VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

PROJECT REPORT ON

DESIGN AND IMPLEMENTATION OF FUEL ACCURACY MEASUREMENT AND THEFT DETECTION IN VEHICLES

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

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ALVA'S Education Foundation

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE

This is to certify that following students

Madhu B Gurav	**4AL15EC043**
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have submitted Project report on **Design and Implementation of fuel accuracy measurement and theft detection in vehicles** for VIII Semester B.E. in Electronics & Communication Engineering during the academic year 2020-21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	Signature of the H.O.D	Signature of the Principal
Mrs. Bhargavi K V	Dr. D.V.Manjunatha	Dr. Peter Fernandes

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ABSTRACT

Fuel is one of the most overpriced commodite world-wide, and this has led to a manifold increase in fuel theft globally. Automotive industry has increased exponentially in Recent years, and the number of vehicle drivers has increased in the street as well, that leads to the increasing demand for using fuel stations. The fluctuating price of petrol has also increased in the fuel theft cases.The main concept of the project is to detect the quantity or amount of fuel filled from petrol bunk to vehicle tank is proper or not. If there is an inappropriate fuel filled by fuel tube nozzle to vehicle there will be indication shown to the user of the vehicle. Although noncontact methods are more complex than contact methods, there are lots of sensors available for the fuel measurement. In this system we are detecting the fuel theft detection using the fuel sensor, Microcontroller, and the LCD display. To detect the fuel theft problem and the sudden decrease in the fuel level in the vehicles. There are many types of the sensors and we haveused the fuel sensors .In which it is very accurate when compared to the other sensors. LCD display is used in this system to display quantity in the form of the digital signal of the volume of the fuel level in the vehicles. Buzzer which sends the message to the owner of the vehicle when there is any fuel theft in the vehicle. So that the owner of the vehicle can be alerted from the fuel theft problem.

This paper presents the design, implementation and characterization of a hardware platform for Fuel level indication System for vehicles. The primary design goal is to devise a system capable of monitoring the fuel level in real time.to calculate the quantity of fuel filling in the tank and at petrol-stations. This system is based on hardware as well as software. The Hardware part consists of fuel level circuits, on- board Arduino,GSM modules,Liquid Crystal Display (LCD) and Flow Level Sensor. While the software part consists of Arduino IDE. This system measures fuel volume and sends measured volume to the owner's mobile through the GSM network. It also provides a technique for detecting theft or fraud incidents in case of fuel fill in the tank is less than the required fuel to be filled or fuel theft from vehicle. This system allows monitoring of fuel level, having a reduced cost due to affordable and easy-to-acquire electronic components.