

For more Project details visit:

<http://www.projectsof8051.com/public-garden-automation/>

Code	Project Title
1180	Public Garden Automation

Synopsis for

PUBLIC GARDEN AUTOMATION

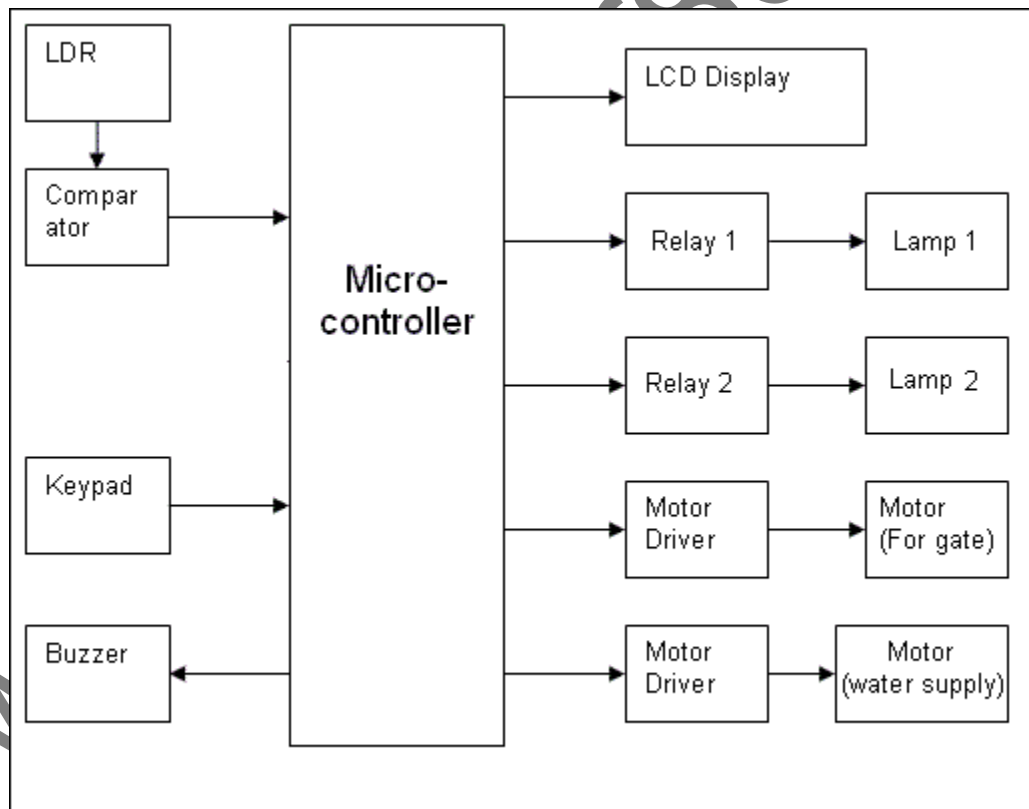
INTRODUCTION

The most important problems faced in Garden automation are the misuse of electricity and its wastage. Sometimes due to carelessness of the authorities and the workers lamps are left ON which results in wastage of electricity. Water wastage is another problem which needs to be dealt with. Our project helps to overcome all these problems.

Firstly the Microcontroller around 4.00pm switches on the water supply once to water the entire garden few hours before opening of the garden for public. Next the gate is opened by running the motor which is driven by a motor driver operated by the Microcontroller. At around 6.00pm the two lights are switched on depending upon the output of the LDR and the lights remain functional till the garden remains open for visitors.

The garden remains open for about three hours and so around 8.50 pm a buzzer is sounded to indicate closure of the garden and alert the visitors. The gate is then closed at 9.00pm and one of the two lamps is switched off. One lamp is kept on throughout the night. In the morning the remaining lamp is switched off as the depending upon the signal sent by the light dependent resistor to the Microcontroller. These are the step involved in the operation of the circuit and the public garden automation. Microcontroller is used to supervise the actions of all other devices and to control the entire set of operations.

BLOCK DIAGRAM



BLOCK DIAGRAM DESCRIPTION

1. **POWER SUPPLY UNIT:** Power supply unit provides a 5V regulated supply to the micro controller AT 89C51, ADC 0804, LCD, MUX 4051, serial memory. It provides a 12V unregulated supply to the relays.
2. **LDR:** The output of LDR is given as input to the signal conditioning circuit the output of which is given to 89C51 on input side to control the state of lamps.
3. **MICRO CONTROLLER AT 89C51:** It processes the calculated digital values by converting it to ASCII & sends it to the LCD display in order to display the data. Also depending upon the setting at the input, it controls the output
4. **LIQUID CRYSTAL DISPLAY:** As the name suggests, it is used for displaying purpose. It displays the current date, time.\
5. **RELAY:** It is used to control the flow of water in the garden just like any simple valve and is driven by a relay driver.
6. **KEYPAD:** The keypad is used for entering the time and date and also can be used for manual over ride.

APPLICATIONS

1. This small scale project can be implemented in any public garden with minimum cost and resources.
2. This helps in proper utilization of the available resources and helps in avoiding wastage of electricity and water.

FUTURE SCOPE

1. This project mainly aims at the automation of the public garden to avoid wastage of resources.
2. This can be expanded in the sense of security. Using metal detectors and CCTV cameras security of the garden can be enhanced.
3. Also by using GSM technology further control of water supply and lights using mobile can be achieved