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An Embedded Based Smart License Registration System

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ABSTRACT

A framework for viewing the competitor whether he/she is qualified for getting permit by utilizing a embedded based enhanced license registration system has been proposed here. The method changes its yield when there is any weight change over the surface. Hence the differential yield from the proposed distinguishes the competitor who neglects to keep his/her foot in the vehicle while following the way. At that point the differential yield was handled by the small scale controller. The ultrasonic sensor is utilized for hand flag recognition and unique mark sensor is utilized for the quantity of endeavor. This can anticipate the acts of neglect that are associated with the RTO segments. Along these lines just legitimate applicants with suitable age point of confinement can be experienced to give the permit this diminishes the mishaps on driving. The aftereffects of the test are refreshed deliberately in the PC along these lines can accept the permit according to the arrangement. This working model is been executed by utilizing the microcontroller.

Keywords : IR Sensor, pic16f877a, Zigbee

I. INTRODUCTION

RTO the executives will have a great deal of work with respect to enrollment of vehicles and issue of driver's permit. Driving without driving permit is a noteworthy issue in numerous nations. Survey says that the accidents happened mostly by the unlicensed drivers, drunken drivers and less usage of seatbelts. For some unlicensed drivers, requirement and punishments are not solid hindrances and furthermore there are additionally regulatory escape clauses which some exploits. There gives off an impression of being a general laxity in the arrangement of checking the legitimacy of records and their possession – for instance it is asserted to be clear for an unlicensed driver to pass himself off as a companion (with a permit) and later present the companion's archives at a police headquarters. Blueprint a structure to keep non approved individual from driving. Standard maxim behind development is making secure driving structure for customer. Attributable to dangerous conditions on streets, the rate of mishaps in India has been high.In recent days life technology has been developed and the growing technology introduces many advances in day to day life. Unlicensed driving involves worry for a few reasons. It is conceivable that drivers who have not experienced proper preparing and testing might be inadequate in some part of the information and abilities required to drive securely and effectively.Normally, in driving test a candidate applied for license have to drive over a closed loop path in front of the authorities. The corruption in the current system is very much; to tackle the corruption we came up with this idea. As the level of transparency increases, the prevalence rate of

corruption decreases in issuing of driving licenses in the RTOs. It does not require interaction between the officials and the citizens, negating the chances of corruption. This project helps to get driving license for the candidate without any biased interference of authorities. The automated driving license test is designed in all the possible driving challenges. It assesses the overall traffic knowledge and driving skills of applicants on the automated test through sensors. In this project IR sensors are used on the test to monitor the vehicle movement and tests driving skills of the candidate. And also the authority person needs not to monitor the candidate who enters for the license test. Before entering for the driving license test candidate has to be registered. If candidate gets qualified he can get license. Suppose if the candidate fails to drive properly then that license is canceled.

II. RELATED WORK

This paper displays about the robotization of driving permit test framework. Typically, in driving test a competitor connected for permit need to drive over a shut circle way before the experts. The applicant needs to roll over the way with no help over the land surface and in the event that he neglects to do he will be precluded. For that, the experts watch competitor physically. In this venture, a lab see framework with sensor has been produced for viewing the contender for getting permit by utilizing lab see. By utilizing this, the competitor who neglects to keep their foot in the vehicle by differential yield from the sensor can be observed[4].

The controller module detects the movement of the test vehicle on the test track alluded to as zero rpm estimation and the LabVIEW based virtual instrument gives a Graphical User Interface to remote end checking of the sensors implanted on the test track. The proposed mechanical answer for the robotization of existing manual test process empowers the disposal of human intercession and improves the driving test exactness while running paperless with Driving Skill Evaluation System. As a commitment to the general public this mechanical arrangement can lessen the quantity of street mishaps in light of the fact that most mishaps results from absence of arranging, expectation and control which are very reliant on driving ability[7].

The principle target of this undertaking is to avert non-licensees from driving and causing mishaps, another framework is proposed. A significant and entirely dependable human recognizable proof technique is unique finger impression ID. Unique mark ID is a standout amongst the most mainstream and solid individual biometric distinguishing proof techniques[8]. Existing security standard for the vehicles utilizes remote control get to innovation. No solid security frameworks structured up until this point. So vehicle burglaries have expanded in huge numbers. In this undertaking we have created safety belt identifier, entryway lock sensor, liquor sensor and Bio metric sensors. All stages should be cleared to switch on the start. All stages can be performed consecutively.

Point of this venture is to make the unmistakable, proficient and the straightforward trial of the any driver which needs the permit of driving by to following the driving of another individual while giving driving test. In genuine circumstances on the off chance that any driver isn't great in driving, at that point additionally he got the permit of driving through the specialists of the driving school. By utilizing this venture we can help to our nation to decrease the debasement. At that point the extent of the mishap is expanding by giving the permit to the wrong individual. This circumstance can be taken care of by the task which help to offering permit to the opportune individual as it were.

