Wireless Lighting System

Components involved

- Arduino UNO R3 Board
- Relay
- AC Bulb
- IR Receiver sensor
- Jumpers and connecting wires
- AC power source (Socket)
- Breadboard (for prototyping)

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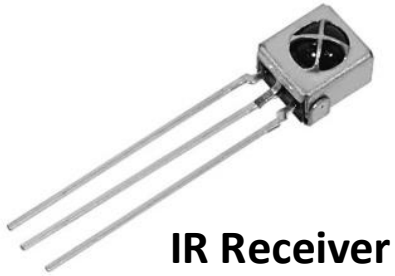
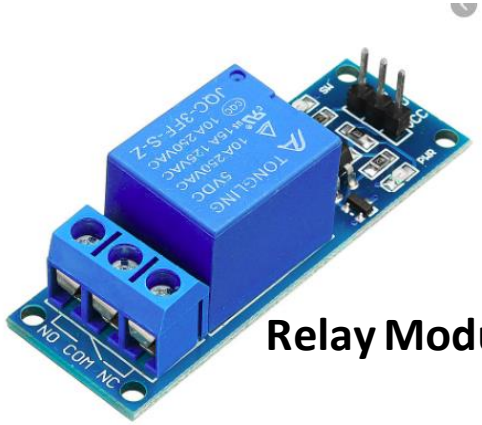


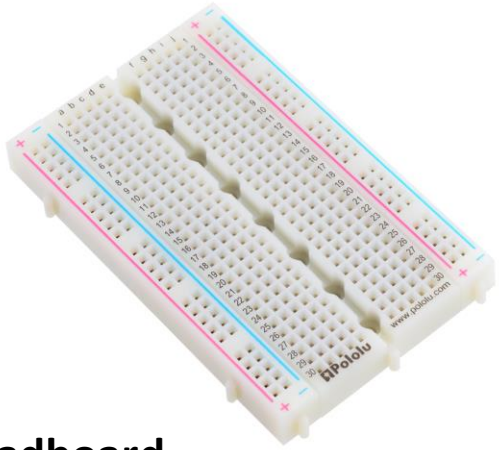
IR Receiver sensor

Arduino UNO R3 board



Relay Module (1 ch)

