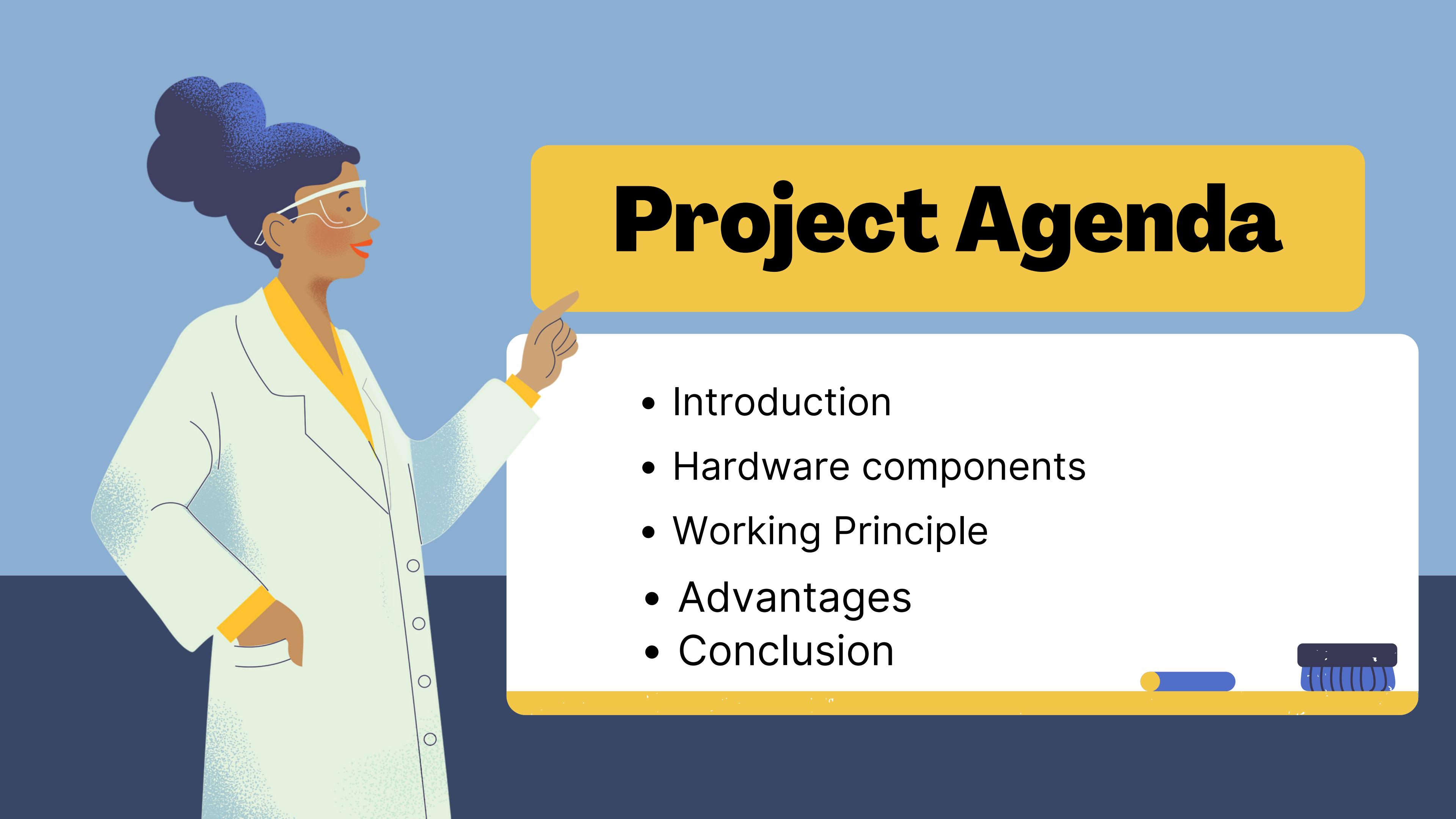


Room Light Automation System

TEAM VERILOG



Project Agenda

- Introduction
- Hardware components
- Working Principle
- Advantages
- Conclusion

