

AN AUTOMATED IDENTIFICATION SYSTEM OF PILFERED VEHICLES WITHOUT NAVIGATION TRIALING

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Abstract: Now-a-days, vehicle thefts are occurred frequently in many cities. Although, cops put their high effort to identify the stolen vehicles, many of them cannot be retrieved due to lack of technology. Some robbers theft vehicles to do their own interest of things and duties. After completing their work, they could park the vehicle in any public parking which may be at far distance from the place where they got them. To identify such kind of vehicles, a proposed system consists of continuous monitoring of vehicles in public parking with information update over internet.

Keywords: Vehicle Theft, Public parking, Monitoring vehicles

I. INTRODUCTION:

Today, the parking industry is being transformed by new technologies that are allowing cities to reduce rates of congestion significantly. Sensor networks that sense vehicle occupancy are providing the basic intelligence behind smart parking systems. Thanks to the Smart Parking technology, it is now possible to know in real-time the location of free parking spaces and to help drivers to get to their ultimate destination. The wireless sensors are still intrusive, they are embedded in the pavement, or taped to the surface of each individual parking lot.

ADVANTAGES:

- Saving of time
- Easy to get parking slot.
- Theft vehicles will be identified easily

II. REVIEW OF LITERATURE

2.1 Design and Implementation of Microcontroller Based Anti-Theft Vehicle Security System using GPS, GSM and RFID Year(2018)

Abstract: Stealing the vehicle is the major threat to car or vehicle owners. Nowadays, it is increasing day by day. If not recovered soon, stolen vehicle are generally sold, revamped or even burned, if the resale price is considered to be too low. When a vehicle is stolen, it becomes hard to locate and track it, which considerably decreases the chances of recovering it. An Anti-Theft vehicle security has been developed to mitigate this problem. This system consists of a PIC16F876A microcontroller, fingerprint, RFID, GPS-GSM modules and a tilt sensor. The car will be started with RFID or fingerprint or password. If an unauthorized person wants to open the door of the vehicle, it will ask for correct RFID or password or fingerprint. The tilt sensor is used to measure any breaking of windows or doors and movement of the vehicle, a message will be sent to the owner's mobile containing the location of the car via GPS-GSM module. The system gives also an alarm. Furthermore, the connection to the fuel injector of the car is deactivated to prevent the unauthorized start of the vehicle anyhow. This anti-theft security system enhances the chances of recovering the car.

Advantages:

- It will be very useful technique for findout the vehicle parts.

Disadvantages:

- Implementation of project is very difficult.

2.2 RFID Based Theft Detection System for Automobile Parts Year(2020)

Vehicle parts theft is an area of crime where less attention is being paid and weak countermeasures are being used in Sri Lanka. A survey has been conducted to find the need of an enhanced vehicle security system which can detect theft and

authenticity of vehicle parts, and also to identify which vehicle parts are being commonly stolen in Colombo, Sri Lanka. In consonance with the results of the survey, it was obvious of the need for such vehicle security system. This research paper presents the design, implementation and testing of the prototype model that has been built as the proposed solution to prevent or minimize vehicle parts theft and detect the authenticity of the vehicle parts, if original parts of the vehicle were replaced with aftermarket parts without the user's consent. Theft and authenticity of vehicle parts are detected using RFID technology in the developed prototype model. To make this vehicle security system an affordable solution to the vehicle owners, a single low-cost RFID reader is used and an anti-collision mechanism is built based on TDM and signal relaying, as a cost cutting strategy to read multiple RFID tags.

Advantage:

