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Automatic Street Light Controller

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Abstract -*Currently, all over the world, enormous electrical energy is used by lamps that are on the streets or in the company's surroundings. This is a huge waste of energy all over the world and should be replaced. Smart Street Lights is a project on intelligent illumination control of street lights for optimization of power consumption and street lighting problem, which lasts till late night. Street lights are being replaced with LED Street a lighting system today, which reduces power consumption. Smart street lights are an automated system that automates the road. The main purpose of smart street lights is to reduce power consumption when there is no driving on the road.*

1. INTRODUCTION

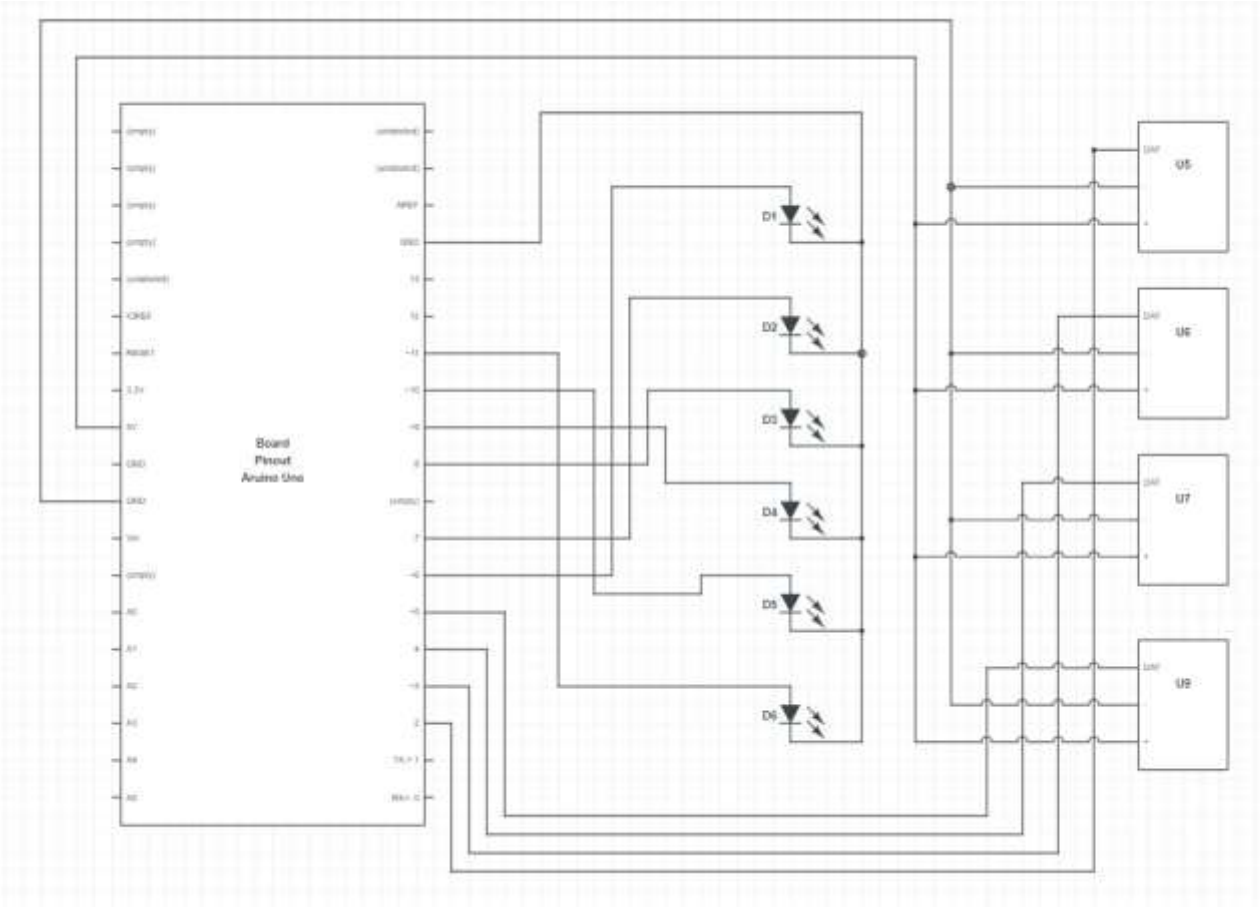
Automation plays a very important role in the world economy and daily life. Automatic systems are being preferred over any type of manual system. Intelligent light sensing refers to public street lighting that is conducive to movement by pedestrians, cyclists and cars. Intelligent street lighting, also known as adaptive street lighting, slows down when no activity is detected, but flashes when movement is detected. This project is about automatic street light. Our project is proposed on automated streetlights that provide speed to vehicles; pedestrians that enable sensors Turn the street lights on / off. Smart street lights are an automated system that automates the road. The main purpose of smart street lights is to reduce power consumption when there is no driving on the road.

2. LITERATURE RIVIEW

Now a days it is very important to save electricity, instead it should be switched on using electricity in unnecessary time when not in use. "Street lights" are a major power consumption factor in any city. Most of the time the street lights are on during the whole night till sunrise. Thus, a large amount of energy and power is wasted when it is no longer needed. Our system with the LED will glow when vehicles, pedestrians or any kind of movement is detected on the road. If the IR sensor detects any motion on the road, the LED will automatically turn on and the light will go off if there is no speed on the road.

3. METHODOLOGY

3.1. SYSTEM ARCHITECTURE



3.2. Hardware and Software requirements

- *Arduino UNO*
- *4 IR Sensors*
- *6 LED (generic)*
- *Breadboard , 170 Pin*
- *Arduino Integrated Development Environment(Supports C/C++)*

3.3. Working Principle

This system is very simple and economical. The IR sensors Sense a movement on the road and sends signal to Arduino and thus respective LED's are turned on. Each sensor have sequence of 3 LED's. When 1st sensor senses the vehicle the first 3 led and turned on. Same principle is used for all the sensors thus saving energy.

4. CONCLUSION

It is the design and implementation of an automatic streetlight / light system. The system was designed to automatically detect light and switch one's light. When it receives input from the IR sensor, the design uses a microcontroller to control the output. This design can be used in various areas such as streetlights, public parks and lights outside homes, etc. The use of this system also reduces energy consumption because nowadays manually operated street lights are not switched off and switched

on even after sunlight. before sunset. The area and cut-off area are not required in this project. The implementation of this project promotes digital work.

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