CSE-321L Electronics I

Automated Visitor Counter With 7 Segment Display

Submitted to

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1. Introduction

The system is meant to save energy and is particularly useful if we want to count the number of people who are going to attend a specific event or function. It also helps in data collection by counting the number of attendees. The counter is simply incremented to do this. In order to accomplish this, the system employs Infrared Sensor pairs, which saves a significant amount of energy. Each pair consists of two sensor pairs set in opposing directions at a fixed distance from one another. The IR transmitter sends infrared rays directly to the receiver, which receives the signal and passes it to an 8051 microcontroller. The IR sensor module detects when a human enters the area where the device is installed, and this information is relayed to the microcontroller. This input is processed by the microcontroller. The system also counts the number of persons present at this time and increases a counter with each arrival; this count is shown on a 7-segment display.

2. Electronic Components

The following components were used in making the Automated Visitor Counter with 7 Segment Display:

- 8051 series Microcontroller
- Transistor
- Push Button
- Diodes
- Voltage Regulator
- IR Receivers
- LED
- IR LED's
- 7- Segment Displays
- 555 Timers

3. Block Diagram: