

**AUTOMATION OF INFORMATION SYSTEM ON ROAD TRAFFIC
ACCIDENT AND STOLEN VEHICLES
(CASE STUDY OF FEDERAL ROAD SAFETY COMMISSION F.C.T,
ABUJA)**

BY

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UNIVERSITY OF TECHNOLOGY, MINNA**

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CERTIFICATION

This is to certify that Awusaku Joy Chinwe with Matriculation Number PGD/MCS/2006/1207 has satisfactorily completed the project work on AUTOMATION OF INFORMATION SYSTEM ON ROAD TRAFFIC ACCIDENT AND STOLEN VEHICLES, (CASE STUDY OF FEDERAL ROAD SAFETY COMMISSION FCT, ABUJA) in the department of Mathematics and Computer Science, Federal University Of Technology, Minna, Nigeria.

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Project Supervisor

Date

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(Head of Department)

Date

External Examiner

Date

DEDICATION

This work is being dedicated to my husband and also people with conscience to stand by friendship and courage to defend the truth and above all, Almighty God who made everything possible.

ACKNOWLEDGEMENT

I wish to express my sincere appreciation to my supervisor, Abraham Ochoche whose suggestion and comment were invaluable to me, his kindness, attitudes and inspirational guidance during my work.

I wish to place on record that I remained substantially grateful to the entire members of staff of the fame department of Mathematics/Computer science, Federal University of Technology, Minna, Niger State. Dr. N. I. Akinwande, Dr. L. N. Ezeako, Dr. Audu Isah, Dr. Abubakar U. Y, K. R. Adeboye and a host of others. I remember you all in mind.

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ABSTRACT

The horrible issue of mismanaging information concerning accident cases and stolen vehicles in Nigeria is alarming, and the need to provide an efficient and effective solution is therefore inevitable. This project titled “Automation of Information System on Road Traffic Accident and Stolen Vehicle” is therefore aimed at designing a program that will provide timely and accurate information on road accidents and stolen vehicles, such as date of accident, number of injured persons, number of deaths recorded per accident, name of the owner of vehicle stolen, model of the vehicle, chassis number, Engine number and so on.

CHAPTER ONE

1.0 GENERAL INTRODUCTION

1.1 Introduction

In Nigeria, Road Traffic injuries are a major public health challenge that requires concerted efforts for effective and sustained prevention. As estimated 1.2 millions people are killed on road crashes every year and as many as 50 millions suffer injuries.

Almost everyday we hear cases of people dieing, injured in Road Traffic Accident and Stolen Vehicles as well in Federal Capital Territory, Abuja due to carelessness, over speeding and so on. Once there's a case on Road Traffic Accident or Stolen Vehicle, some good Samaritan informed Federal Road Safety immediately. However, treating these incidents as anything other than "accident" has been criticized for holding back safety improvements, because a culture of blame may discourage the involved parties from fully disclosing the facts and thus frustrate attempts to address the real root cause.

The information gotten by Federal Road Safety Commission on accident victims and stolen vehicles are documented manually for references and this causes a drawback in producing timely and accurate information, knowing the number of people that dies, injured on RTA and also number of Stolen Vehicles yearly. Due to these problems encountered during these cases, an automated system is designed to solve it.

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1.2 Background of the Study

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There is no day that passes by without one seeing or hearing of accidents or stolen vehicles. The most frequent of these is always the Road Traffic

1.3

Accident (RTA).

Accident is anything which happens by chance or unpleasant event that happens unexpectedly and causes damage or death.

Generally RTA is classified according to severity. It is called fatal when loss of life is involved, serious when it does not result to death by injury victim who leads to his or her hospitalization. A minor accident is one which does not involve an injury which involves only bruises that can be treated and discharged instantly at the hospital or clinic. The victims of Road Accident could be pedestrian, drivers, passenger, animal and vehicle.

Though not their major role, vehicle thefts are not left out in this context as sometimes the Federal Road Safety Commission (FRSC), handles the tracing of stolen vehicles.

1.3 Aims and Objectives of the Proposed System

- To provide a statistics of accident that occurs for a given period of time and number of vehicles stolen.
- To encourage good driving habits and help reduce and limit the impact of Road Traffic Accidents.
- Making the highways safe for motorists and other Road Users.
- To enhance and improve file updating.
- Recommending works and devices designed to eliminate or minimize accident on the highways and advising the Federal and State governments including the Federal Capital Territory administration and relevant Governmental Agencies on the locations where such works and devices are required.
- Educating motorist and members of the public on the importance of discipline on the highway.

- Easy tracking and recognition of stolen vehicles, thereby helping the Police and other law enforcements agencies in quick recovery of such.
- To that a strategic computerized project is feasible.

1.4 Significance of the Study

The Road Traffic Accident in Nigeria is becoming unbearable and the need to improve a means of keeping track of such accident is therefore inevitable. Thus, the significance of this project work is therefore encapsulated into the following:

- i. **The Motorist and Pedestrians:** If the software developed in this work is implemented, it will go a long way in providing timely information on accident cases.
- ii. **Government:** The software that will be designed will help the government in keeping the statistics and observing the trend in road accidents to provide a means of reducing the accident to the barest minimum and it also provide the government with information on number of vehicle stolen yearly.
- iii. **Economy and society:** Since the government tends to improve on roads where accidents are common based on the information

system, it will go a long way reducing Road Traffic Accident in our Society.

1.5 Scope of the Study

This study is limited to Federal Capital Territory (FCT) of Federal Road Safety Commission, Abuja. In the course of analysis/investigations, the constraints encountered were centered on time, information and financial constraints.

1.6 Statement of the Problem

In Federal Road Safety Commission in Nigeria, especially in Federal Capital Territory, Abuja, the keeping of records or information on Road Traffic Accident has proved difficult and tedious. The problems can be summarized as follows:

- Time duration wasted on data processing and verifications.
- Excessive use of paper work resulting in uncertainty about accuracy of information recorded on papers/registers.
- Poor data security as it leads to improper records keeping system with difficulties encountered when making enquires -of registered items and possibility of information loss.

1.7 Brief History of Federal Road Safety (FRSC)

The Federal Road Safety Commission (FRCS) was established in 1988 vide FRSC ACT Cap 141 Laws of the Federation of Nigeria LFN, 1990 as amended and today, FRSC (Establishment) Act, 2007 is the lead agency with statutory responsibility of over seeing Road Traffic Administration and Safety Management matters in Nigeria.

Earlier in this century, Nigeria and indeed African did not experience the enormous losses in material and human resources as a result of Road Traffic related accidents, apparent due to low socio-economic interaction which was highly restricted to local pathways on animals (horses and camels) and through rivers in canoes. However due to the advent of industrialization and subsequent urbanization in African, the number of vehicle and motorable road increases, thus improving the relationship between vehicle traffic and socio-economic activities. Nevertheless, this development had its own setbacks in terms of high fatality rate resulting from traffic accident related tragedies. And so, finding itself on the cross road of having to cope with its fast decimating manpower resource and a large percentage of disable youth; and with the staggering cost of medical care for the injured, couple with the attendant social and psychological

trauma. Africa began to accord road safety matter must deserved attention.

The traffic situation before the establishment of the Federal Road Safety Commission in Nigeria could best be described as chaotic, unpredictable and indeed dangerous as it was characterized by unprecedented wave of Road Traffic Accidents with attendant colossal human and material losses. Within this era, public awareness and interest in Road Safety was minimal. There was uncoordinated and haphazard licensing of drivers and vehicles as well as absence of good driving culture. Deliberate policies and concerted effort of enforcing regulations was lacking. Quantitatively, Road Traffic Accidents fatality index as at 1987 was 302 at 16 deaths per 1,000 vehicles.

As stated earlier, prior to the establishment of the Federal Road Safety Commission in 1988, there was no concrete and sustained policy action to address the Road Safety question. Earlier attempts in this direction were limited to discrete and isolated attempts by some States of the Federation and individuals.