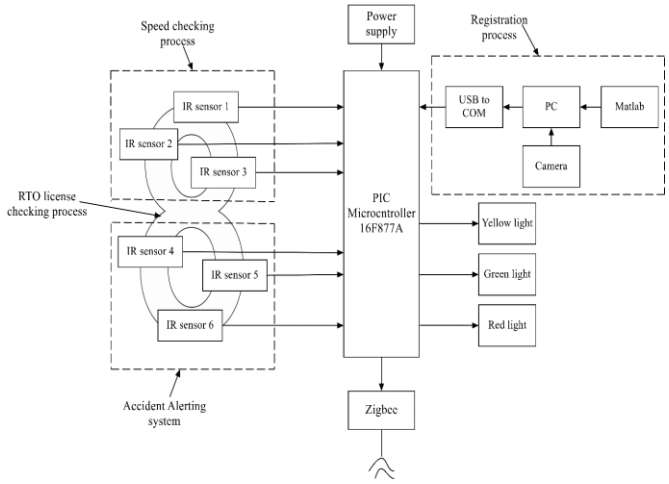

Figure 1. Block diagram

III. METHODOLOGY

The input 230V AC voltage applied to Switched mode power supply. SMPS consists of Rectifier, capacitor, DK112 IC, step down transformer. Rectifier is converting AC into pulsating DC of 230V.In Rectifier analog input is connected to the switch and positive, negative edge is connected to the capacitor. DK112 IC is converting 230v DC to 30v AC. Step down transformer it step down 30v AC to 12v AC. And the rectifier is converting 12v AC to 12v DC. 1000uf Ceramic capacitor is used to filter the harmonics in the power supply line. The capacitor is connected to the voltage regulator. The 7805 voltage regulator has 3 pins. First pin is 12v input pin, second pin is ground, pin and third pin is 5v output pin. Input 5v is given to a PIC microcontroller. The main operation is controlled by PIC microcontroller which is used to control the entire system. Here we consider as four processes. The first one is RTO license registration process through a PC. The second one is an RTO license checking process through IR sensors. Third one is vehicle speed level. Fourth one is an accident altering process. This information will be transmitted through zigbee. In receiver side these information displayed on the LCD display and Buzzer will be ON.

Component Description

Power Supply

Fundamentally any electronic circuit keeps running with a power supply. Here we are giving a 5v supply to the different IC's utilized in the plan exhibited here. We get a 240V supply in our home at any moment. So as to give our circuit fitting supply voltage an alternate power circuit is to be made dependent on our necessity.

SMPS

Exchanged Mode Power Supply utilizes a changing controller to change over electric power productively. SMPS exchanges electric power from a source (AC mains) to the heap by changing over the attributes of flow and voltage.

Input rectifier

The AC contribution from mains is first corrected in the SMPS utilizing a rectifier to change over it into DC. The rectifier comprising of a full wave diode scaffold or module that creates an unregulated DC voltage to the Smoothing capacitor.

Pin configuration of pic16f877a

As it has been referenced previously, there are 40 pins of this microcontroller IC. It comprises of two 8 bit and one 16 bit clock. Catch and think about modules, sequential ports, parallel ports and five info/yield ports are likewise present in it.

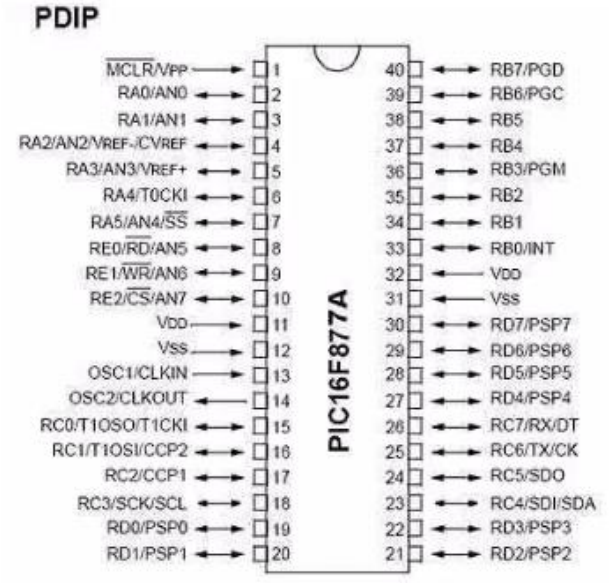

Figure 2. pic16f877a

IR Sensor

IR sensor fundamentally comprise an IR LED and a Photodiode, this pair is by and large called IR pair or Photo coupler. IR sensor take a shot at the primary in which IR LED produces IR radiation and Photodiode sense that IR radiation. Photodiode obstruction changes as per the measure of IR radiation falling on it, consequently the voltage drop crosswise over it likewise changes and by utilizing the voltage comparator (like LM358) we can detect the voltage change and produce the yield in like manner.