Introduction

We unknowingly waste lot of electrical energy

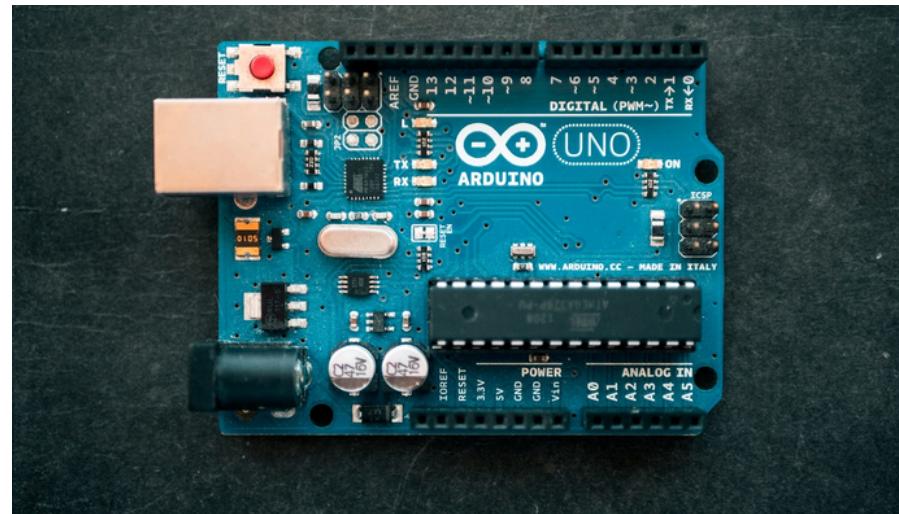
We keep room lights and fans on in our absence

So we propose to develop a simple arduino based system

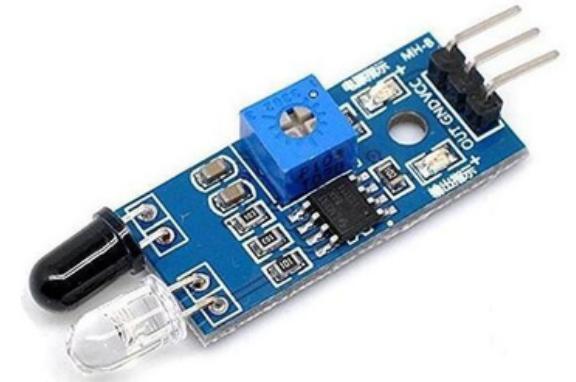
The system controls room appliances to reduce electricity wastage

Hardware used

What have we used to make the circuits ?



