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VISITOR COUNTER

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Abstract- The aim of this paper is to monitor the number of person/people visiting some place like seminar hall, conference room, library, shopping mall, etc. This project is based on interfacing some components such as LCD, microcontroller, sensors etc. We also add “Automatic lighting system of a room” with this project.

This project is mainly based on based on microcontroller which is a reliable circuit that takes over the task of controlling room lights as well as counting of number of persons/visitors in the room very accurately. When somebody enters into the room then the counter is incremented by one and the lights in the room will be switched ON and when one leaves the room then the counter is decrement by one. The light will be only switched OFF until all the persons in the room go out. The total number of persons present inside the room will be displayed on 16X2 LCD.

Indexed Term

LED	Light Emitting Diode
IR-LED	Infrared Light Emitting Diode
LCD	Liquid Crystal Display
PCB	Printing Circuit Board
AVRAtf and Vegard's RISC	
LM358 IC	LM358 Integrates Circuit

I. Introduction

In new era the whole world is changing very fast and the use of electronics in everyday life became necessary. Many electronic and electrical devices are used to make easy life style [1]. There are many changes in human life due to the use of electronics, the tedious job become simple, the time required is also get shorted and many more advantages are observed. The visit counter is a one of those instruments which help to count the exact number of visitors at occasion where ever it is necessary [2]. If we count the numbers, some time manual errors are introduced in it and we are unable to get correct information. But this can overcome with the use of the small circuit of visitor counter. Once we get the exact number of visitors then it is easy to provide them further facilities or data information from the central bottle neck, the flaw come from the architecture has not resolved essentially.

In this project we have used circuit, which is consists of IR pair at input section and LCD at output section. With the help of this system we can count the visitors, at Banks, shops, temples, malls etc. [3] IR pair is the input section of this circuit. When some individual goes into the room then the counter is increased by one when any one leaves the room then the counter is decremented by one the aggregate number of people inside the room is likewise shown on the 16x2 LCD shows. Then this input of LCD for displaying and finally we get the display of count on LCD. In this way the circuit of visit counter can works on such simple principle .We also add automatic room lighting system in this project to count number of persons visiting particular room and accordingly light up the room? So, when somebody enters into the room then the counter is incremented by one and the light in the room will be switched ON and when any one leaves the room then the counter is decremented by one. The light will be only switched OFF until all the persons in the room go out. The total number of persons inside the room is also displayed on the 16x2 LCD displays [4]. In today's world, there is a continuous need for automatic appliances with the increase in standard of living; there is a sense of urgency for developing circuits that would ease the complexity of life. Also if at all one wants to know the number of people present in room so as not to have congestion.

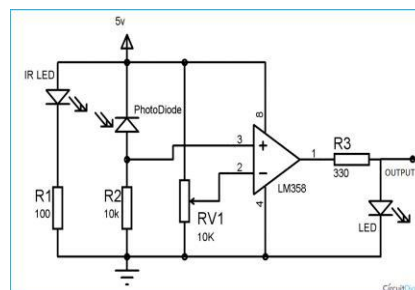


Fig.1. IR sensor circuit diagram

We are going to show this large scale project on small scale via Printed Circuit Board manufacturing respectively. On PCB we will attach components that are required to give an example of automatic of light system in room. [5]. these components are soldered on PCB will function in such a way that they illustrate visitor counter system. Over and above these are the

fundamental or basic steps to illustrate Automatic Room Lighting system with Visitor Counter to our viewers. As above mentioned here we are providing some examples to display one kind of automation. Throughout we will cover the complete package towards the introduction of Visitor Counter automatic is a lighting system, some example to display Visitor Counter based upon at automatic lighting system on a PCB(s), components used to build up the system, components declaration, definition and explanation .We are covering all the technical topics that are associated with this project. We hope that after reading this project report readers will build smart system for there better future. This project report comprises simple English language and therefore non-technical background or people who are unknown from Automatic room lightning system with Visitor Counter will be benefited of this technology that is touching everywhere technical people but also to non for output of receiver fed to the microcontroller Atmega16A It does the job of counting and output provides to the technical one.

II. Proposed Method

This undertaking is a usage to the thought or programmed guest counter tallying and thought controlling utilizing a microcontroller. At present the fundamental work that has been done on this proposed framework is utilizing ultrasonic sensor which give longer location run contrasted with IR beams. On the off chance that clients need to turn on and off the electrical machines, they need to go to a particular zone and on/off the apparatus. Yet, in this plan we are controlling the electric loads remotely utilizing RF innovation the client has RF transmitter and RF collector is kept at the application side the client can control the electrical apparatuses inside the scope of 100 feet We have likewise LCD sensor to detect light condition and relying on it controls the electrical light loads.This undertaking titled "Microcontroller based Bidirectional Visitor Counter" is planned and exhibited with a specific end goal to check the guests of an amphitheater, lobby room office, sends, sports scene and so on. The framework tallies both entering and leaving guest of the assembly hall or corridor or different spots, where it is put. Contingent on the hinder on the sensor, the framework recognizes the section and exit of the guest . on the effectively execution of the framework, it shows the quantity of guest display in the rooms. This framework can be monetarily actualized in every one of the spots where the guests must be tallied and controlled. This framework can be utilized as a robotized change to expand.

