🔧 **Project Components:**

1. **PIR Sensor (Passive Infrared Sensor)** – Detects motion based on IR radiation changes.
2. **Arduino UNO / Nano / ATtiny85** – Microcontroller to read sensor input and control output.
3. **LED** – Lights up when motion is detected.
4. **220Ω Resistor** – Limits current to the LED.
5. **Jumper Wires + Breadboard** – For circuit connections.
6. **Power Source (USB or Battery)** – To power the Arduino.

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💡 **Short Project Description:**

This is a simple **motion detection system using a PIR sensor**. When the PIR sensor detects movement (such as a person walking into a room), it sends a HIGH signal to the Arduino. The Arduino then **turns on an LED** to indicate motion has been detected.

The PIR sensor works by detecting **infrared radiation** changes in its environment—specifically from warm-blooded objects like humans or animals. This makes it suitable for applications like **home automation, security systems, or smart lighting**.