**REAL TIME EFFICIENT STREET LIGHT CONTROLLING SYSTEM**

**AIM:**

The main aim of this project is to design of real time clock based efficient street light controlling system using LDR.

**PURPOSE:**

The purpose of the project is to implement the street light control using RTC and intensity of light through LDR.

**BLOCK DIAGRAM:**

**MICRO CONTROLLER**

**AT89S52**

**POWER SUPPLY**

**STREET LIGHTS**

**RTC**

**LCD DISPLAY
16X2 LINES**

**KEYPAD**

**LDR**

**ADC 0808**

**Power Supply:**

 **Step Down**

**Transformer**

**Bridge**

**Rectifier**

**Filter**

**Circuit**

**Regulator section**

**DESCRIPTION:**

The main goal of our project is to control the switching of Street Lights automatically according to day time or night time. This allows us to realize the task efficiently and effectively without the intervention of human by making it automated and even we can avoid unnecessary wastage of power by switching it off at right time.

This project is designed around a microcontroller which forms the heart of the project. In our project we are going to make use of a device called RTC which stands for Real Time Clock which provides the details such as day month year date and time according to which the street lights are made ON and OFF. The RTC is interfaced with microcontroller to communicate and hence to get the information such as time etc and to control the switching of street lights.

Particular time at which the street lights should on will be stored in microcontroller through keypad. And also the light intensity will be calculated with the help of LDR and if the LDR value falls below the threshold value then the microcontroller switches on the street lights irrelevant of time, this is known as season based. The microcontroller communicates with RTC through a serial protocol called I2C. According to this project, the day and night timings are found with the help of RTC and street lights are switched accordingly.

**HARDWARE COMPONENTS:**

* Microcontroller(AT89S52)
* Power supply
* RTC
* Keypad
* LDR
* ADC 0808
* Street Lights
* LCD (16x2)

**SOFTWARE TOOLS:**

* Keil u-Vision
* Embedded C
* Express PCB

**APPLICATIONS:**

* Used in street light applications
* Used in Domestic applications.

**RESULT:**

According to this project we can develop an advanced street light control system thereby human effort and power wastage can be minimized.