PROJECT REPORT

ON

“ROAD SAFETY”

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Submitted to

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ACKNOWLEDGMENTS

In the accomplishment of this projects successfully, many people have best owned upon me their blessings and heart pledge support, this time I am utilizing to thank all the people who have been concerned with project.

Primarily, I would thank god for being able to complete this project with success. Then I would like to thank our physics **Prof. Dr. SANGEETA JADHAV** whose valuable guidance has been the one that helped me patch this project and make it full proof success his guidance and his instruction has served as the major contributor towards the completion of the project.

CERTIFICATE

This is to certify that **AMAN GUPTA (4209), AMAN (4208), AYUSH ADHIKARI (4220)** have successfully presented her/his own work for Project in First Year Engineering in the form of Audit Course Project Report titled **" ILIGHTO "** in the Department of Applied Sciences & General Engineering, Army Institute of Technology, Pune, for the academic year 2018 -2019.

DR. SANGEETA JADHAV

Audit Course Project

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INTRODUCTION

Speed Thrills but Kills", despite having so many accidents every day, people want to accelerate their daily routine. There has been such a terrible environment due to a lot of accident on the roads of India that now all this is seen a big concern for road safety management.

MOTIVATION

Road traffic crashes are one of the world's largest public health and injury prevention problems. The problem is all the more acute because the victims are overwhelmingly healthy before their crashes. According to the World Health Organization (WHO), more than 1 million people are killed on the world's roads each year. A report published by the WHO in 2004 estimated that some 1.2 million people were killed and 50 million injured in traffic collisions on the roads around the world each year and was the leading cause of death among children 10–19 years of age. The report also noted that the problem was most severe in developing countries and that simple prevention measures could halve the number of deaths.

PROBLEM

Blind corner

A **blind corner** or **blind turn** is a corner on a road where the view of what is behind the corner is obstructed. The view could for example be obstructed by buildings, hills or trees. Warning signs are often placed on such roads to warn traffic.

Vehicle-to-vehicle communication offers the possibility to reduce the risk of accidents on blind corners.

Fog and mist

According to Wikipedia - Fog is a cloud that is in contact with the ground. Although mist and fog look like smoke, they are tiny drops of water floating in the air. They can be described as clouds that have formed at ground level.

Old traffic management system

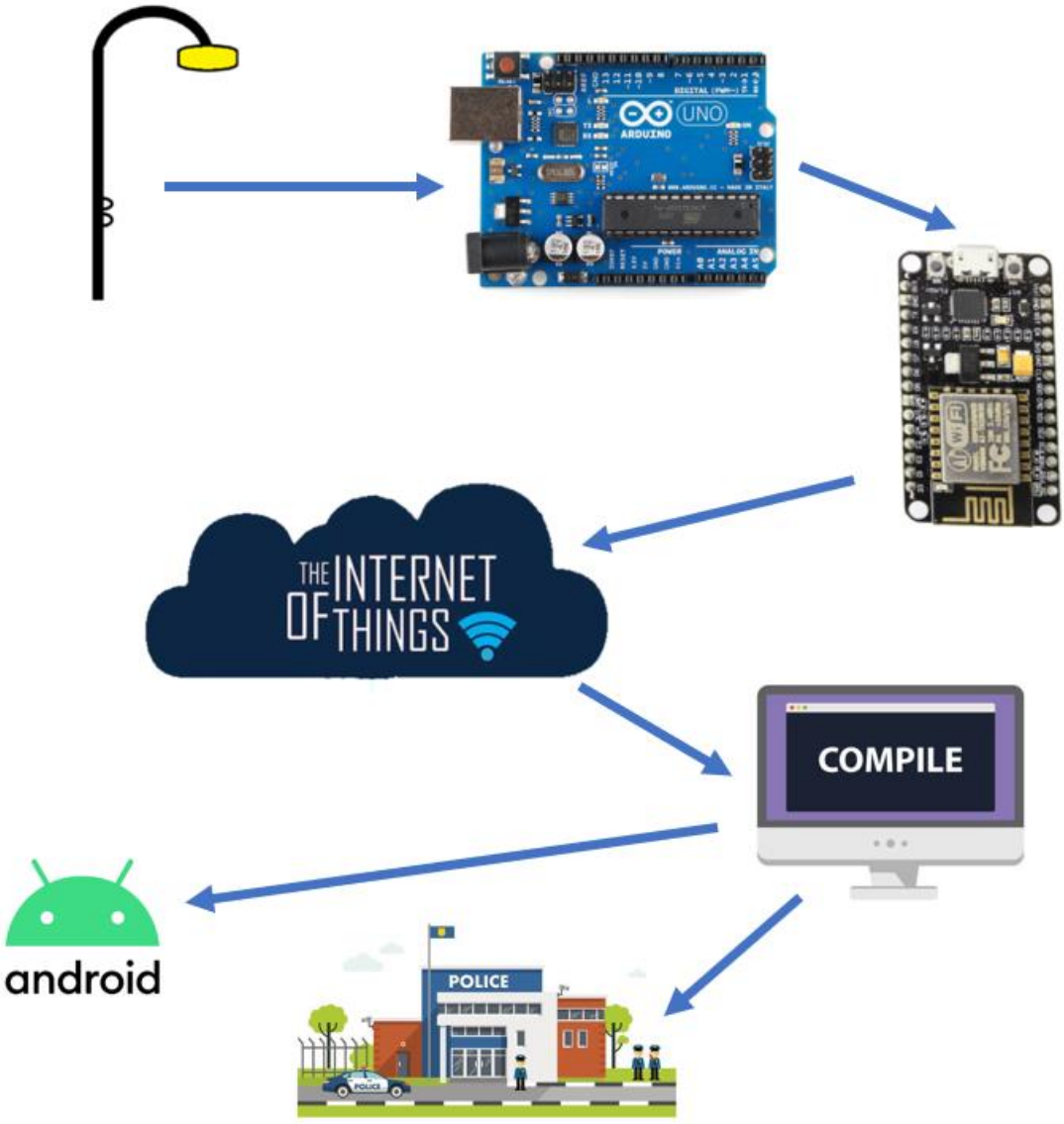
On Indian roads the traffic light management system works on a timer-based system which do not incorporate the real time traffic density of the cross road.