Notable was the effort of Shell Petroleum Development Company of Nigeria (SPDC) between 1960-1965; the efforts of the Nigeria Army in the training of its Officers and men on Road Safety in the early 70's. (The Nigeria Army started the First Public Road Safety Campaign in 1972 when it initiated an annual Road Safety week.)

The first deliberate policy on road safety was the creation in 1974 of the National Road Safety Commission (NRSC) by the then Military Government. The impact of the Commission was however, not sustained. In 1977, the Military Administration in Oyo State established the Oyo State Road Safety Corps which made some local significant improvement in Road Safety and road discipline in the State. This lasted till 1983 when it was disbanded by the Federal Government.

With the continued dangerous trend of Road Traffic Accidents in Nigeria which placed it as one of the most Road Traffic Accident (RTA) prone countries worldwide (only second to Ethiopia),the Nigeria Government saw the need to establish the present Federal Road Safety Commission in 1988 to address the Road Safety crisis in Nigeria.

1.8 Definition of Terms

Below are the terms used in this project with their meanings:-

FRSC:	Federal Road Safety Commission
RTA:	Road Traffic Accident
Accident:	A chance event commonly involving catastrophe, suffering or damage.
Record:	A collection of related data field.
Information:	A collection of facts organized in such ways that have additional value beyond the value of the facts themselves.
System:	A network of interrelated procedures that are joined together to perform an activity or to accomplish a specific objective.
Data:	Facts and figures that are not currently being used in a decision making.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Review of Some Related Literature

The Mandate of the Commission, with citations made from (www.frsc.gov.ng) was accident prevention in all roads across the country.

The work of these numerous research fellows has made a tremendous contribution to his research project.

Yahaya (1986), wrote a project on “Road Traffic Pattern in Kaduna State” using regression analysis and variance analysis respectively. He came out with a conclusion that the number of people killed and the rate of RTA in Niger State were on the increase.

Hassan (1999), in his Analysis of the Impact of the FRSC on Road Traffic Accident from 1985-1996 conclude that the FRSC has a positive impact in reducing Road Traffic Accident in Niger State.

Ogege (2007), wrote on “Database Auto Registration System for Vehicles” The Registration was for ownership clarifications to avoid a vehicle been

stolen. It went a long way reducing the rate vehicle are being stolen in Niger State.

Sumaila (1990), presented a paper titled “The Road Traffic Accident Problem in Nigeria and National Awareness” The paper stated that road incidents result in the deaths of an estimated 1.2 millions people worldwide each year, and injured about forty times this number. Addressing the contributing factors that can reduce the Road Traffic Accident, he concluded that many jurisdictions require the collection and reporting of Road Traffic Accident statistics, such data enables figures for deaths, personal injuries and possibly property damage to be produced and correlated against a range of circumstances. Analysis of this data may allow incident clusters and incident causes to be identified.

Geoffrey (1969), published a book on “Cars and Drivers Accident Prevention Instead of Blame”. His suggestion was based on follow-up programmed on dangerous drivers, the quality of testing and so on.

Smeed (1990), in his research work observed that drivers balances risks as they drive, lending road authorities to attempt to reduce the consequences of

seek people's opinion on registration process, limitations and also individual recommendations.

- **Interviews:** This is obtaining information by personal contacts. It is a face- to-face means of conversing with important staffs in the system. This is usually done orally.
- **Investigation/record inspection:** This is the checking/examine of vital records used in the system, which would help boost the problem solving procedure.

Hence, the method that was employed in the course of this project was oral interviews with staffs and some vehicle owners and information search through the internet.

3.2 Review of Existing System

The FRSC system is essentially manual, whereby the rescue department prepares the report, after which it is give to the secretary to command to type. The records are inputted into the system by the secretary and updated every month. Whenever any information is needed by the command, the secretary prints it out. This process of preparing the scheme and document

has be properly done and carefully inputted into the computer in order to avoid mistake.

3.3 Problem of the Existing System

The major drawbacks experienced from the existing operation employed by the commission, are in the area of record operations of the system, and below are some of the observed:

- No centralized database for future research.
- Lack of data integrity leading to data redundancy.
- Data insecurity: when files are not properly archived and restrictions placed or the records could be tampered with e.g. theft or malicious handling of files by non-personal.
- Human errors are made in the preparation of report either due to carelessness, tiredness, or stress; as they are too many files to work.
- A great deal of time is taken in preparing.

3.4 System Specification

This is an in-depth set of documents that provides details of all features of the system such that the input, output and files are specified.

3.5 System Input Specification:

Generally, information system is made up of the following subjects and activities. In this case, entities (subject and activities) required in order to make up records in database. This includes vehicle owner, engine number, chassis number, location, date, time, names of persons in vehicle and so on. They are typed into the space provided on the system and save in the database memory. The sections which these entities are typed and they are: Accident Information entry form, Stolen Vehicle entry form, Newsletter, User login.

3.6 Accident Information Form:

							Vehicle
							Vehicle Brand
							Color
							Engine Number
							Chassis Number
							Driver Name
							Names of persons in Vehicle
							Number of persons Affected
							Causes
							Damages
							Date
							Time
							State
							L.G.A.
							Location
							Hospital Information
							Comment
							Confirm Entries
							Submit Form

3.7 Stolen Vehicle Entry Form:

							Vehicle Owner
							Eng. No.
							Chassis No.
							Color
							Model
							Plate No.
							Date
							Time
							State
							L.G.A.
							Location
							Telephone Number
							Email
							Confirm Entries
							Submit form

3.8 Newsletters:

Name	Email Address	Send Mail

3.9 User Log-in:

User Name	
Password	

3.10 System outputs Specification

In output specification, the new system must ensure that the result or information must be able to be generated through the processing of data supplied via the entry point. The necessity of the output is the primary communicates of data result of the data with the end user. The output of the processing is obtained in two ways:

Hard copy, and

Soft copy.

Output in hardcopy is a phenomenon in which the information is printed on the paper. And the soft copy information is only displayed on the

Visual Display Unit (VDU). This could also be copied into other backup devices for any more operations and manipulation to be performed on it. The output of the processing will display the following information;

3.11 Files

Database file is a method for storing data Database file is the suits desktop application such as Microsoft Access. Query that is written in a special language usually a dialect of Structured Query Language (SQL) is used by user to request data from a relational database.

SQL is a simple language that provides instruction for building and modifying that structure of database and also for modifying the data stored in the tables. SQL report writer creates rooms for users to interactively interrogate the database, analyses it, and update the data according to the user's privileges on the data. SQL is data definition language (DDL) and data manipulation language (DML).

DDL allow definition of tables, creates, while DML allows the end user to retrieve information from table and also controls the security of the database. The main commands used to change and retrieve data are:

View, add, select, delete etc.