Arduino



IR Sensor



Jumper Wires

Working Principle

Including Libraries

“IRRemote” library

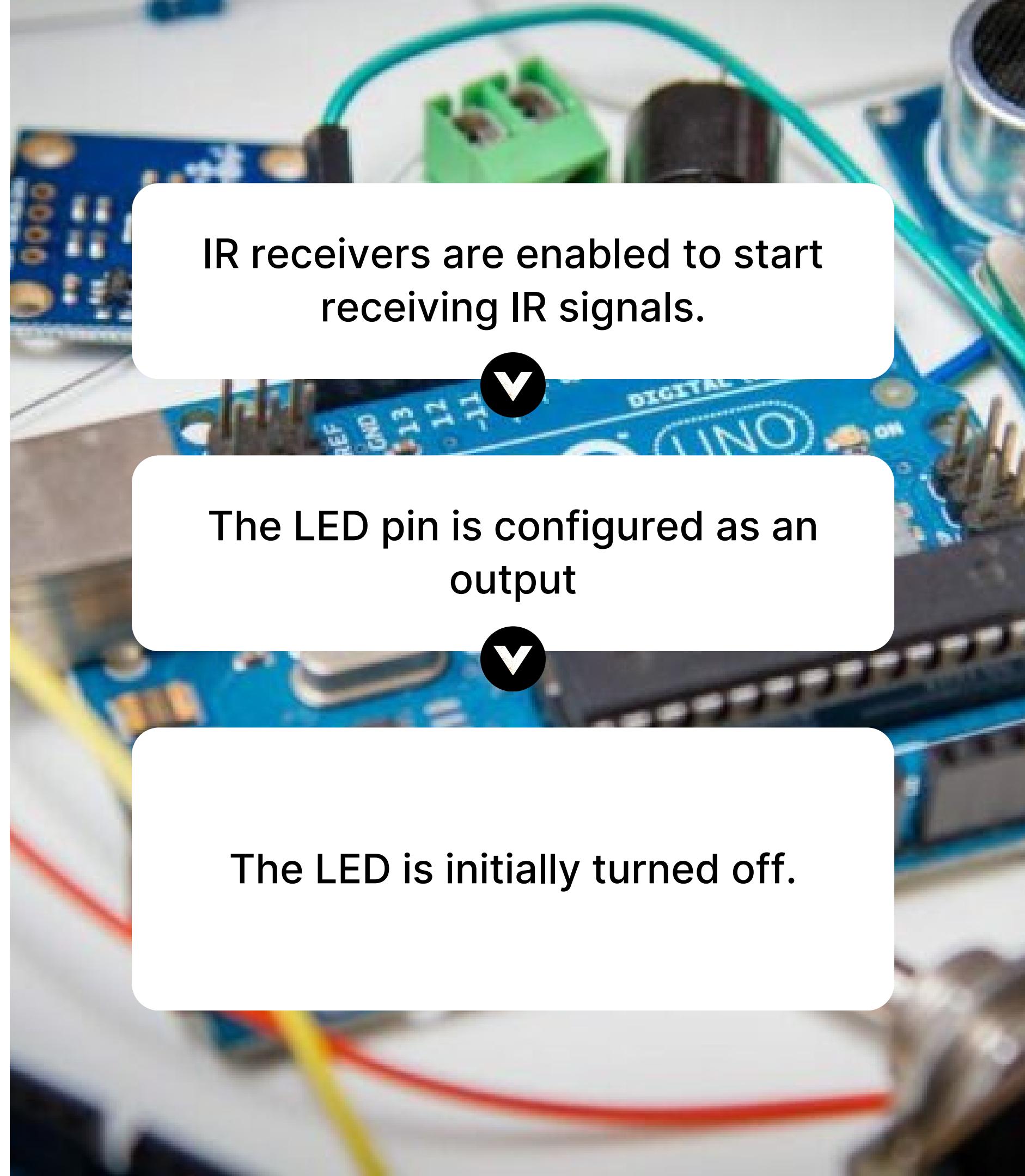
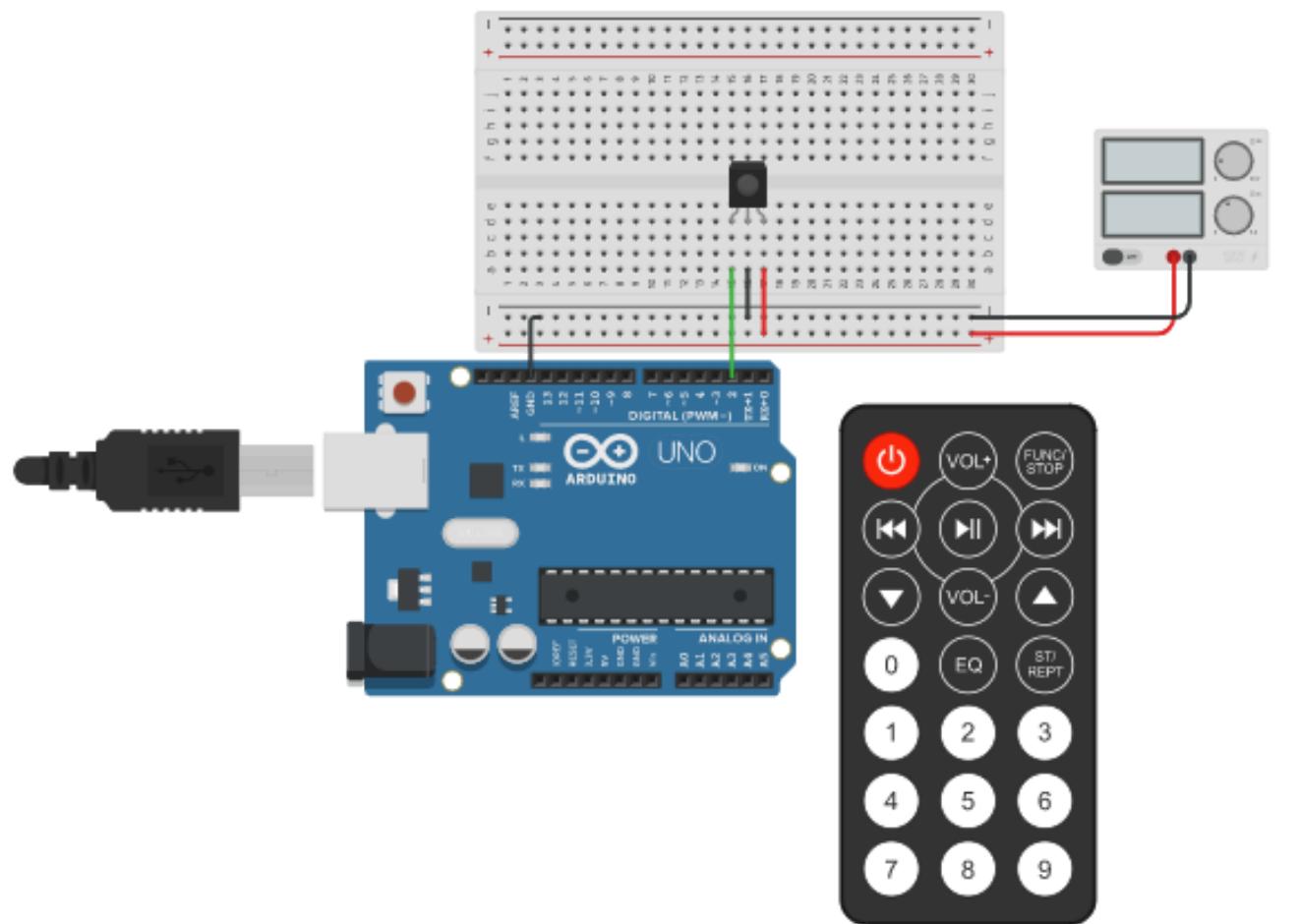


