

## **AUTOMATIC TAP CLOSER**

### **PROJECT DESCRIPTION:**

This project uses an IR sensor and Arduino to control an automatic water tap. When a hand is detected, the Arduino activates a relay to turn ON the DC water pump. When the hand is removed, the relay turns OFF the pump automatically. This system helps save water and improve hygiene.

### **PIN CONNECTION:**

#### **IR Sensor → Arduino**

VCC → 5V

GND → GND

OUT → D2

#### **Relay Module → Arduino**

VCC → 5V

GND → GND

IN → D8

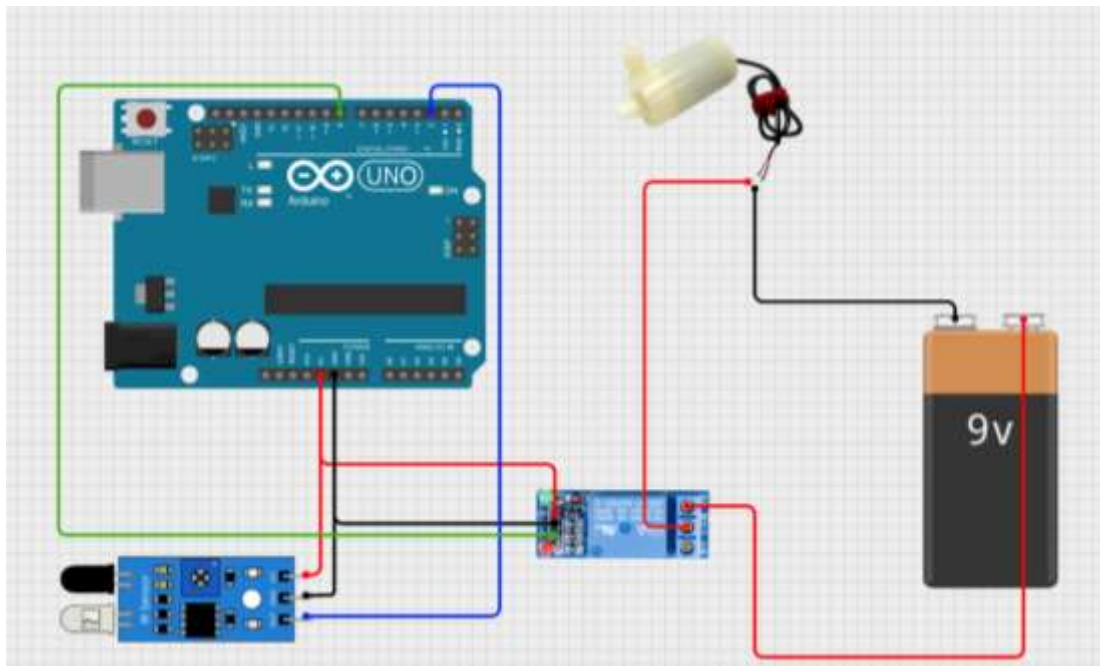
#### **Relay → DC Pump**

Power Supply + → COM

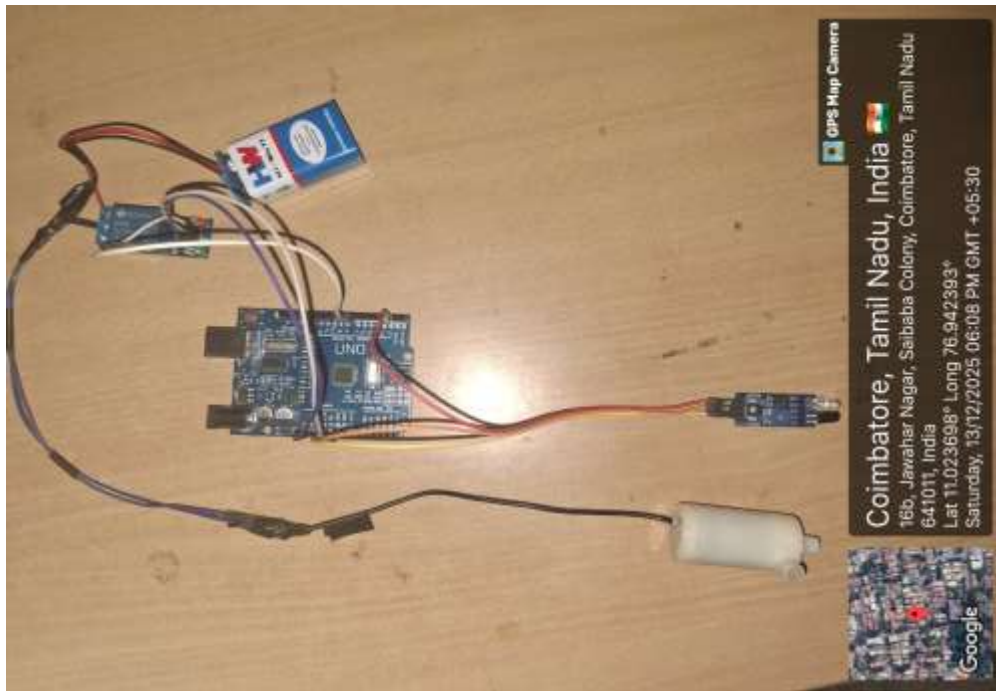
NO → Pump +

Pump – → Power Supply –

### **CIRCUIT DIAGRAM**



## PROJECT PHOTOS



## CODE

```
int ir = 2;    // IR sensor OUT pin
int relay = 8; // Relay input pin

void setup() {
  pinMode(ir, INPUT);
  pinMode(relay, OUTPUT);
  digitalWrite(relay, HIGH); // Pump OFF initially
}

void loop() {

  int sensorValue = digitalRead(ir);

  if (sensorValue == LOW) { // Hand detected
    digitalWrite(relay, LOW); // Pump ON
  } else { // No hand
    digitalWrite(relay, HIGH); // Pump OFF
  }
}
```