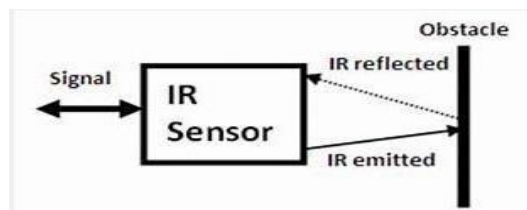


Fig. 2.1. Box model of IR sensor

The point when the framework is fueled, the compiler at first instates the stack pointer and every other variable. It at that point filters the information ports (PortP1.0 first). Meanwhile, when there is no intrusion between the IR LED and the phototransistor of the primary sensor

match, the yield of the phototransistor is dependably at low voltage. At the end of the day, port P1.0 is at rationale low level. Presently when a progress happens, i.e. a rationale abnormal state is gotten at port P1.0, the compiler considers this to be an interference to detect the entry of a man or a question between the IR LED and the phototransistor. According to the program, the check other info stick P1.1. Like the principal sensor combine, for this sensor match likewise the phototransistor leads without any intrusion and P1.1 is at rationale low level.

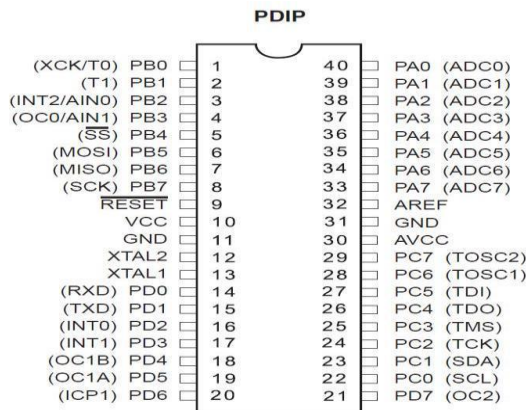


Fig 2.2. ATmega32A

It is at rationale low level. If there should be an occurrence of an intrusion, the stick P1.1 goes high and this interference is seen by diminishing the estimation of count. The program guarantees that the checking of both the port pins is done at certain postpones in order to stay away from few intrusions to guarantee the tally esteem is over 1 or 2.

III. Result and Discussion

We began our venture by influencing energy to supply. That is simple for me yet when we move in the direction of the principle circuit, there are numerous issues and issues identified with it, which we confronted, similar to part choice, which segments is superior to other and its element and cost shrewd. We began our task by influencing energy to supply. That is simple for me yet when I move in the direction of the fundamental circuit, there are numerous issues and issues identified with it, which are I confronted, similar to segment determination, which segments is superior to other and its component and cost savvy likewise, at that point allude the information books and different materials identified with its. I had issues with better or right outcome, which we wanted and furthermore the product issue. I additionally made them weld issues which were settled utilizing progression checks performed on the equipment. We had issues with better or right outcome, which we wanted. And furthermore the product issue. We additionally made them weld issues which were settled utilizing congruity checks performed on the equipment. We began testing the circuit from the power supply. There we got over first inconvenience. Subsequent to getting 9V from the transformer it was not changed over to 5V and

the circuit got 9V. As the bind was shorted IC 7805 got scorched. So we supplanted the esteem is expanded and this esteem is shown on the Counter. Presently the compiler begins checking was shorted IC 7805 got scorched. So we supplanted the IC7805.also the circuit parts around the IC7805 were totally damaged with the assistance of the patch we made the important ways.

IV. Conclusion

In this computerized world Technology is exceptionally best in class and we favor things to be done naturally with no human endeavors. This task likewise lessens human endeavors. Additionally it is exceptionally valuable to save assets. It is exceptionally valuable in Schools, healing facilities, shopping centers, workplaces, assembly halls and so forth. In any huge lobby on the off chance that we need to tally number of people it is extremely troublesome as it brings about blockage and unsettling influence to the entire Class. This venture moves toward becoming assistance in such circumstance since it gives the relay on LCD show. Additionally it controls the lighting framework naturally as indicated by what numbers of people are there in a room. Turning ON of lights will increment with expanding the people in a room. Killing of lights will diminish with diminishing the people in a room.

V. Acknowledgement

We have taken efforts in this project in order to gain knowledge in our field and polish the existing ones. However, it would not have been possible without the continuous support and help of our respective teachers. We would like to extend my sincere thanks to all of them.

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