Code:

```cpp
const int IR_PIN = 5;      // IR sensor output pin
const int LED_PIN = 12;    // LED pin

void setup() {
  pinMode(IR_PIN, INPUT);        // Set IR sensor pin as input
  pinMode(LED_PIN, OUTPUT);      // Set LED pin as output
  digitalWrite(LED_PIN, LOW);    // Start with LED OFF
  Serial.begin(9600);            // Initialize serial communication
}

void loop() {
  int irValue = digitalRead(IR_PIN);  // Read IR sensor state

  if (irValue == LOW) {
    // Object detected
    digitalWrite(LED_PIN, HIGH);      // Turn ON LED
    Serial.println("Obstacle Detected");
  } else {
    // No object
    digitalWrite(LED_PIN, LOW);       // Turn OFF LED
    Serial.println("No Obstacle");
  }

  delay(200);  // Delay for stability
}
```

Arduino Uno

sketch_oct10a.ino

```arduino
const int IR_PIN = 5;     // IR sensor output pin
const int LED_PIN = 12;   // LED pin

void setup() {
  pinMode(IR_PIN, INPUT);        // Set IR sensor pin as input
  pinMode(LED_PIN, OUTPUT);      // Set LED pin as output
  digitalWrite(LED_PIN, LOW);    // Start with LED OFF
  Serial.begin(9600);            // Initialize serial communication
}

void loop() {
  int irValue = digitalRead(IR_PIN);  // Read IR sensor state

  if (irValue == LOW) {
    // Object detected
    digitalWrite(LED_PIN, HIGH);       // Turn ON LED
    Serial.println("Obstacle Detected");
  } else {
    // No object
    digitalWrite(LED_PIN, LOW);        // Turn OFF LED
```

Output   Serial Monitor ✕

Message (Enter to send message to 'Arduino Uno' on 'COM6')   New Line   9600 baud

```
No Obstacle
No Obstacle
No Obstacle
No Obstacle
No Obstacle
No Obstacle
No Obstacle
No Obstacle
No Obstacle
No Obstacle
```

Ln 18, Col 11   Arduino Uno on COM6