

# YESHWANTRAO CHAVAN COLLEGE OF ENGINEERING

IIOT 2404: Internet of Things Application Lab

## LAB-05

OBJECTIVE/ AIM	Interface ESP32 with IR Sensor and Buzzer and with BLYNK.
SOFTWARE REQUIRE D	Arduino IDE
CODE	<pre>#define BLYNK_TEMPLATE_ID "TMPL3YWgU_00a" #define BLYNK_TEMPLATE_NAME "IR Sensor" #define BLYNK_AUTH_TOKEN "kY5q7mfFoM3fKEVqWIlyNFZ87J5ShkIm"  // Include necessary libraries #include &lt;BlynkSimpleEsp32.h&gt; // For ESP32 #include &lt;WiFi.h&gt;              // For ESP32 WiFi  // Blynk credentials char auth[] = BLYNK_AUTH_TOKEN; char ssid[] = "S23"; char pass[] = "aman09877";  // Pin definitions const int IR_SENSOR_PIN = 4; // IR Sensor output pin connected to D4 const int BUZZER_PIN = 5;    // Buzzer pin connected to D5  // Define Blynk virtual pin for LED widget #define BLYNK_LED_VPIN V0 // LED widget is on virtual pin V0  void setup() {     // Initialize serial communication for debugging     Serial.begin(115200);      // Connect to WiFi and Blynk     Blynk.begin(auth, ssid, pass);      // Set the sensor pin as input and the buzzer pin as     output     pinMode(IR_SENSOR_PIN, INPUT);     pinMode(BUZZER_PIN, OUTPUT);</pre>

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```
// Initialize buzzer as OFF
digitalWrite(BUZZER_PIN, LOW);
}

void loop() {
  // Run Blynk
  Blynk.run();

  // Read the IR sensor's output
  int sensorValue = digitalRead(IR_SENSOR_PIN);

  // If the sensor detects an object, turn OFF the buzzer
  if (sensorValue == HIGH) {
    digitalWrite(BUZZER_PIN, LOW); // Turn buzzer OFF
    Serial.println("Object detected! Buzzer OFF");

    // Turn OFF LED widget in Blynk
    Blynk.virtualWrite(BLYNK_LED_VPIN, 0); // LED OFF
  }
  // If no object is detected, turn ON the buzzer
  else {
    digitalWrite(BUZZER_PIN, HIGH); // Turn buzzer ON
    Serial.println("No object detected. Buzzer ON");

    // Turn ON LED widget in Blynk
    Blynk.virtualWrite(BLYNK_LED_VPIN, 255); // LED ON
  }

