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AUTOMATIC LIGHT AND WATER CONTROL IN PUBLIC GARDEN

Yelmame S. N., Pacharne S. A., Gunjal S. B., Mrs. Narang D.A.
Deparment of Electronics and Telecommunication Engineering, Jaihind Polytechnic, Kuran, INDIA

ABSTRACT

Today with the advent of technology things are becoming quite easy and user-friendly. The pace of Progress in development of technology had led to invention of many revolutionary products. This revolution in technology has led remarkable comfort and had added more features to the luxury of mankind. We have face the most important problem of electricity wastage. Sometimes due to carelessness of the authorities and the workers lamps are left ON that time we waste to the electricity. It is first problem. Second problem is the water wastage. Which needs to be deal with. Propose system is overcome this problem. In this system we use LDR for on and off state of lamp in garden. In evening time intensity is decreases then lamp is on the light intensity is increase again. In morning when the intensity of light increases the lamps are switched off . Moisture sensor is use for the sense the moisture in garden. When moisture level is low then water pump is turn on and moisture level is sufficient in garden then water pump is off.

KEYWORD: LDR, lamp, moisture sensor, water pump, motor, microcontroller.

INTRODUCTION

The most important problem mis use of electricity and its wastage faced in Garden automation. Sometimes due to carelessness of the authorities and the workers lamps are left ON which results in wastage of electricity. Second problem is the water wastage. Which needs to be dealt with. Propose system is overcome this problem. Firstly switches will be on and water supply will on at 4.00pm and remains no for few hour .After that gate will be open by running the motor. The lamp is on by the depending upon the output of the LDR. The light are on at 6.00pm.The garden is open for three hour so buzzer is sounded at 8.50pm.It indicate the close the garden and alert the visitor. The gate close at 9.00pm. Microcontroller is supervise all devices and control the entire set up operation.

MATERIALS AND METHODS

Material
1. AT89C52µcontroller
2. MAX 232 & RS232
3. CM8870
4. CRYSTAL OSCILLATOR
5. PCB LAYOUT
6. LM 7805
7. LCD I6X2 DISPLAY
8. 4.7K PULLUP RESISTORS
9. RESISTOR
10.40 PINµCONTOROLLER BASE
11.16 PIN IC BASE
12.DC MOTAR
13.CONNECTING WIRES
14.SOLDERING METAL
15.SINGLE STRIP CONNECTORS (PAIR)
16.LED
17.HEAT SINK
18.CAPACITOR

19.MOISTURE SENSOR
20.LDR

Method
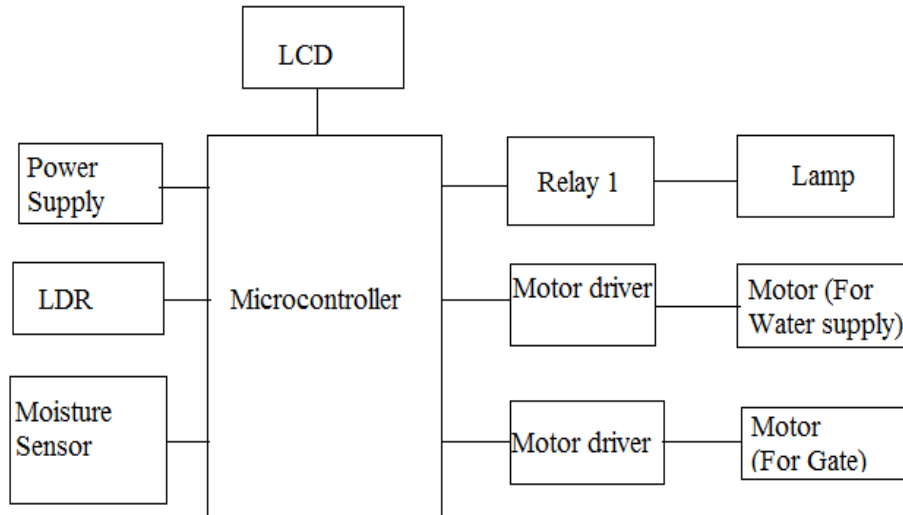
Fig 1. Automatic light and water control in public garden

Power supply:- Power supply provide suitable supply voltage to all circuit and microntroller IC.A power supply can series of blocks is broken down , each block performs a particular function. 5 volt power supply is used in this project.

LDR:- It work on light intensity for lamp ON or OFF.

Relay:- It is control the flow of water in the garden .

Liqiud cryasatal dispaly:- It is used for displaying purpose. It displays the date and time.

Moisture sensor:- Moisture sensor sence the moisture in soil.

Microcontroller:- It is main block in diagram. It controll whole circuit.

Motor:- Motor provide the required water to the garden and controll the gate.

WORKING
In this system we use LDR for on and off state of lamp in garden. In evening time intensity is decreases then lamp is on the light intensity is increase again. In morning when the intensity of light increases the lamps are switched off . Moisture sensor is use for the sense the moisture in garden. When moisture level is low then water pump is turn on and moisture level is sufficient in garden then water pump is off.

ADVANTAGES
- Low cost.
- Avoid wastage of water and electricity.
- Save Time.
- Easy to handle.

APPLICATION
- Tracking Military Application
- Real Time System
- Search and rescue
- Surveying.

FUTURE SCOPE
- This project is design for avoid wastage of resourses.
- In future we provide security to this system by using metal detectors and CCTV camera.
- we can also use in future GSM technology control of water supply and light using mobile phone.

CONCLUSION
Thus we have save the light as well as water by using this system. Avoid mis use of water and electricity.Automatic light and water control system easy to handle and operate.

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