



## Automatic Project with Bidirectional Counter Module Arduino Uno

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### Highlights

#### Branding Free Project

- No Brand Name on PCB & Projects
- 100% Working Project
- Tested Project

#### Documentation

- Free Project System
- Printed Short Project
- Printable Software

#### Support

- Demo Video – **Embedded below**
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**SKU:** PH\_EP\_031

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2,846.00 Current price is: ₹2,846.00.

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**Categories:** [Arduino](#), [Engineering project](#), [Projects](#)

## Product Description

### INTRODUCTION:

The Automatic Room Light Controller with Bidirectional Visitor Counter with Multiple Load using Arduino Uno is a project aimed at automating the control of room lighting based on the number of people present in the room. This system utilizes Arduino Uno, an IR module, an LCD display, and multiple 5V relays to detect and count the number of visitors entering or exiting a room. It provides a flexible solution for controlling multiple loads, allowing for efficient energy management and enhanced convenience.

### AIM:

The main objective of this project is to develop an automated room light controller with bidirectional visitor counting capability that can control multiple loads. The aim is to achieve energy efficiency, convenience, and versatility in managing room lighting based on the occupancy level.

### PRINCIPLE:

The system operates on the principle of using an IR module to detect the presence of people. The IR module emits infrared radiation and senses its reflection from nearby objects. When a person enters or exits the room, the module detects the change in reflection and triggers the count accordingly. The Arduino Uno processes this information and updates the visitor count displayed on the LCD display. Additionally, multiple 5V relays are used to control individual loads based on the visitor count.

### ADVANTAGES:

- **Energy Efficiency:** The automatic control of room lights ensures that the lights are only turned on when necessary, resulting in energy savings.
- **Convenience:** The system eliminates the need for manual control of room lights, providing a hands-free and automated approach.
- **Accurate Visitor Count:** The bidirectional visitor counter ensures an accurate count of incoming and outgoing visitors for better monitoring and management.
- **Cost-effective:** The project utilizes cost-effective components, making it a cost-efficient solution for room light control and visitor counting.

## APPLICATIONS:

- **Offices and Commercial Spaces:** The system can be implemented in offices and commercial spaces to optimize energy consumption and enhance convenience.
  - **Educational Institutions:** Schools, colleges, and universities can benefit from this system to effectively manage room lighting based on occupancy.
  - **Hospitals:** Automatic room light control can be valuable in hospitals and medical facilities, improving energy efficiency and reducing manual intervention.
  - **Residential Buildings:** Home automation systems can incorporate this project to automate room lighting based on the number of occupants.
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[Download Free Project Synopsis](#)

[Working Video](#)

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## Disclaimer:

This is a handmade complete working Models, Projects & Activity kits supported by rough study material to make a suitable projects report by the student. It is using Cardboard/Wooden base, Paper, Foam based board, stationary items, Electronic-Electrical Components, Mechanical & Scientific goods as per the requirement of a particular model. Colour of product and decoration item may be varying according to availability of material but we make ensure that we will deliver the product with same working, structure and dimensions as describe in product description section.

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