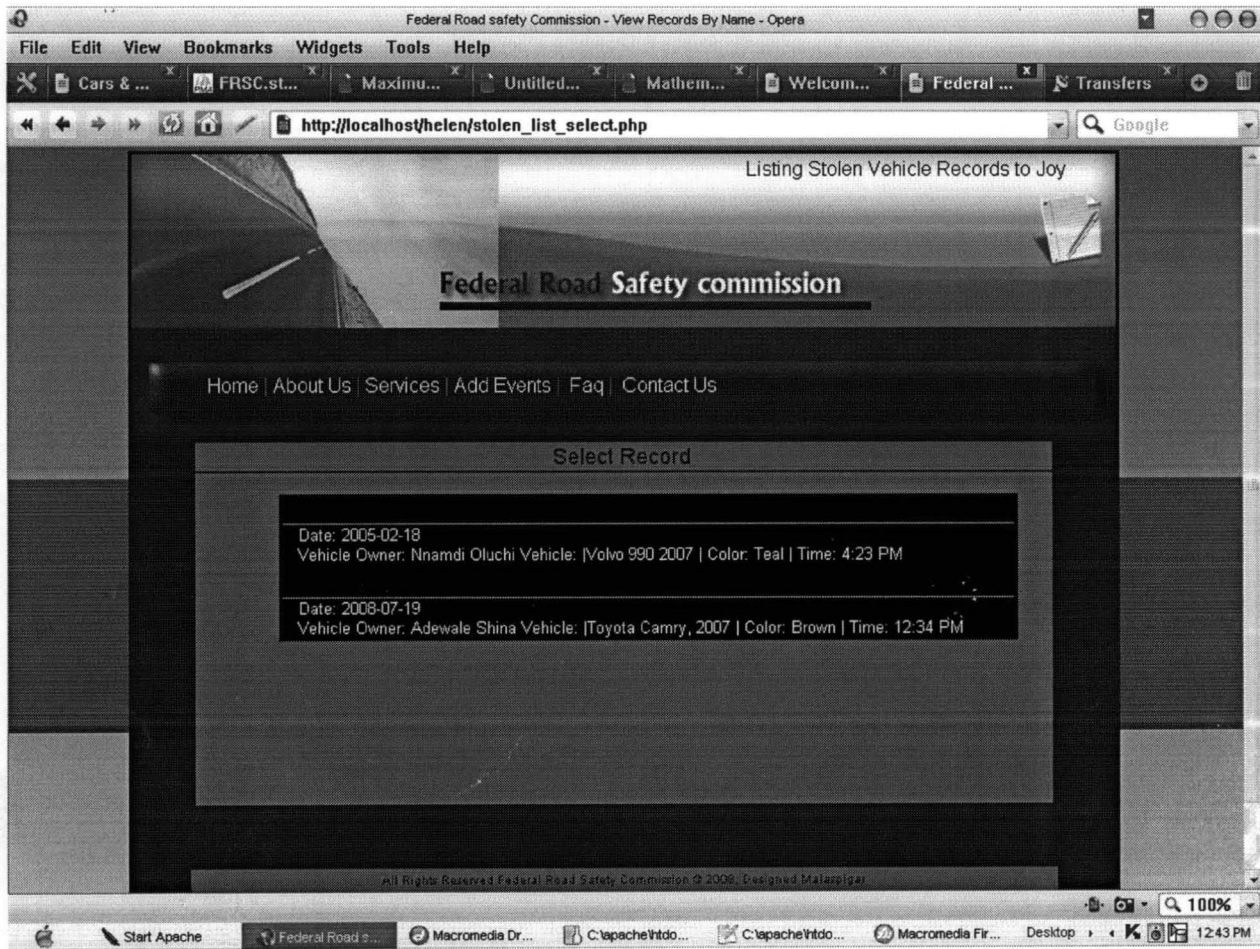


FIG. 4.9 STOLEN VEHICLE RECORDS

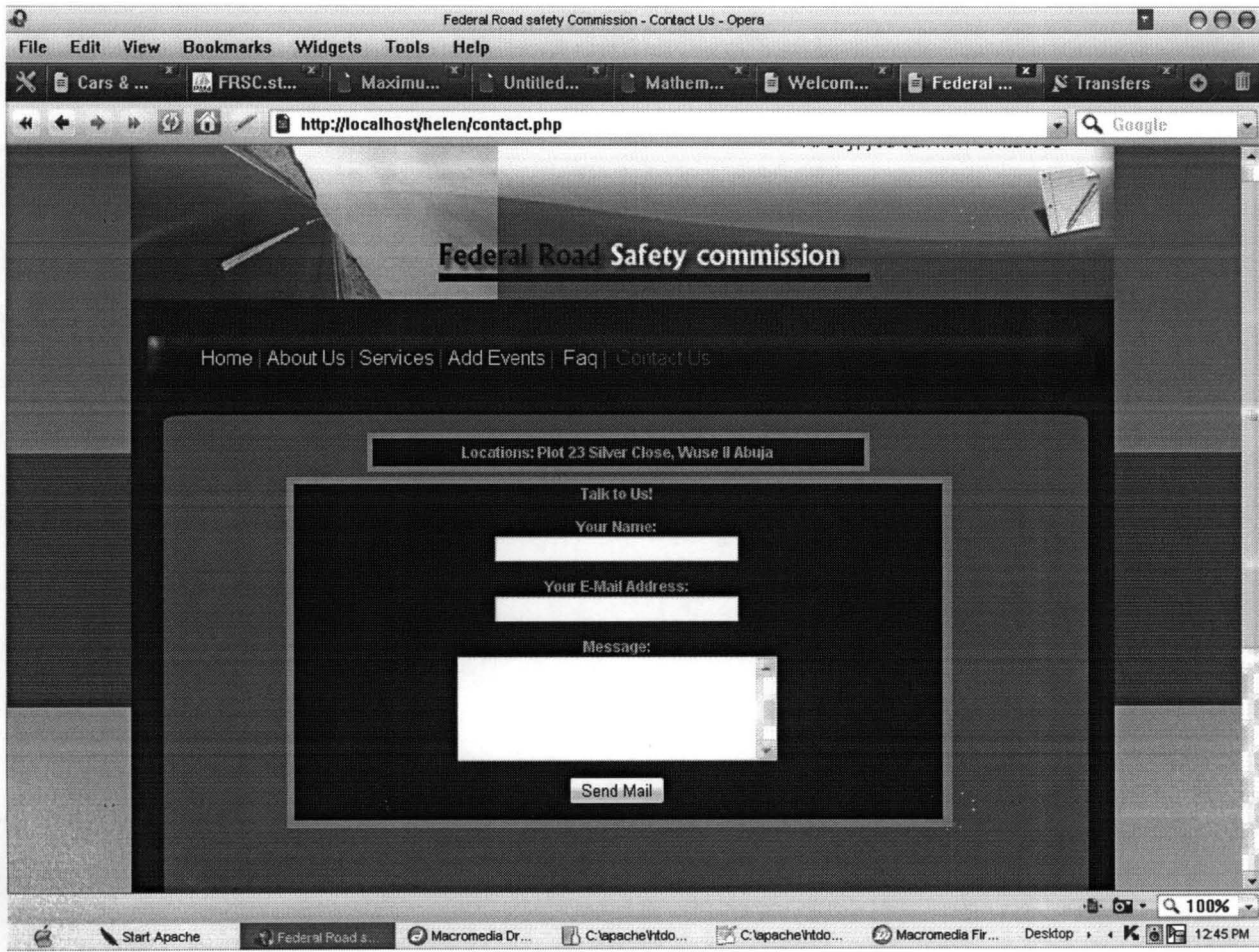


FIG. 4.10 NEWSLETTER FORM

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1. Summary

This project is arranged in chapters, one to five. Each chapter gives a brief summary of project work on Information System of Road Traffic Accident and Stolen Vehicle in FCT Sector Command FRSC, Abuja.

Chapter one is the Introduction. Around the world, Road Traffic Injuries are a major public health challenge that requires concerted efforts for effective and sustained prevention. As estimated 1.2 millions people are killed in road crashes every year and as many as 50 million suffer injuries. World Health Organisation believes that these figures could increase by more than half over the next 20 years unless there is a firm commitment to road safety and accident prevention, especially in developing countries such as Nigeria. Because of these the FRSC was formed in 1988 to take proper care of Road Traffic Accident and to be alight of this Stolen Vehicles.

Chapter two was based on Review of Related Literature. Contributions of other research fellow was made and written, thereby concluding that FRSC has a positive impact in reducing Road Traffic Accident and stealing of vehicle. Again the best way to keep information intact is by having a well managed database.

The third chapter was on System Analysis and Design. It reviewed the existing system and identified the problem that associated with the system; these prompted me to design an automated system with input, output and file specification. Due to the nature of Road Traffic Accident and Stolen Vehicle vast information, I made a better choice of programming language for the development of the system's database management (DBMs) package.

Finally Chapter four was system implementation. Algorithm was in dataflow diagram called flowchart. The chart avoids unnecessary details but help users with an intelligent picture of the whole system. The program codes were moved to Appendix. The program has an interactive interface that also displays the result and comments on the result.

5.2 Conclusion

The project succeeded in taking care of the major problems in a typical Road Traffic Accident and Stolen Vehicle Information in FCT Sector Command FRSC, Abuja. It utilizes the advantages derived from the use of computers to overcome the common problem of inefficient storage of data and inconsistent report.

