A PROJECT REPORT

ON

Smart Parking System

Bachelor of Technology

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ACKNOWLEDGEMENT

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“Smart Parking System”.

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PROBLEM STATEMENT

- Parking management influences drivers search time and cost for parking space.
- It may also causes traffic congestion.
- Finding parking space in most cities,

especially during the rush hours, is difficult for drivers.

- Difficulty arises from not knowing where the available space may be at that time traffic congestion may occur.

INTRODUCTION

We see the ineffectiveness of excess vehicles to manage them in the correct order. As the population increases day by day the rate of utilization increases and coping with the numbers become a task. The parking problem causes traffic congestion and air pollution.

Smart parking system is the key to reduce the wastage of fuel. It can be a solution to minimise time and efficiency as well as the cost of the fuel burnt in search of the parking space.

MOTIVATION

The traffic is one of the major effect of population growth in urban areas. Due to this searching for a parking area during peak hours is not only time consuming but also results in wastage of fuel. The driver keep searching for suitable parking which leads to increase in traffic. Increasing volume of vehicular exhaust creates a bad impact on the

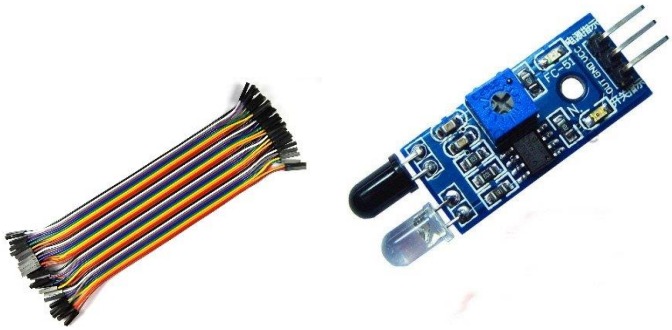
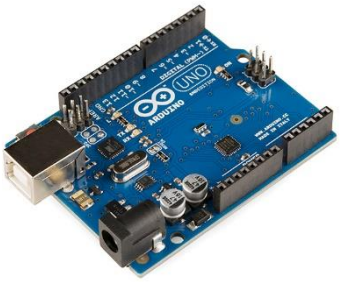
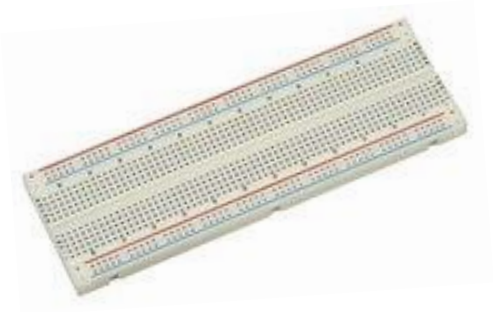
environment. Hence reservation based smart parking has become the need for us.

WORKING PRINCIPLE

Smart car parking system works on the principle of detecting obstacle and send a visual feedback. Arduino is the brain of system. It controls and watches over all the components. The ultrasonic sensors will be placed in the parking slots that will tell about the presence of the cars inside the parking slot. While entering, the car is noticed by the sensors. Firstly by the outer sensor and then the innser sensor. The count increases and result is shown in screen. And while exiting, firstly the inner sensor notices and then the outer sensor. The count decreses and result is shown in screen.

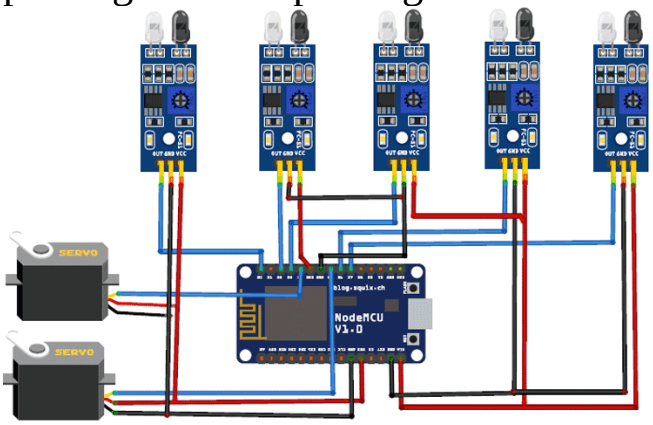
TOOLS USED

- Arduino Uno
- Ultrasonic sensor
- IR Sensor
- Jump Wires
- Breadboard

IMPLEMENTATION

This model has capacity of four cars. There are sensors at the entrance to detect the presence of car before going inside or outside of the parking. The other sensors inside the parking lot to detect the car individually for each parking slot. The projection on the screen corresponds to the system model parking slots. As this is a web-based representation, anyone will be able to get the status of the parking lot by visiting the website on the URL through their cell phones, laptops, desktops and other internet supporting device. The model of the parking has four parking slots.



CONCLUSION

Due to the rapid increase in urban population, there is decrement in the number of parking spaces and an increment in traffic congestion. This project helps citizen to find parking slots and also decreases the time of everyone which is taken in finding the slots. It is very helpful for the city also. As in the future work the users can book a parking space from mobile. GPS, reservation facilities and license plate scanner can be included in the future.

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