DESCRIPTON

On Indian roads the traffic light management system works on a timer based system which do not incorporate the real time traffic density of the cross road. our project aims to modify this traffic management system by incorporating the real time traffic density using ultrasonic sensor.

The blind corner model avoids accidents by indicating the presence of vehicles on other end of blind corner.
Smart street light model saves energy by turning on only in the presence of traffic and avoids accidents in case of fog and mist.

WORKING METHODOLOGY



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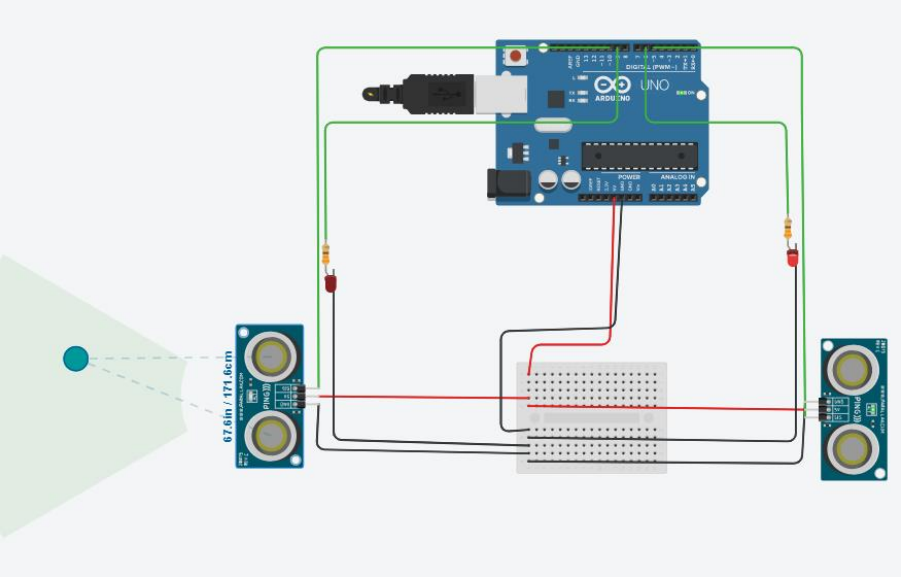

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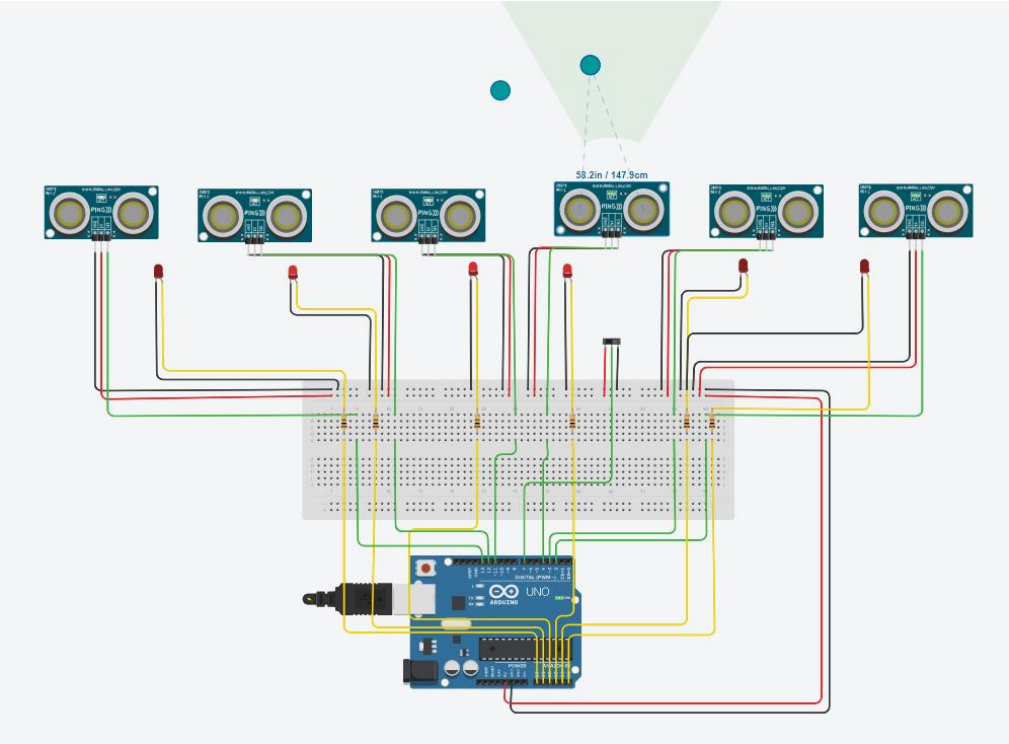

