#  ADVANCED TIME BASED SYSTEM FOR PUBLIC GARDEN

**AIM**:

The aim of the project is to control various components in a garden to save electricity and water.

**PURPOSE**:

The purpose of this project is to implement microcontroller in various components of a garden like water pumps, main gates and lights etc to control them automatically.

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| **BLOCK DIAGRAM:****MICRO CONTROLLER****AT89S52** |
|  **LDR****ADC 0804** **LED****LAMP**  **RELAY**  **LCD DISPLAY****RELAY**  **BUZZER** **KEYPAD****RTC****Transformer** **DRIVER CIRCUIT** **DC MOTOR (FOR GATE)** **PUMP MOTOR****POWER SUPPLY:****Regulator section****Filter****Circuit****Bridge****Rectifier****Step Down****Transformer**DESCRIPTION: The most important problems faced are the misusage 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 will switches on the water supply once to water the entire garden for 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. Then lights are switched on depending upon the light intensity and the output of the LDR and the lights remain functional till the garden remains open for visitors. The garden remains open for few hours and at the time of closing a buzzer is sounded to indicate closure of the garden and alert the visitors. The gate is then closed and three of the four lamps are 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. All the timing works are done with the help of RTC.**HARDWARE USED:*** MICROCONTROLLER(AT89S52)
* RELAY
* ADC 0804
* LCD
* LDR
* PUMP MOTOR
* BUZZER
* LEDs
* DC MOTOR

**SOFTWARE USED:*** KEIL Uvision
* EMBEDDED’C’
* EXPRESS PCB
* EXPRESS SCHEMATIC

**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.  |
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**RESULT:**

By using this project, we can control various components in a garden and save electricity and water.