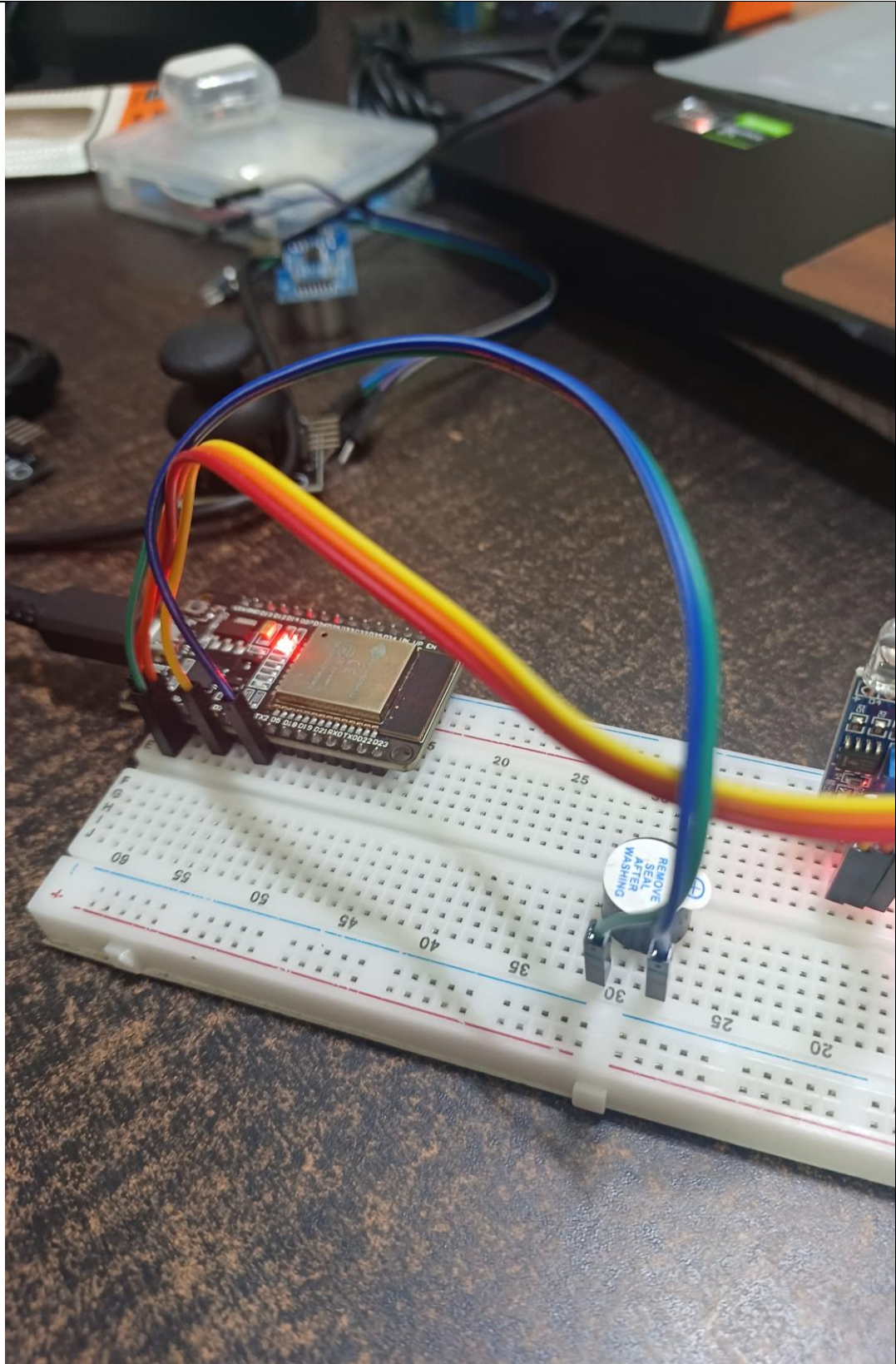
  // Small delay to avoid rapid switching
  delay(100);
}
```

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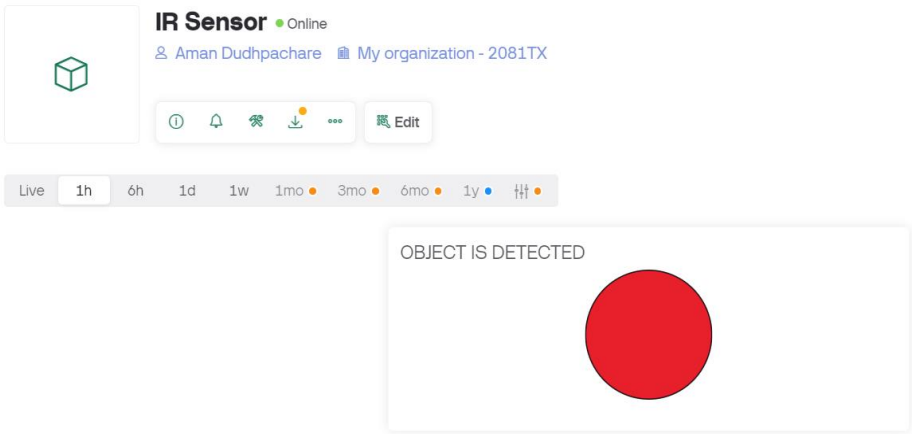
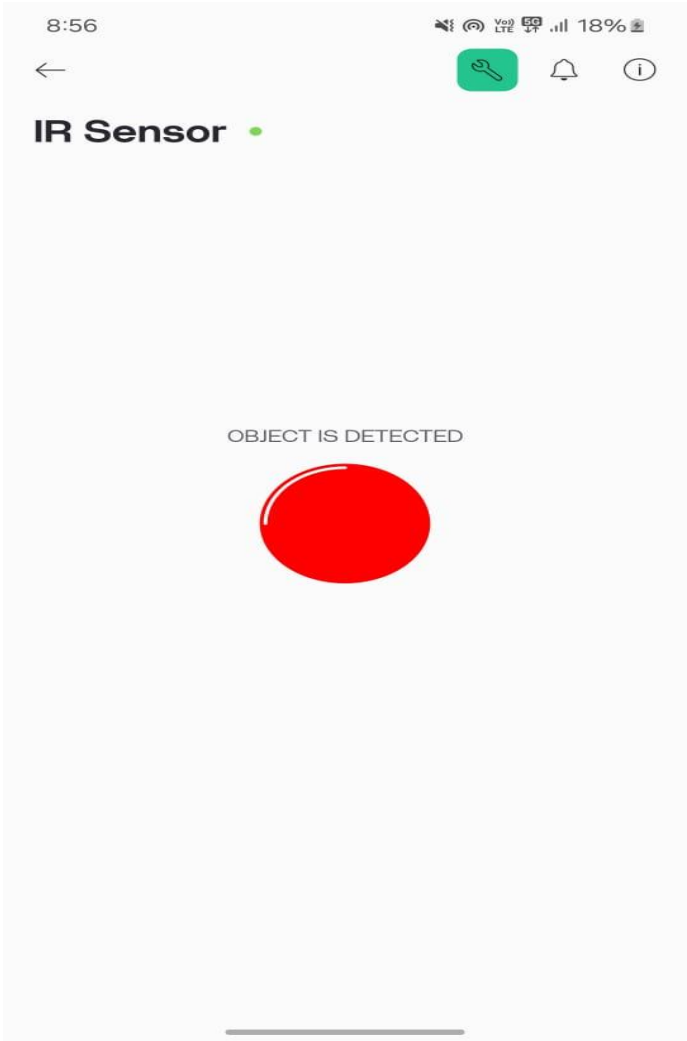
OUTPUT/  
PHOTO



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	 <p>The screenshot shows a web interface for an 'IR Sensor' device. At the top, it says 'IR Sensor' with a green dot indicating it is 'Online'. Below this, there are links for 'Aman Dudhpachare' and 'My organization - 2081TX'. A toolbar contains icons for help, notifications, settings, download, and an 'Edit' button. A time filter bar shows options from 'Live' to '1y'. The main display area shows the text 'OBJECT IS DETECTED' above a large red circle.</p>  <p>The screenshot shows a mobile application interface for the 'IR Sensor'. The status bar at the top displays the time '8:56', signal strength, LTE, 5G, and 18% battery. The app header includes a back arrow, a green key icon, a bell icon, and an information icon. The main content area displays 'IR Sensor' with a green dot, followed by 'OBJECT IS DETECTED' and a large red oval.</p>
RESULT	THE PROGRAM HAS BEEN EXECUTED SUCCESSFULLY