Principles continued

Defining the pins

Constants are defined to represent the pins to which the IR sensors and LED are connected (`IR1_PIN`, `IR2_PIN`, and `LED_PIN`)

Setting up the circuit



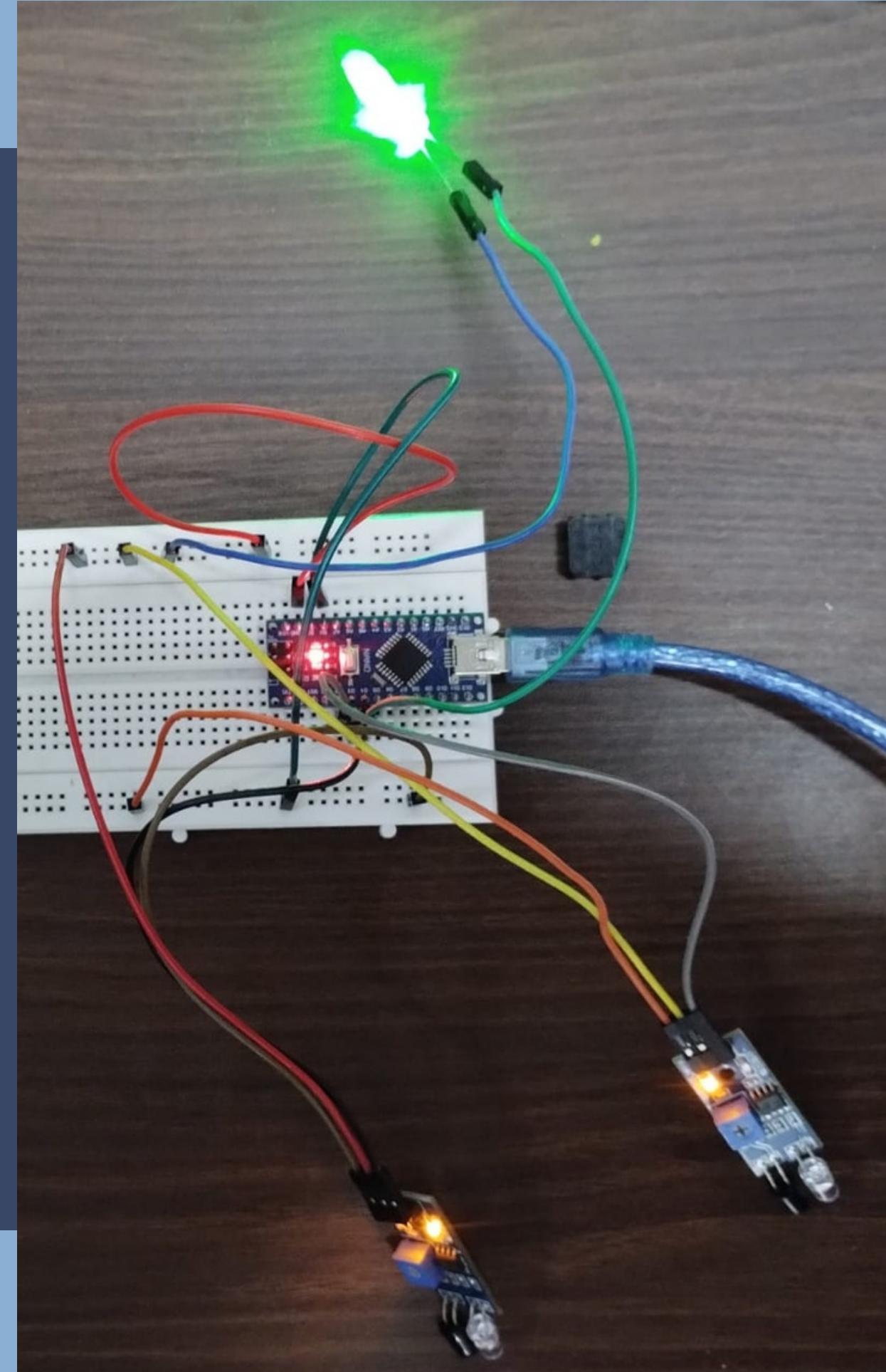
Completing the Circuit

- The code written on the arduino continuously monitors two IR sensors to detect movement in a room.
- It keeps track of the number of people inside the room and controls an LED accordingly



The circuit

The overall circuit fits within a very small space and proves to convenient for the even the smallest rooms.



Completing the Circuit

This is simple yet efficient project that can be easily implemented with minimal costs. This project takes up minimal space but has a huge impact on society.

With further development, this system can be implemented in the entire household, with much more features.

TECH SCALABILITY

1. Hardware Expansion: Easily add more Arduino microcontrollers and IR sensors to monitor multiple rooms or areas.
2. Wireless Sensor Network: Utilize protocols like Wi-Fi for scalable deployment without complex wiring.
3. Centralized Control: Implement a single interface for managing multiple units and sensor nodes, enhancing scalability and efficiency.