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PUBLIC GARDEN AUTOMATION SYSTEM

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Abstract - *This project is about garden automation system.it consists of IR sensors which are placed on the entry and exit gate. Our architecture is used to keep the count of people coming in a specific area ,where sensors are placed it keeps the count of each person entering through the gate and total number of people present in garden are displayed on LCD screen. We have also upgraded our project with LDR sensor. Due to LDR sensor lights gets automatically on when sunsets i.e. when there is no sunlight. This system overcomes all the problems that we faced in the survey of the Garden and the other public places.*

Key Words: IR(infrared), LCD(Liquid Cristal Display), LDR(Light Dependent Resistor), etc.

1. INTRODUCTION

In our daily life there are so many problems I public places like garden, etc. In proper management and many other things such as carelessness of the authorities & the workers. We have seen these problems and we got idea to make a model which can solve all the problems and related to society, so we visited a garden & did survey on it. Then we planned to make the Garden Automation System which is basically a model.

In this project, we used some devices and sensors, the main motive of this project is to count a flow of people which is entering the garden & exiting the garden, using LDR sensor. We save the wastage of electricity. First of all, we attached all the sensors on the entry and exit gate. Hence, when the people is entering, it will display the count on the LCD display, which is located at side of the gate. Suppose the closing time is 9 P.M., then at that time the buzzer will start like an alert the visitors about the closing of the garden. Also, the lights is switched ON/OFF automatically using the sensor. Also, the Servo motor is used for opening and closing of the gates.

The main device in project is RTC, which is Real Time Clock. Our project is operated on Real Time Clock, due to RTC, it displays the exact time and date on the LCD display. The time operates in 12hr format with AM/PM. Here, we used Arduino which gives all commands to RTC & other devices and sensors. This system overcomes all the problems that we faced in the survey of the Garden and the other public places. We can modify this system by using CCTV or using the face detection in this system.

Key Words: *RTC (Real Time Clock), IR (infrared), CCTV (Closed Circuit Television), LCD(Liquid Cristal Display), LDR(Light Dependent Resistor), etc.*

1.1 Proposed system architecture

Our system consists three modules:-

1) USER: User can perform Entry / Exit operation as well as operates the sensors in garden operation.

2) ADMINISTRATOR: Administrator can give authorized access to perform some operations. Administrator can operates the main functions like controlling and buzzing which can direct connected to the garden operation.

3) GARDEN OPERATING: In this the commands given by user and administrator are performing and displayed. The Automation and LDR Sensors are monitored in this operation.

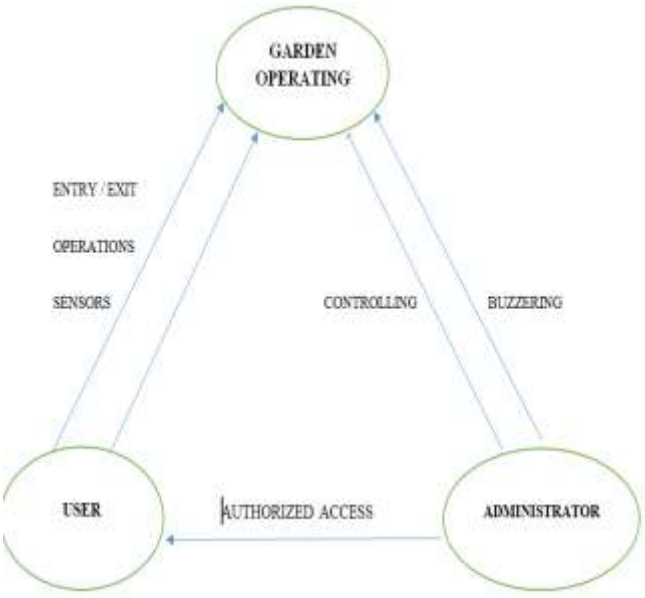

Fig 1. SYSTEM ARCHITECHTURE

2. EXPERIMENTAL RESULTS

Fig 2. Sensor connection

Fig 3. Sensor reading

3. FEATURES

1. Easily operate at real time
2. Flexible and Reliable
3. Temperature insensitive
4. Accuracy is high

4. APPLICATIONS

1. We can use in company entrance to count the number of people coming in and going out.
2. In the same way, we can use it in schools and colleges to count the number of students entering the classrooms.
3. This project can also be used in Government Offices, Parking, Societies, etc to count the number of people and vehicles.
4. It can also be used to reduce the wastage of electricity and can reduce the work of workers.

5. CONCLUSION

The IR sensor Based system proves to be a counting control system which monitors and controls all the activities of system successfully. Our Project is based on Sensor which is very easy and simple. In Garden due to carelessness of workers lights are left on so to overcome this, in our system lights are switched on and off automatically .Using our project we can keep the record of people entering garden, save time.

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