5.3 Recommendation

Having developed this program to improve the management of FCT Sector Command FRSC, Abuja, the following steps should be followed:

- The staff of FCT Sector Command FRSC, Abuja should be given comprehensive training on the application and utilization of computer to make their work easier and standardized.
- The organization should make efforts to be made concerning various Road Traffic Accident and Stolen Vehicle tasks.
- The current system of record keeping and information processing of the FRSC should be changed.
- The information/record system should be computerized to meet universal standards of Road Traffic Accident and Stolen Vehicle information.

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Publication

Source, FCT SECTOR COMMAND FRSC, ABUJA, last update,
December, 2008.

www.frsc.gov.ng, Last update December, 2008

APPENDIX A

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    @session_start();
?>
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"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
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<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
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<style type="text/css">
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    background-repeat: repeat-x;
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}
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    text-decoration: none;
}
a:visited {
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}
a:hover {
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</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="43">&nbsp;</td>
<td>&nbsp;</td>

```

```

<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="14"></td>
<td></td>
<td colspan="3" valign="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->
<tr>
<td width="721" height="18" align="center" valign="bottom"><span class="style14">All Rights
Reserved Federal Road Safety Commission &copy; 2008, Designed Malaspigar </span></td>
</tr>
</table>
</td>
<td></td>
<td></td>
</tr>
<tr>
<td height="12"></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</table></td>
</tr>
</table>
</body>
</html>

<?
    session_start();
?>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<title>Federal Road safety Commission - Contact Us</title>
<style type="text/css">
<!--
body {
    background-image: url(bg.jpg);
    background-repeat: repeat-x;
    margin-top:0px;
}
.style2 { font-size: 12px;
    font-family: Geneva, Arial, Helvetica, sans-serif;
    color: #498EC9;

```

```

        font-weight: bold;
    }
    a:link {
        color: #9DC9F0;
        text-decoration: none;
    }
    a:visited {
        color: #9DC9F0;
        text-decoration: none;
    }
    a:active {
        color: #9DC9F0;
        text-decoration: none;
    }
    a:hover {
        text-decoration: none;
        color: #709CB5;
    }
    .style14 {
        font-size: 10px;
        color: #000048;
        font-family: Geneva, Arial, Helvetica, sans-serif;
    }
    .style22 {font-family: Geneva, Arial, Helvetica, sans-serif; color: #9DC9F0;}
    .style23 {color: #014D7F}
    .style25 {font-family: Geneva, Arial, Helvetica, sans-serif; color: #0066CC; }
    .style26 {color: #0033CC}
    a {
        font-family: Geneva, Arial, Helvetica, sans-serif;
    }
    body,td,th {
        font-family: Geneva, Arial, Helvetica, sans-serif;
    }
-->
</style></head>

<body>
<table width="888" border="0" align="center">
<tr>
<td width="882" align="center" valign="top"><table width="800" height="896" border="0"
background="img3.jpg">
<!--DWLayoutTable-->
<tr>
<td width="15" height="40">&nbsp;</td>
<td width="7">&nbsp;</td>
<td width="471">&nbsp;</td>
<td colspan="4" align="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->
<tr>
<td width="289" height="37" valign="top"><?