AC Bulb

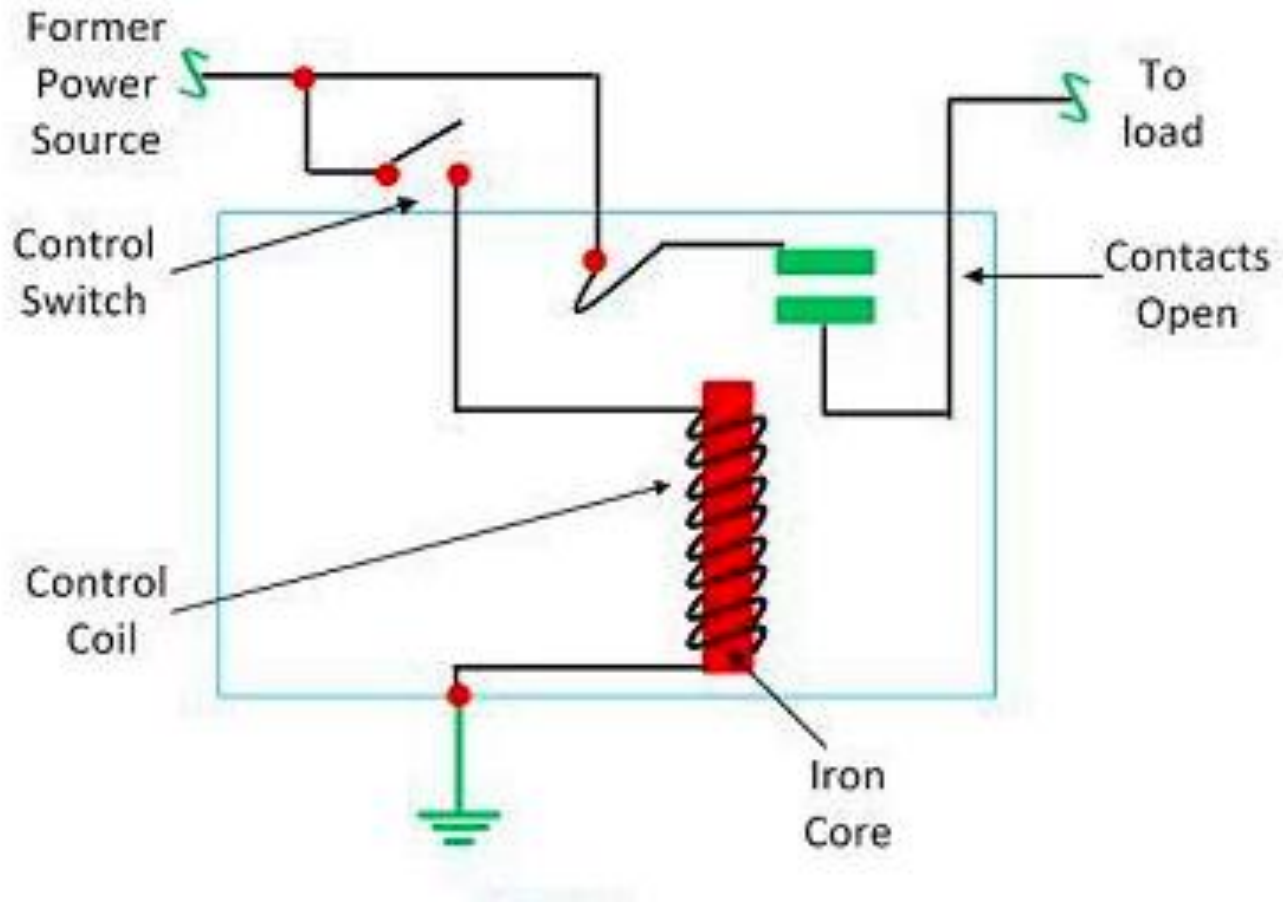


Breadboard

Jumpers

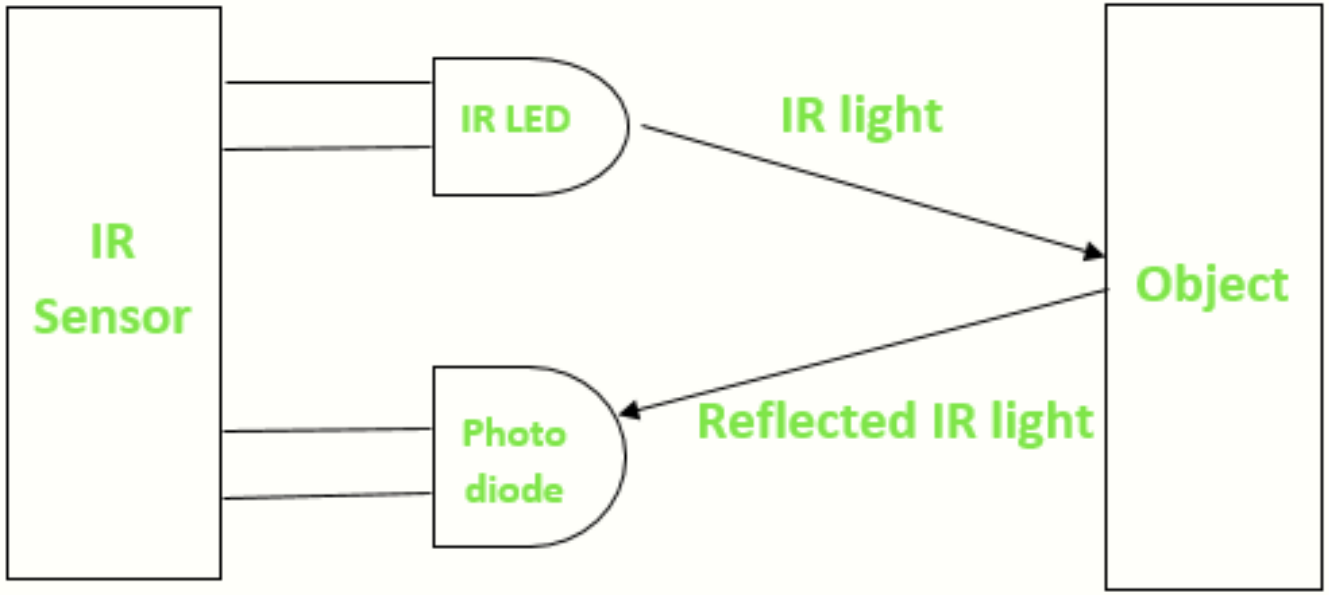
Working Principle of a Relay

- It works on the principle of an electromagnetic attraction.
- When the circuit of the relay senses the fault current, it energizes the electromagnetic field which produces the temporary magnetic field.
- This magnetic field moves the relay armature for opening of closing the connection.


Former
Power
Source
To
load
Control
Switch
Contacts
Open
Control
Coil
Iron
Core

Working Principle of IR Receiver Sensor

- IR Receiver is also called a photodiode.
- The emitter is an IR LED and the detector is an IR photodiode.
- The IR photodiode is sensitive to the IR light emitted by an IR LED. The photodiode's resistance and output voltage change in proportion to the IR light received.


IR
Sensor
IR LED
IR light
Object
Photo
diode
Reflected IR light


Thank you!