Low cost

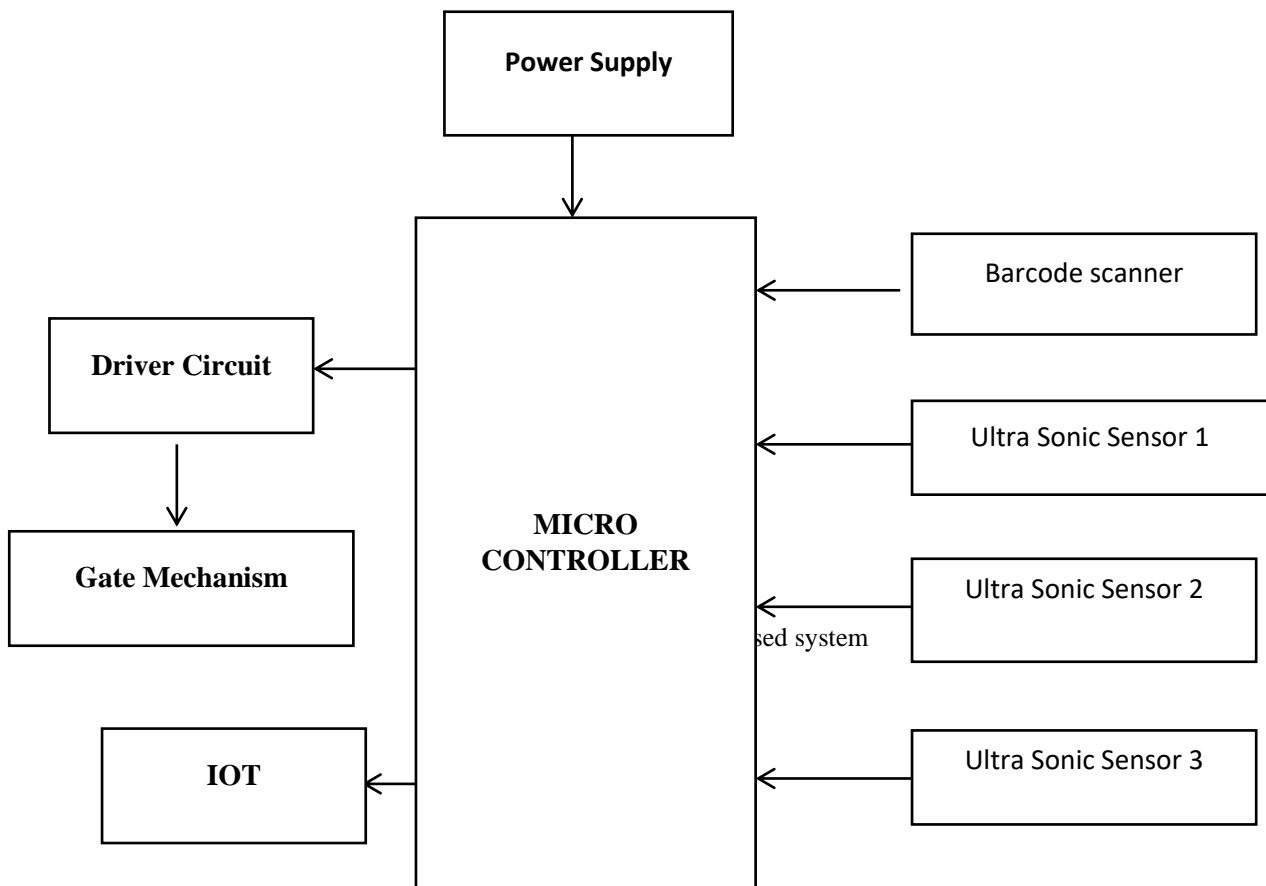
Disadvantage:

This technique is complex

III. PROPOSED SYSTEM:

In proposed system we are using microcontroller as heart of the project. In this system, every incoming vehicle have its own barcode. When these vehicles enter for parking, the barcode of vehicle will be scanned by barcode scanner. While scanning, amount will be debited from the user's account along with user details. After scanning, three ultrasonic sensors are connected in parking slot will detect the availability of space for vehicle parking. A driver circuit is used here to drive the gate mechanism. Once the vehicles are parked in slot, then the motor closes the door. Then the presence of vehicle will be detected for certain period of time. If the time exceeds, then alert intimation will be sent to the owner of the vehicle. If he doesn't respond within certain time, then alert information will be sent to police. All statuses will be updated in webpage using IOT.