if(isset($_SESSION['usr'])){
    echo "Hi ". $_SESSION['usr'] . ", you can now contact us";
}
else{
    echo ".... WAITING....";
}
}

```

3.12 Choice of Programming Language

A program is a set of instructions written in a computer language to help it accomplish a particular task. Hence it has to be written with the object computer in mind for easy interpretation. Programming language has some factors needed to be considered when choosing it. These factors are:

- Database management compatibility
- The flow and structure of programming
- Availability
- Ease of Manipulation

CHAPTER FOUR

4.0

IMPLEMENTATION

4.1 System Implementation

System implementation consists of converting the hardware, software and files to the new system and training the users.

The training is necessary so that the staff will have a proper understanding of their responsibility in making the system work. Some training can begin early to increase the involvement of users in the new system to lessen the shock of adjustment. Subsequent training can be scheduled to ensure that the technical personnel who will develop, operate and maintain the system, and the system user clearly understand the operating procedures. Training is done with variety of tools. They run from documentation (instructional manuals) to videotapes of live classes to one on one, side by side, teacher-student training sometimes is done by the organizations own staffers at other times it is contracted out.

4.2. Hardware Requirement

Once the software has been chosen, the hardware to run, it must be acquired or upgraded. It is possible that the new system will not require

obtaining any new hardware, its also possible that the new hardware will cost millions of Naira and involve many items: micro computers, mainframes, monitors, modems and many other devices. Some organizations may find it better to lease rather than buy some equipment. In the case of the Automated Project Management system, the hardware requirement of the computer system to be used should be Pentium!!! and above. The Ram size should be 64MB and above, C: drive Hard disk, D: drive CD ROM 50-56 speed, A:3.5 inch floppy disk, Windows 98 or higher version, keyboard as input device, VDU (Visual Display Unit) and printer as output device.

4.3. Software Requirement

