonState = digitalRead(buttonPin); // Read the current state of the button

    // Check if the button state has changed from HIGH to LOW (button press)
    if (buttonState == LOW && lastButtonState == HIGH) {
        toggleVariable = !toggleVariable; // Toggle between 0 and 1
    }

    lastButtonState = buttonState; // Update the last button state

    if (toggleVariable) {
        if (sensorState == HIGH) {
            tone(PIEZO_PIN, hz);
            delay(100);
            noTone(PIEZO_PIN);
            display_print("O INTRUSO\nLigue 112");
        }
        else {
            display_print("ALARME\nLIGADO!");
            noTone(PIEZO_PIN);
        }
    }
    else {
        display_print("ALARME\nDESLIGADO!");
    }

    delay(50);
}
```