3.1 Block Diagram of Proposed System:



3.2 Flow chart of Proposed System:

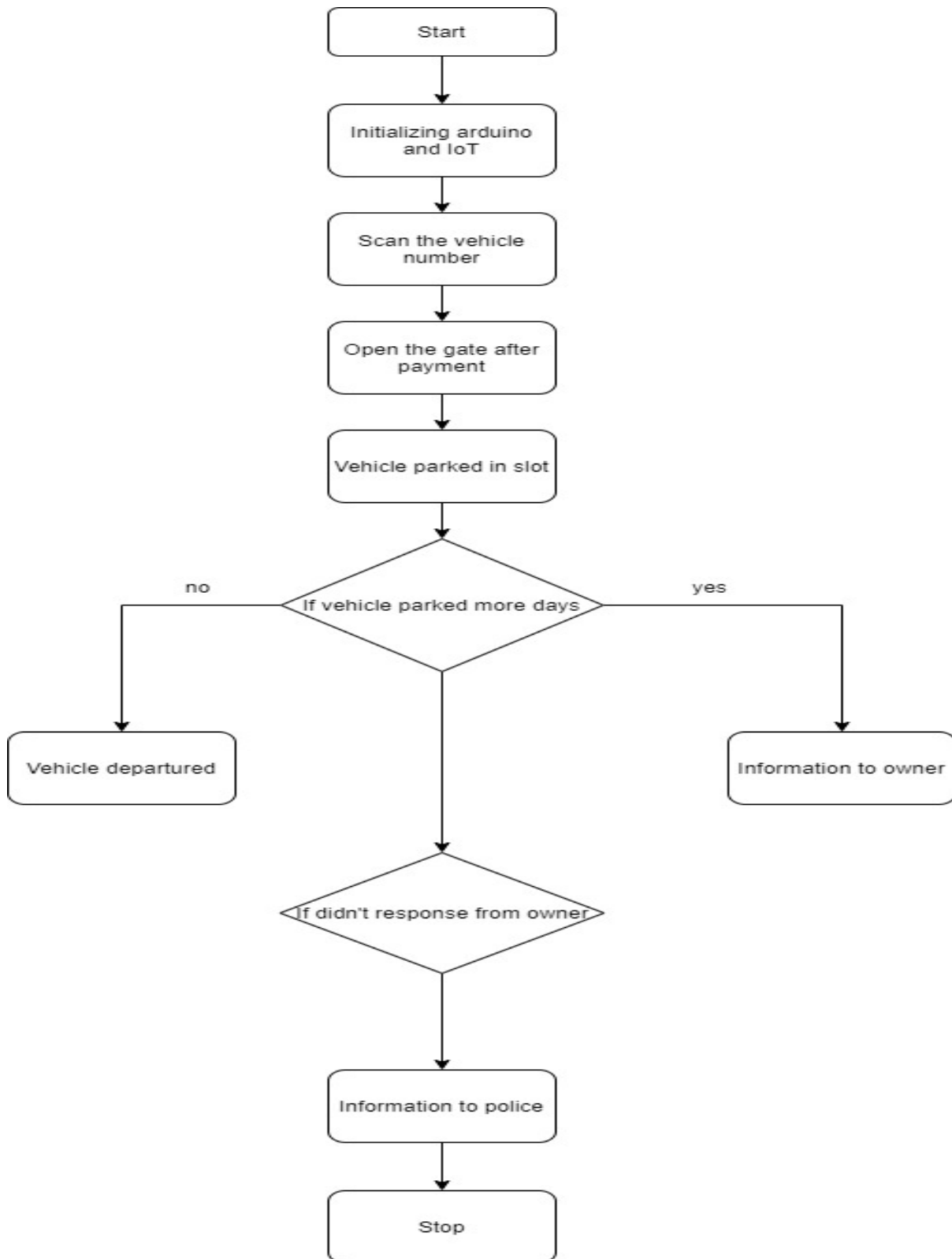


Fig 3.2 flow chart of proposed System

IV. WORKING:

4.1 Vehicle parking System:



Fig 4.1 Vehicle parking system

The hardware components are mentioned in the proposed system. Here we are using Arduino uno as the primary microcontroller. The amount will be debited from vehicle owner's account using barcode scanner.

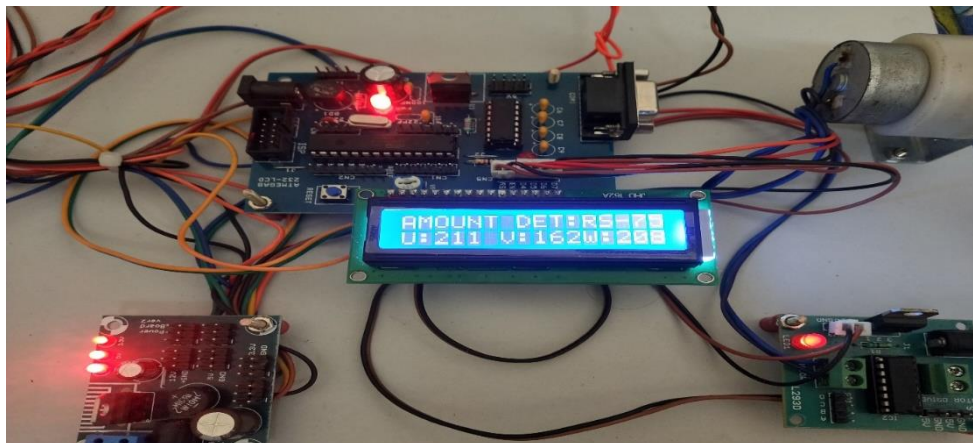


Fig 4.2 Amount debited

4.2 Vehicle Parked in slot:

After amount debited the vehicle parked in the slot.



Fig 4.3 Vehicle parked in slot

4.3 Information to owner:

The system monitoring vehicle at particular time for security purpose. If time exceeds the indication sent to owner's mobile number.



Fig 4.4 Info to owner

4.4 Information to Police:

In case of didn't get response from the owner, the information will be sent to police through IoT.



Fig 4.5 Information to police

4.5 Cloud data:

#	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	INFO TO POLICE	VEHICLE NO:TN 73 aw 8822	PARKED FOR MORE DAYS	NA	NA	NA	NA
2	INFO TO OWNER	VEHICLE NO:TN 73 aw 8822	PARKED FOR MORE DAYS	NA	NA	NA	NA

APPLICATIONS:

1. Vehicle theft identification system.
2. Vehicle parking system.

V. CONCLUSION:

The presentation included a demonstration of a novel intelligent parking sensor device. It allows for real time parking tracking and payment without need for user or driver contact. The sensor system benefits from the proposed ground breaking solution in terms of detection and payment reliability, as well as cost savings by reducing system complexity and investing in infrastructure.

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