WORKINGOF ONLINE ACCESS CONTROL SYSTEM FOR VEHICLES IN TRUCK-LOADING FUELS TERMINALS

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ABSTRACT---The world is moving towards the use of the "Future Internet" concepts. The appearance of the Internet of Things (IoT) as a new Future Internet concept has led to a new wave of application potential which could play an important role in our daily life. The concert of existing applications may be better greatly by applying IoT-enabling technologies efficiently. This paper explains the system which is capable of automatically deducing the dispensed amount of petrol from user prepaid card (i.e., RFID card) and that deduced amount information and remaining balance of the card is send to the customer and even that deduced amount information is send to the web server using Wi-Fi technology. Here, we are maintaining each customers petrol dispensed information on the web server which connects all the petrol stations across the country.

Keywords: RFID, IoT, Web Server, HTTP, Embedded Access Control, Gate Reader.

I. INTRODUCTION

Internet of Things (IoT) represents a new paradigm where the barriers between the real and cyber realms are increasingly annihilated by turning out every day physical device to smart object able to provide smart services. These services are bringing addedchances but at the same time growing new tasks particularly in security and privacy. In fact, the verification and permissionproblems have been intensively examinedover existing rules for use cases outside constrained environments. However, in constrained environments such IoT, those issues are still in their beginning and additional desires hinder the use of several security rules. In particular, the need arises for a dynamic and fine-grained access control mechanism, where users/resources are constrained [1]. The mainobjective of Internet of Things has been the establishment of value-added services based on the universally available smart devices that can offer different services by interacting with everyone. However, the example has developed to its next phase, Social Internet of Things (SIoT), with the beginning of an idea to enable these devices with awareness. This knowledgeallows these smart devices to socialize with all other based on mutual context and mutual interests. The Social Internet of Vehicles spread on SIoT models in the vehicular domain to change the remaining ITS (Intelligent Transport System) is done by adding price to existing VANET (Vehicular Ad-hoc Network) technology[2].Intermodal passagecontains the use of carriage containers using multiple modes of transport (railway, freighter and lorry) without any handling of the freight itself when changing modes. The shipping containers are replaced in intermodal stations or stations. The optimization in the supervision of such terminals is very vital because the load times have a excessive impact in the commercialincome. Thus, the productivity of identifying and locating shipping containers inside the mortal is serious [5].In actual, numerous vehicles have possessed powerful sensing, networking, communication and data processing capabilities and can interconnect with additional vehicles or discussion information with the external environments over various protocols include HTTP, TCP/IP, SMTP, WAP and NGTP (Next Generation Telematics Protocol). As a outcome, various innovative telematics facilities such as remote safety for restricting engine and remote diagnosis have been established to enhance drivers' safety, convenience and satisfaction [3]. This paper defines the system that is accomplished of roboticallycollecting the

circulated amount of petrol from user prepaid card (i.e., RFID card) and that collected amount information and remaining balance of the card is send to the costumer and even that gathered amount information is direct to the web server using Wi-Fi technology.

II.COMPONENTS REQUIRED

A. ARDUINO UNO

It is a microcontroller board based on inputs and outputs. Itholdsthe whole thingwanted to support the microcontroller; basically connect it to a computer. " [4].
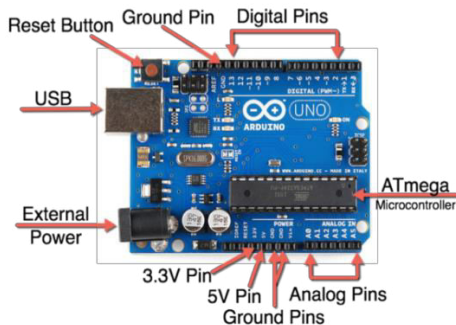

Fig 1.Arduino Uno

B. BUZZER

A buzzer is a minorhowevereffectivemodule to add sound features. There are two types are buzzers that are normallypresented. The one is a modest buzzer make a Constant Beeeeeeppp...sound, the other type is readymade buzzer that will appearaelarger than this and will produce a Beep. Beep. Beep.

Fig 2.Buzzer

C. WIFI MODULE

The WiFi Module is a self contained chip. It containedwith mutual TCP/IP protocol stack. Thus it can providesome microcontroller access to your WiFi network. This component has a powerful appropriate on-board processing and storingability. Thus it allows it to be integrated with the sensors and other application specific devices to interconnect [7].
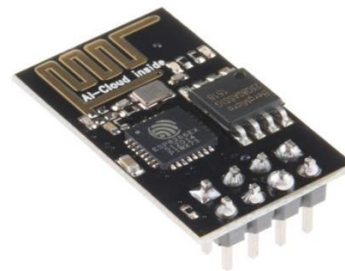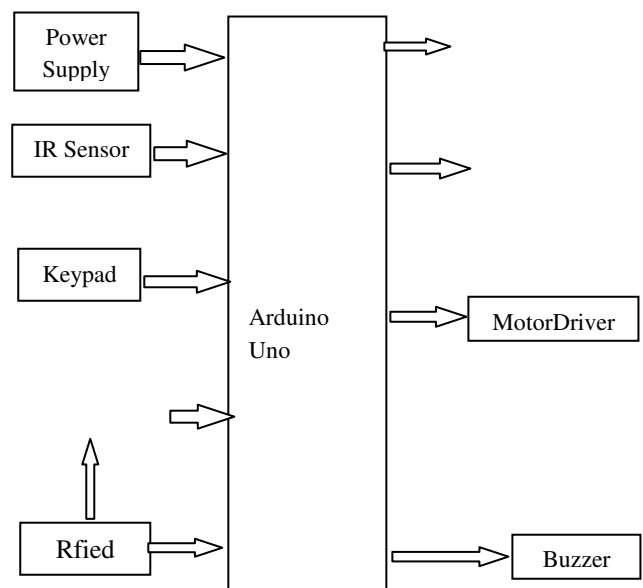

Fig 3.WiFi module

D. LCD DISPLAY

A liquid crystal display or LCD draws its classification from its name. LCD procedures a liquid crystal to produce a visible image and operational voltage is 4.7Vto 5.3V [6].

III. BLOCK DIAGRAM

IV. WORKING PRINCIPLE

Here we using IR sensor to detect vehicle come or not. When RFID card or tag comes in the range of RFID reader, the RFID reader reads the ID number of the RFID card and sends to the Arduino UNO microcontroller. Where the ID numbers of the RFID cardsare already stored in the microcontroller. The authorization is verified by the microcontroller.If RFID card is authorized than microcontroller displays RFID card is authorized on the LCD screen, otherwise it displays RFID card is unauthorized and initiates the buzzer. Microcontroller gives the access to the customer to enter the amount of the petrol using keypad only if RFID card is authorized and it is displayed on the LCD screen. Thus the microcontroller authorizations that the available balance of the RFID card is more than the entered amount. If it is more than microcontroller turns ON the pump motor through relay switch for a particular time period and then pump motor automatically turns OFF and buzzer also activated. After completion of petrol filling process, the information of the petrol dispensed amount and remaining balance of the RFID card is send to the costumer and also sends to the web page through Wi-Fi module.

V.CONCLUSION

This system links all the petrol stations of diverse companies on a single Web server and this web server access is protected by a password and this password is only known to the petrol companies. On this web server we are maintaining the dispensed petrol information and available balance of the costumers. And even this information is send to the costumer's mobile phone. Otherprominence of this system is to give the safety and security to the costumers instead of carrying the money every time.

VI.REFERENCE

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