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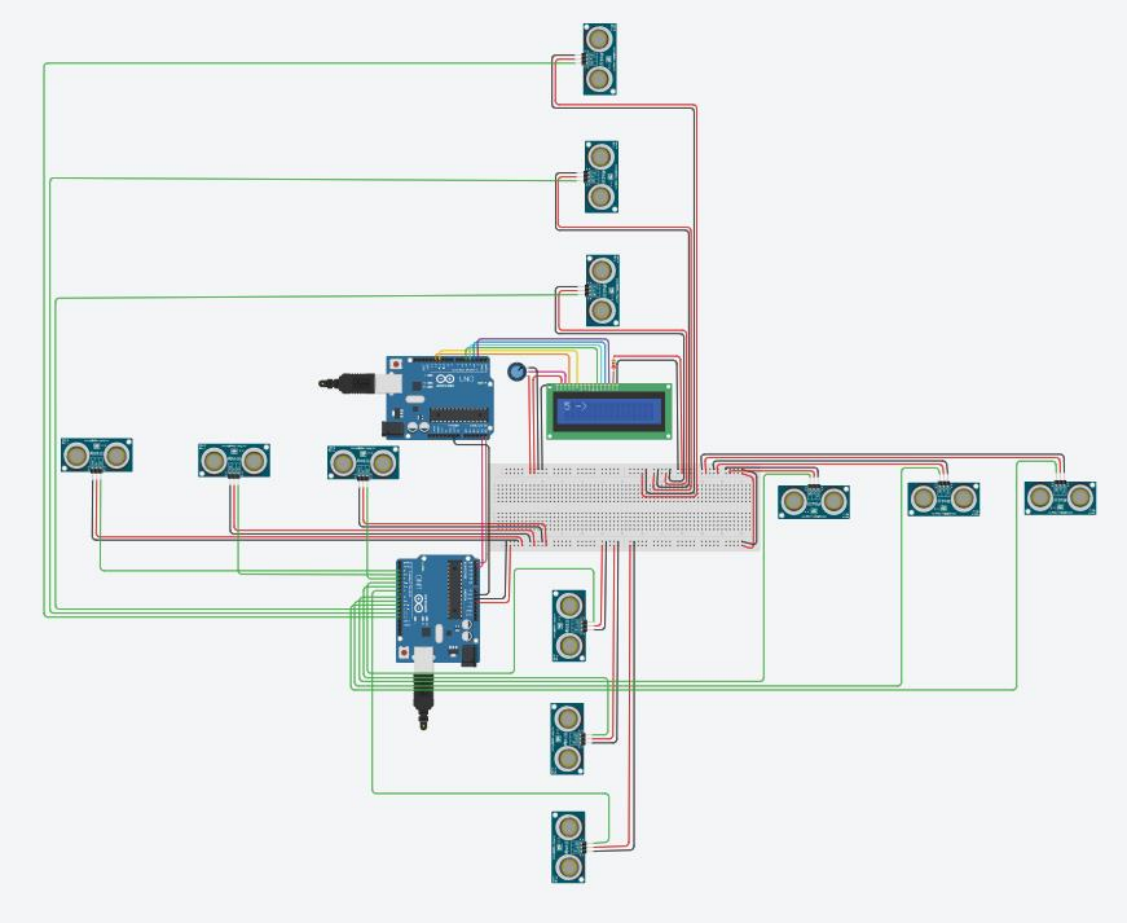

ADVANTAGE

Time saving using smart cross road traffic management system

Energy efficient using smart street lights

Avoids accidents using smart cross road traffic management system and smart street lights.

SUMMARY

Traffic light control systems are widely used to monitor and control the flow of automobiles through the junction of many roads. They aim to realize smooth motion of cars in the transportation routes. However, the synchronization of multiple traffic light systems at adjacent intersections is a complicated problem given the various parameters involved. Conventional systems do not handle variable flows approaching the junctions. In addition, the mutual interference between adjacent traffic light systems, the disparity of cars flow with time, the accidents, the passage of emergency vehicles, and the pedestrian crossing are not implemented in the existing traffic system. This leads to traffic jam and congestion.

CONCLUSION

We propose a system based on PIC microcontroller that evaluates the traffic density using ultrasonic sensors and accomplishes dynamic timing slots with different levels. Moreover, a portable controller device is designed to solve the problem of emergency vehicles stuck in the overcrowded roads.

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