MySQL, PHP and HTML were used for the design of the Automated Project Management System. The applications generally consist of several parts: an environment, the language, the interface, and etc.

MySQL (Structure Query Language) is a language that provides instruction for building and modifying that structure of database and also for modifying the data stored in the tables.

PHP is a scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical application. It is also a Server-side HTML embedded scripting language

HTML (Hypertext mark-up Language), a simply instruction that informs the web browser as to how the information should be displayed.

4.4. System Testing

With the hardware and software requirements met, the new system can be tested. Testing is usually done in two stages, and these are the unit testing and the system testing.

Unit Testing: In system testing, the part are linked together and tested data is used to see if the parts work together. At this point, actual organization data may be used to test the system. The system is also tested with erroneous and massive amount of data to see if the system can be made to hang up (crash).

4.5. Changeover Program

File conversion is a valid activity that is sometimes underestimated. File conversion simply put is the process of converting the old file data (the paper file) into the form required by the new system. It is often referred to as part of changeover, in fact, file conversion is often a complete and separate system task in itself involving file- finding, analyses, the design of clerical methods and computer process among others. The changeover from old to new system may take place when:

- The system has been proven to the satisfaction of the system analyst and the other implementation activities have been completed
- The users and Head of Department are satisfied with the result of the system test, staff training and reference manual.
- The target date for the changeover is due.

The system changeover may be achieved in a number of ways. The most common methods are:

- Direct
- Parallel
- Pilot
- Phased

Direct Approach: This means the user simply stops using the old system and starts using the new one. The risk of this method is: if the new system doesn't work, if the old system has been discontinued, there will be nothing to fall back on.