Figure 3. IR Sensor

LCD Display

Figure 4. LCD Display

A liquid crystal display (LCD) is a flat panel display, electronic visual display, or video display that customs the light modulating properties of liquid crystals. Liquid crystals do not emit light directly.

IV. CONCLUSION

Checking the hopeful's driving abilities who connected for driving permit whether the applicant is qualified for getting permit by utilizing PIC Microcontroller and furthermore the framework is utilized to test driving aptitudes on vehicle with no experts. So hopeful will be naturally chosen or reject by the framework. It will decrease the labor and there is zero chance for any unlawful action. It likewise causes RTO authorities to keep up records efficiently and decrease a great deal of administrative work and manual endeavors. This procedure expects to help the client in sparing their time if these reports confirmation. By this task we can give permit just to qualified competitors. The proposed computerized driving permit test is worthwhile over existing manual test.

V. REFERENCES

[1]. Cross verification of Vehicle and Driver for RTO ISSN:0976-1353 Volume 14 Issue 2 –APRIL 2015.

[2]. Yan Lin, Senior Member, IEEE, Gary A. Jordan, Mark O. Sanford, Jinxiang Zhu, Member, IEEE, and William H. Babcock, “Economic Analysis of Establishing Regional Transmission Organization

and Standard Market Design in the Southeast", IEEE TRANSACTIONS ON POWER SYSTEMS, VOL. 21, NO. 4, NOVEMBER 2006

[3]. Juszkiewicz," The use of Adobe Flex in combination with Java EE technology on the example of ticket booking system", in CAD Systems in Microelectronics (CADSM), 2011, pp. 317 – 320

[4]. Wan-Mi Chen, Yu-Cheng Chen, "Web design and implementation for remote control", in Intelligent Control and Automation (WCICA), 2012, pp. 920 – 924)

[5]. Xiaosheng Yu, Yichang, China Cai Yi, "Design and Implementation of the Website Based on PHP &MYSQL", in E-Product E-Service and E-Entertainment (ICEEE), 2010, pp. 1 – 4.

[6]. Bazghandi, "Web Database Connectivity Methods (using Mysql) in Windows Platform", in Information and Communication Technologies, 2009, pp. 3577 - 3581

[7]. Norul Huda Yusof, Rosilah Hassan, "Flash Notes and Easy Electronic Software (EES): New Technique to Improve Digital Logic Design Learning", in International Conference on Electrical Engineering and Informatics, 2011.

[8]. Marianne Bertrand, Simeon Djankov, Remma Hanna and SendhilMullainathan,"Obtaining a Driver‟s License in India: An Experimental Approach to Studying Corruption", The Quarterly Journal of Economics (2007) 122 (4): 1639-1676.

[9]. Driver errors cause most road deaths in India". The Times of India on the web.2010 – 07-04.

[10]. Mondal, P, Abhishek Kumar, U. D. Bhangale, and Dinesh Tyagi. "A Silent Tsunami on Indian Road: A Comprehensive Analysis of Epidemiological Aspects of Road Traffic Accidents". British Journal of Medicine & Medical Research: 1(1):14-23, 2011. 2011-09-26.

[11]. ShizhuangLin; JingyuLiu; YanjunFang; Wuhan Univ., Wuhan" ZigBee Based Wireless Sensor Networks and Its Applications in Industrial"IEEEInternational Conference on Automation and Logistics, 200718-21Aug.2007page(s):1979-1983.

[12]. Xiuping Zhang; Guangjie Han; Changping Zhu; Yan Dou; Jianfeng Tao;" Research of WirelessSensor Networks based on ZigBee for Miner Position", [J]International Symposium on Computer,Communication, Control and Automation, IEEE. 29 July 2010Pg1 – 5.

[13]. Dunfan Ye, Daoli Gong, Wei Wang,"Application of Wireless Sensor Networks in EnvironmentalMonitoring"2nd International Conference on Power Electronics and Intelligent TransportationSystemIEEE2009pp- 2563-2567.

[14]. Marianne Bertrand, Simeon Djankov, Remma Hanna and Sendhil Mullainathan, "Obtaining a Driver's License in India: An Experimental Approach to Studying Corruption", The Quarterly Journal of Economics (2007) 122 (4): 1639-1676.

[15]. Government of India. Ministry of Road Transport and Highways. Road accidents in India: 2009, 2011-08-23.

[16]. India suffers from highest number of road accidents: WHO". The Financial Express on the web. 2011-05-05.

[17]. Mondal, P, Abhishek Kumar, U. D. Bhangale, and Dinesh Tyagi. "A Silent Tsunami on IndianRoad: A Comprehensive Analysis of Epidemiological Aspects of Road Traffic Accidents".British Journal of Medicine & Medical Research: 1(1): 14-23, 2011. 2011-09-26.

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