

Automatic Room Light Controller with Bidirectional Visitor Counter

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Abstract: *Wastage of electricity is one of the main problems which we are facing nowadays. In our home, school colleges or industry we see that fan/lights are kept on even if there is nobody in the room or area/passage. This happens due to negligence or because we forgot to turn lights off or when we are in a hurry. To avoid all such situations we have designed this project called "Automatic room light controller with visitor counter". This project has two modules, the first one is known as "Digital Visitor counter" and the second module is known as "Automatic room light controller". The main concept behind this project is known as "Visitor counter" which measures the number of persons entering any room like seminar hall, conference room, classroom. This function is implemented using a pair of Infrared sensors. LCD display placed outside the room displays this value of person count. This person count will be incremented if somebody enters the room and at that time lights are turned on. And in a reverse way, person count will be decremented if somebody leaves the room. When the number of persons inside the room is zero, lights inside the room are turned off using a relay interface. In this way Relay does the operation of "Automatic room light controller". Since this project uses 2 infrared sensors, it can be used as a Bidirectional person counter as we.*

Keywords: Microcontroller, IC, Sensor, Transformer, Reset, Disc capacitor, Reset button switch, Rectifier diode, Transistor, Segment Display

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