Parallel Approach: This means that the old and new systems are operated side by side until the new system has shown it is reliable at that time the old system is discontinued. The benefit of this approach is that if the new system fails, then the organization can switch back to the old one.

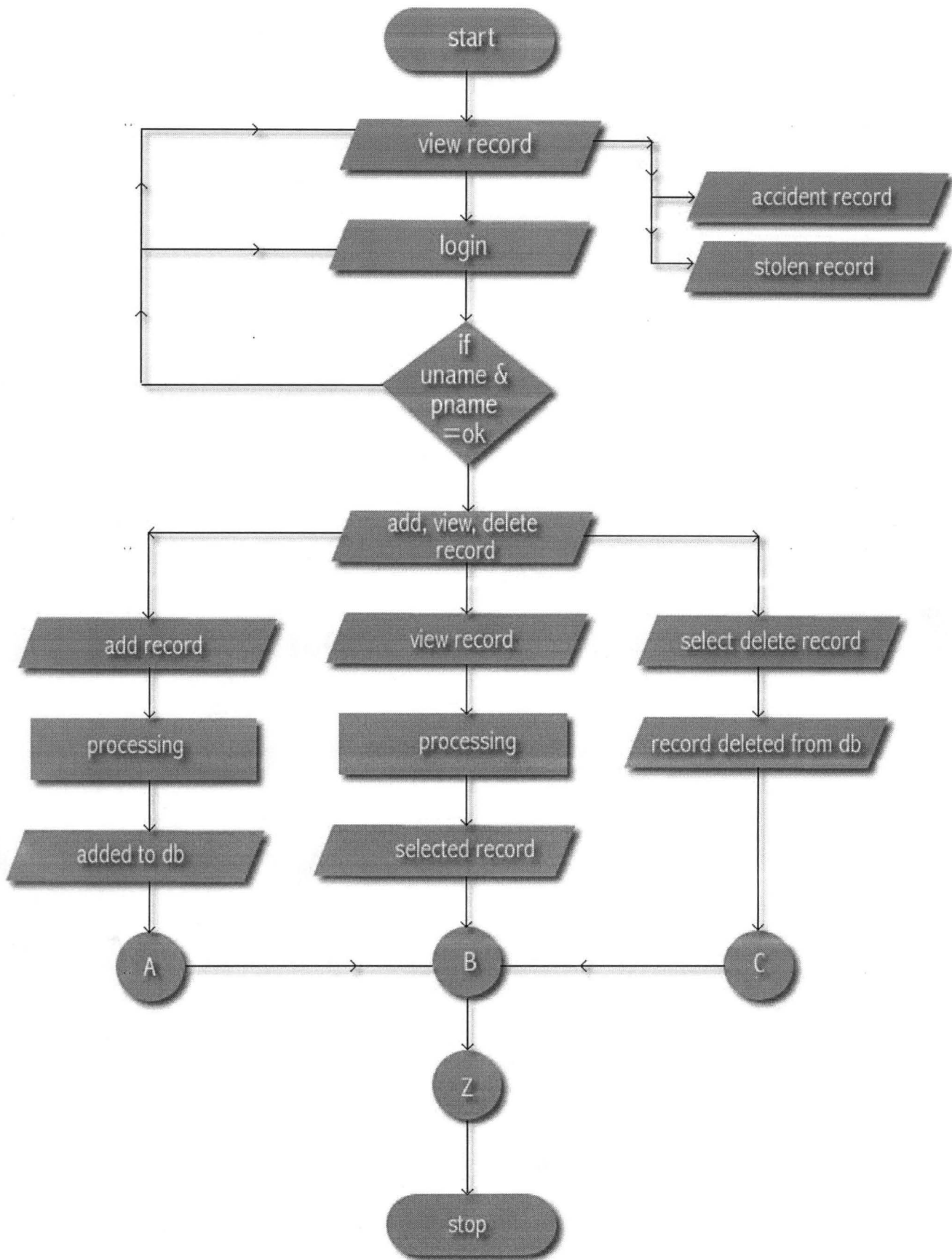
Pilot Approach: This means that only some users try out the entire system. Once the reliability has been proved, the tried system is implemented with the rest of the intended users. This also has its risk, since all the users of a particular group are taken off the old system. However this risk is confined to only a small part of the organization.

Phase Approach: This means that part of the new system are phased in separated either at different times (parallel) or all at once in groups (direct)

In the case of using the APMS it is recommended that the direct approach is used, this is because there is actually no existing system at present, it is completely manual way of managing the various project submitted.

4.6. System Maintenance

System maintenance adjusts and improves the system by having system audit, user feedback and periodic evaluations and by making changes based on new conditions. Even with the conversion accomplished and the users trained, the system won't run itself. There is a six-and never-ending phase in which the system must be monitored to ensure that it is successful. Maintenance includes not only keeping the machinery running but also updating and upgrading the system to keep pace with new products, services, customers, government regulations and other requirements. Below are flowcharts and some snapshots of different interface of the APMS.



FLOWCHART

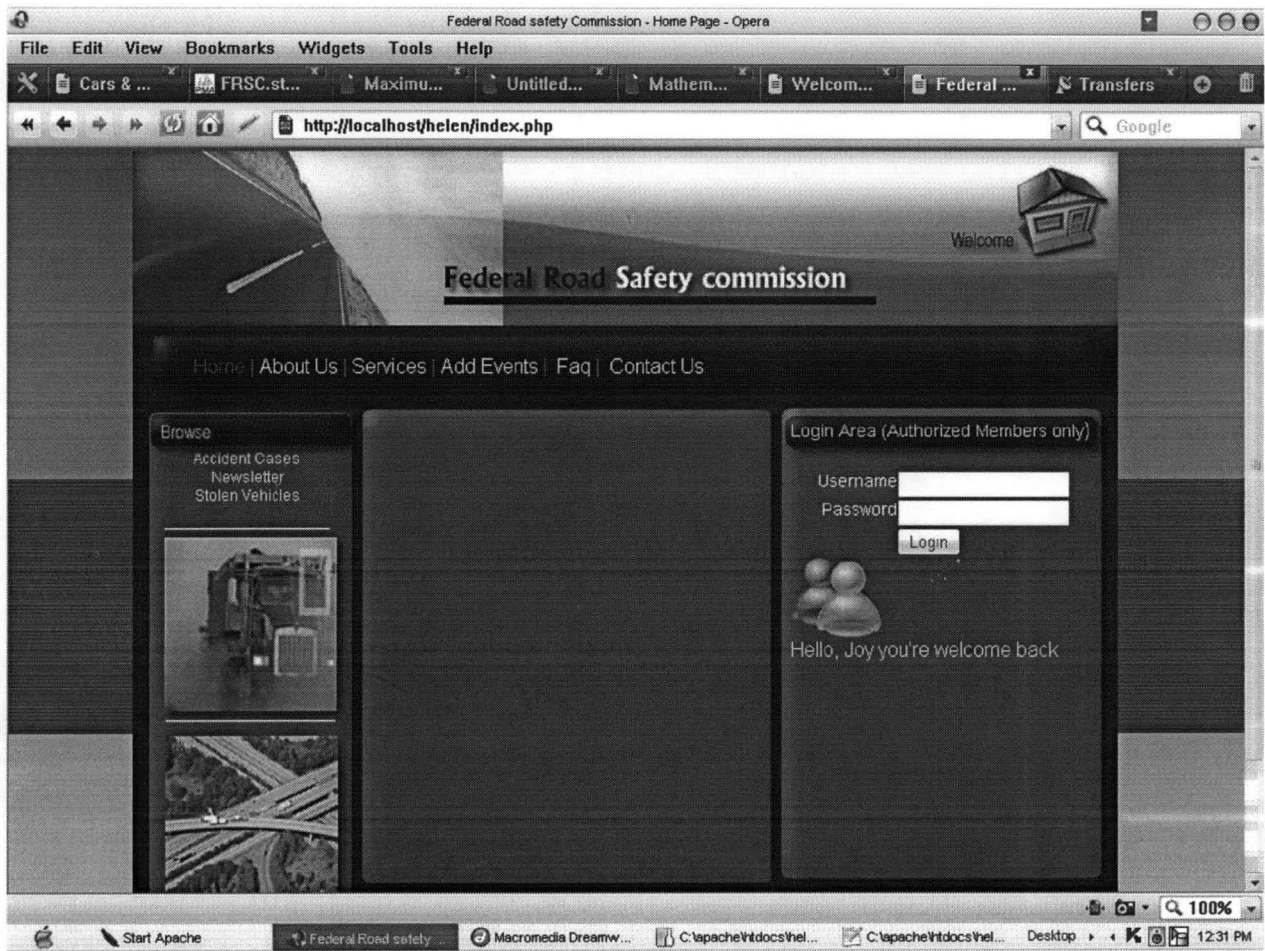


Fig. 4.1 LOG_IN FORM

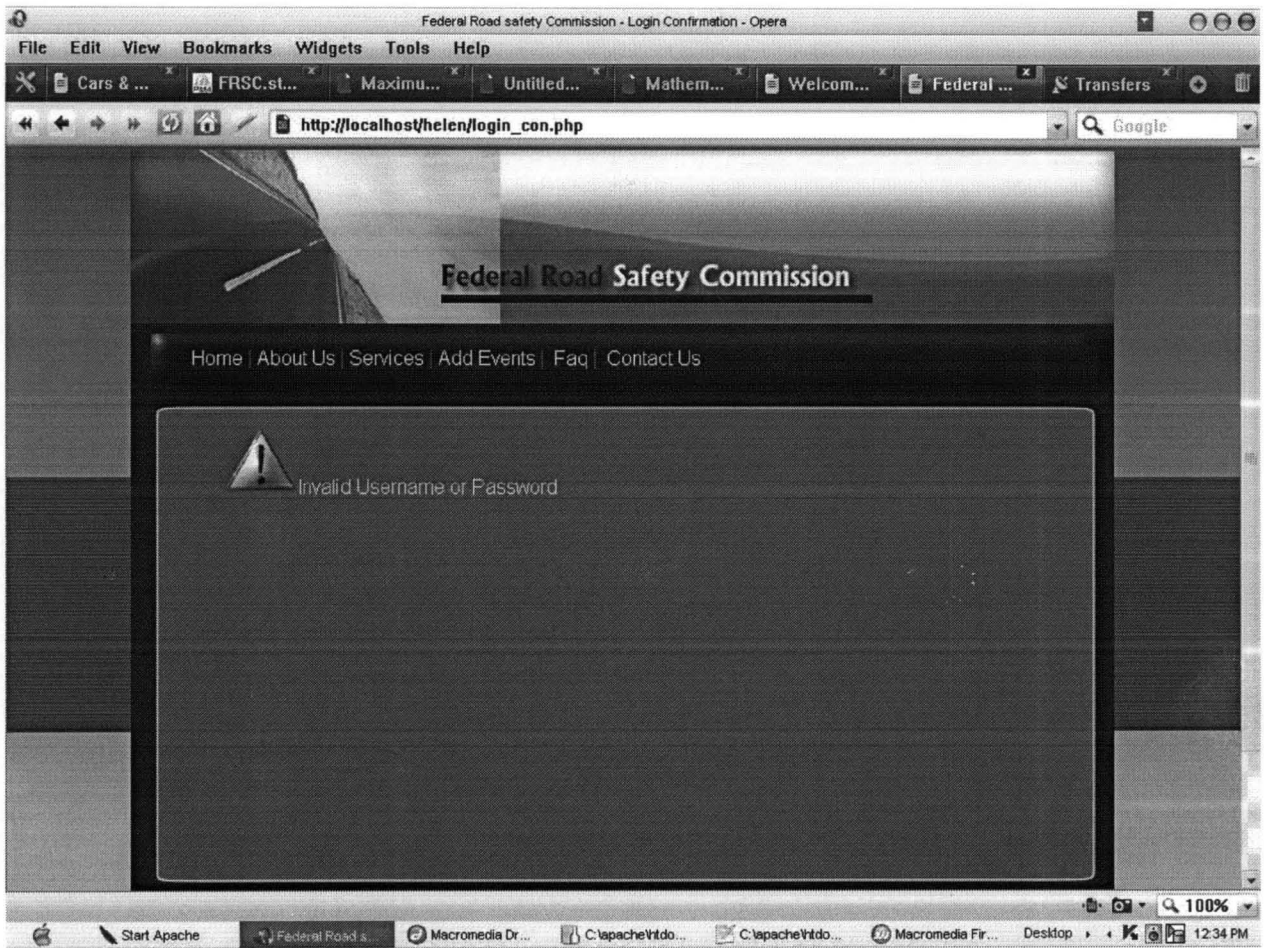


FIG. 4.2 LOG_IN CONFIRMATION (INVALID)

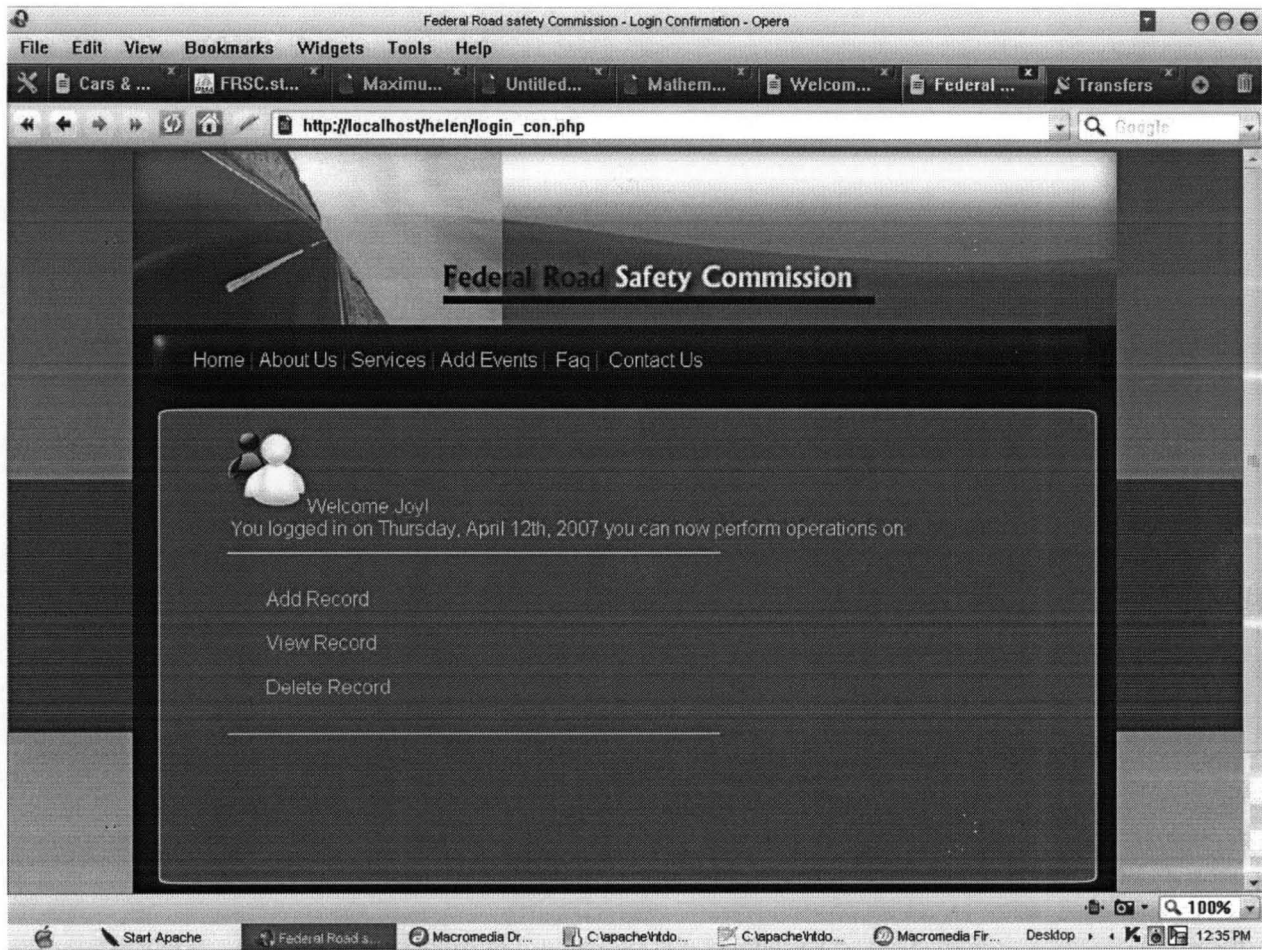


FIG. 4.3 LOG_IN CONFIRMATION (VALID)

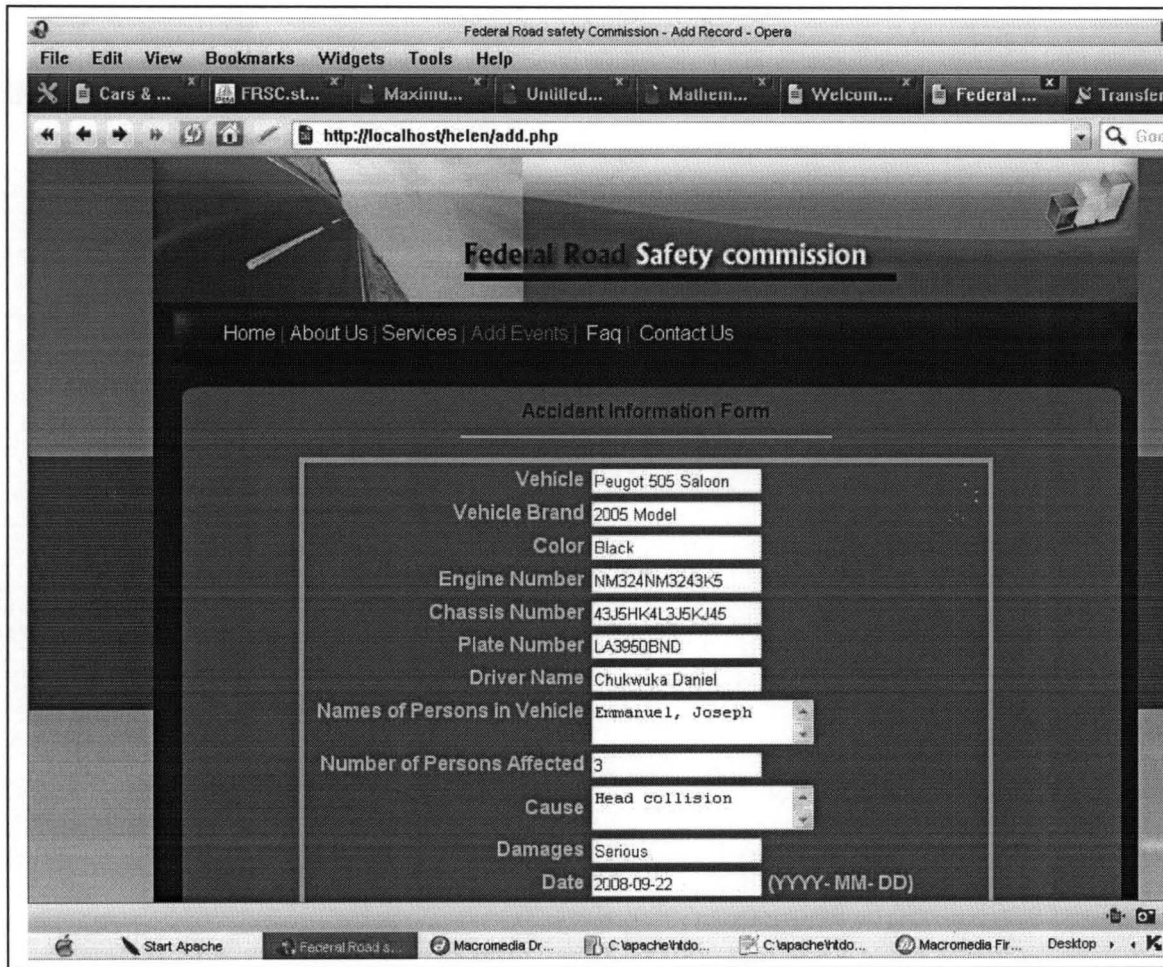


FIG 4.4 ADD_ACCIDENT INFORMATION FORM



FIG. 4.5 ENTRY CONFIRMATION



FIG. 4.6 STOLEN VEHICLE ENTRY FORM



FIG. 4.7 STOLEN VEHICLE ENTRY CONFIRMATION FORM

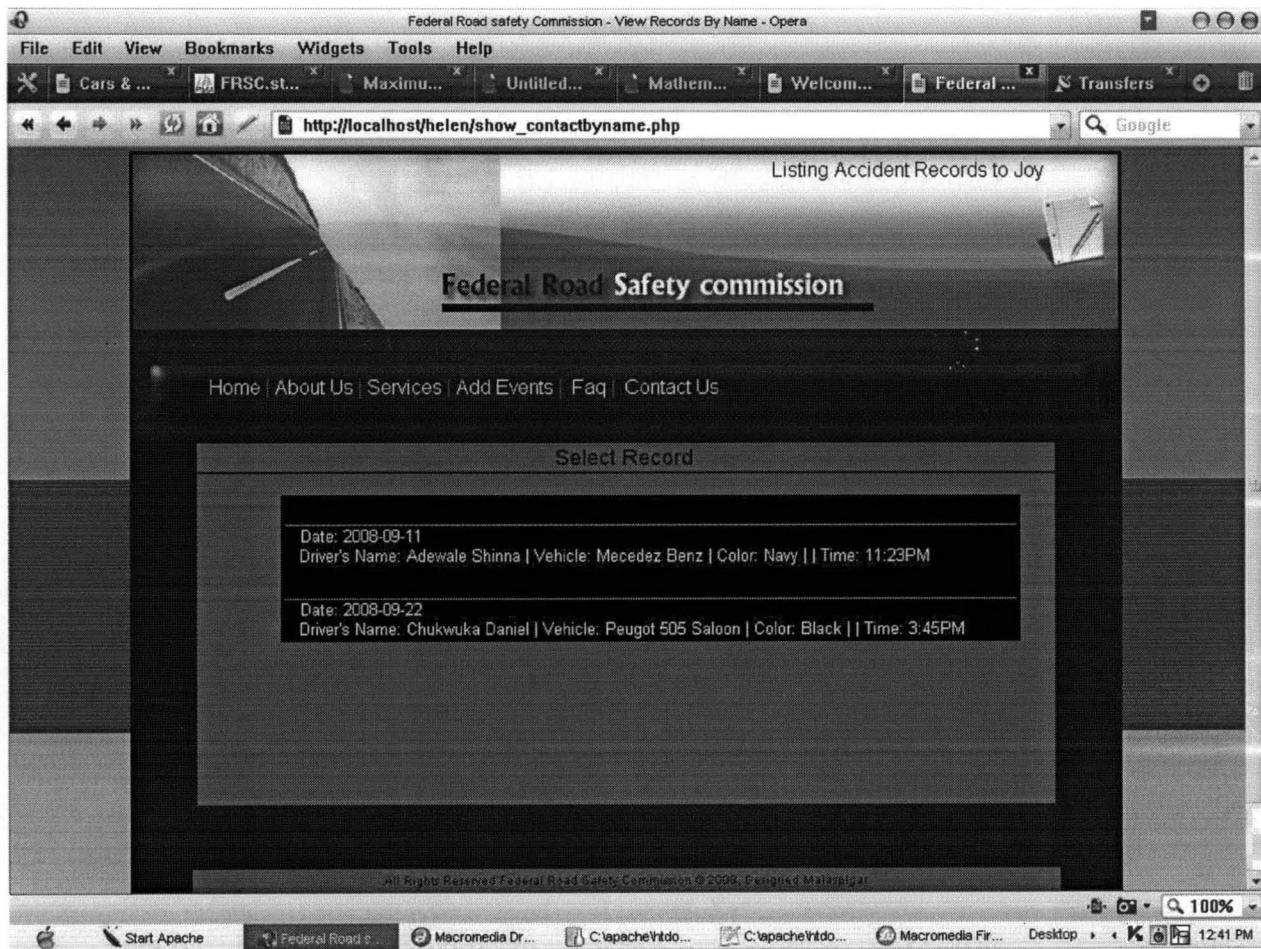


FIG 4.8 ACCIDENT RECORDS


```

        </tr>
    </table></td>
</tr>
<tr>
    <td align="center"><table width="541" border="0" cellpadding="1" cellspacing="3"
bgcolor="#4491C7">
        <tr>
            <td width="533"><table width="531" border="0">
                <tr>
                    <td width="525" align="center" bgcolor="#010042" class="style2"><span
class="style2">Talk to Us!</span><br />
                <?

```

```

$form_block = "
<FORM METHOD="POST" ACTION="$PHP_SELF">
<P><span class="style1"><strong>Your Name:</strong></span><br>
<span class="style1"><INPUT type="text" NAME="sender_name" SIZE=30</span></P>
<P><span class="style1"><strong>Your E-Mail Address:</strong></span><br>
<span class="style1"><INPUT type="text" NAME="sender_email" SIZE=30</span></P>
<P><span class="style1"><strong>Message:</strong></span><br>
<span class="style1"><TEXTAREA NAME="message" COLS=30 ROWS=5
WRAP=virtual</TEXTAREA></span></P>
<INPUT type="hidden" name="op" value="ds">
<P><INPUT TYPE="submit" NAME="submit" VALUE="Send Mail"></p>
</FORM>";

```

```

if ($_POST[op] != "ds") {
    // they need to see the form
    echo "$form_block";
} else if ($_POST[op] == "ds") {
    // check value of $_POST[sender_name]
    if ($_POST[sender_name] == "") {
        $name_err = "<font color=red>Please enter your name!</font><br>";
        $send = "no";
    }
    // check value of $_POST[sender_email]
    if ($_POST[sender_email] == "") {
        $email_err = "<font color=red>Please enter your
e-mail address!</font><br>";
        $send = "no";
    }
    // check value of $_POST[message]
    if ($_POST[message] == "") {
        $message_err = "<font color=red>Please enter a message!</font><br>";
        $send = "no";
    }
    if ($send != "no") {
        // it's ok to send, so build the mail
        $msg = "E-MAIL SENT FROM WWW SITE\n";
        $msg .= "Sender's Name: $_POST[sender_name]\n";
        $msg .= "Sender's E-Mail: $_POST[sender_email]\n";
        $msg .= "Message: $_POST[message]\n\n";
        $to = "andiezbonez@yahoo.com";
        $subject = "You Have A New Mail";
        $mailheaders = "From: Nu' Metro Store
<andiezbonez@yahoo.com>\n";
        $mailheaders .= "Reply-To: $_POST[sender_email]\n";
    }
}

```

```

//send the mail
@mail($to, $subject, $msg, $mailheaders);
//display confirmation to user
echo "<P><span class='\"style1\"'><b>$sender_name your mail has been sent!</b></span></p>";
} else if ($send == "no") {
//print error messages
echo "$name_err";
echo "$email_err";
echo "$message_err";
echo "$form_block";
}
}
?></td>
</tr>
</table></td>
</tr>
</table></td>
</tr>
</table></td>
</tr>
</table> </td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="35"&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="32"&nbsp;</td>
<td colspan="5" valign="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->
<tr>
<td width="763" height="30" align="center" valign="middle"><span class="style14">All Rights
Reserved Federal Road Safety Commission &copy; 2008, Designed Malaspigar </span></td>
</tr>
</table>
</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="19"&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
</table></td>

```

```
</tr>
</table>
</body>
</html>
```

```
<?
```

```
session_start();
```

```
$db_name = "FRSC";
$table_name = "stolen";
```

```
$connection = @mysql_connect("", "", "")
    or die(mysql_error());
```

```
$db = @mysql_select_db($db_name, $connection) or die(mysql_error());
```

```
$sql = " SELECT name, date, brand FROM $table_name WHERE id = '$_POST[id]'";
```

```
$result = @mysql_query($sql,$connection) or die(mysql_error());
```

```
while ($row = mysql_fetch_array($result)) {
```

```
    $name = $row['name'];
    $date = $row['date'];
    $brand = $row['brand'];
    $id = $row['id'];
```

```
    }
?>
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
```

```
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

```
<head>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
```

```
<title>FRSC - DELETE CONFIRMATION</title>
```

```
<style type="text/css">
```

```
<!--
```

```
body {
```

```
    background-image: url(bg.jpg);
```

```
    background-repeat: repeat-x;
```

```
    margin-top:0px;
```

```
}
```

```
body,td,th {
```

```
    font-family: Geneva, Arial, Helvetica, sans-serif;
```

```
    color: #1F7DBD;
```

```
}
```

```
.style22 {font-family: Geneva, Arial, Helvetica, sans-serif; color: #9DC9F0;}
```

```
.style23 {color: #014D7F}
```

```
.style25 {font-family: Geneva, Arial, Helvetica, sans-serif; color: #0066CC; }
```

```
.style26 {color: #0033CC}
```

```
a:link {
```

```
    color: #9DC9F0;
```

```

        text-decoration: none;
    }
    a:visited {
        color: #9DC9F0;
        text-decoration: none;
    }
    a:active {
        color: #9DC9F0;
        text-decoration: none;
    }
    a:hover {
        text-decoration: underline;
        color: #709CB5;
    }
    .style14 {
        font-size: 10px;
        color: #000048;
        font-family: Geneva, Arial, Helvetica, sans-serif;
    }
-->
</style></head>

<body>
<table width="850" height="681" border="0" align="center">
<tr>
<td><table width="800" height="702" border="0" align="center" background="imgx.jpg">
<!--DWLayoutTable-->
<tr>
<td width="31" height="107">&nbsp;</td>
<td width="382">&nbsp;</td>
<td width="314" valign="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->
<tr>
<td width="371" height="74" valign="top"><?

        if(isset($_SESSION['usr'])){
            echo "Hey ". $_SESSION['usr'] . ", you have just deleted $name's record";
        }else{
            echo ".... WAITING....";
        }
?></td>
</tr>
</table> </td>
<td width="19">&nbsp;</td>
<td width="32">&nbsp;</td>
</tr>
<tr>
<td height="42">&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="25">&nbsp;</td>
<td colspan="3" valign="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->

```



```

</tr>
<tr>
<td height="20">&nbsp;</td>
<td colspan="3" valign="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->
<tr>
<td width="723" height="18" align="center" valign="middle"><span class="style14">All Rights
Reserved Federal Road Safety Commission &copy; 2008, Designed Malaspigar </span></td>
</tr>
</table>
</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="19">&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
</table></td>
</tr>
</table>
</body>
</html>
<?php

```

```

    session_start();

```

```

//set up table and database names

```

```

$db_name = "FRSC";
$table_name = "vehicle";

```

```

//connect to server and select database

```

```

$connection = @mysql_connect("", "", "");
or die(mysql_error());
$db = @mysql_select_db($db_name, $connection) or die(mysql_error());

```

```

//build and issue query

```

```

$sql = "SELECT id, driver_name, vehicle, date, time, color FROM $table_name ORDER BY date";
$result = @mysql_query($sql,$connection) or die(mysql_error());

```

```

//create list block of results

```

```

$contact_list = "<ul>";
while ($row = mysql_fetch_array($result)) {
    $id = $row['id'];
    $driver_name = $row['driver_name'];
    $vehicle = $row['vehicle'];
    $date = $row['date'];
    $time = $row['time'];
    $color = $row['color'];
    $contact_list .= "

```

```

    <table width="600" height="36" border="0" align="center" bgcolor="#000000">

```

```

<tr>

```



```

a:visited {
    color: #9DC9F0;
    text-decoration: none;
}
a:active {
    color: #9DC9F0;
    text-decoration: none;
}
a:hover {
    text-decoration: none;
    color: #709CB5;
}
.style28 {
    color: #000048;
    font-family: Geneva, Arial, Helvetica, sans-serif;
    font-size: 18px;
}
.style14 {
    font-size: 10px;
    color: #000048;
    font-family: Geneva, Arial, Helvetica, sans-serif;
}
.style29 {font-family: Geneva, Arial, Helvetica, sans-serif}
.style22 {font-family: Geneva, Arial, Helvetica, sans-serif; color: #9DC9F0;}
.style23 {color: #014D7F}
body,td,th {
    font-family: Geneva, Arial, Helvetica, sans-serif;
}
</style>
</head>

<body>
<table width="900" border="0" align="center">
<tr>
<td height="402" align="center" valign="top"><table width="800" height="638" border="0"
bgcolor="#000048">
<tr>
<td height="229"><table width="800" height="229" border="0" align="center"
background="img4.jpg">
<!--DWLayoutTable-->
<tr>
<td width="19" height="39">&nbsp;</td>
<td width="433">&nbsp;</td>
<td colspan="2" valign="top"><table width="100%" border="0" cellpadding="0" cellspacing="0">
<!--DWLayoutTable-->
<tr>
<td width="334" height="37" valign="top"><?

if(isset($_SESSION['usr'])){
    echo "Listing Accident Records to ". $_SESSION['usr'];
}
else{
    echo ".... WAITING....";
}
?></td>
</tr>
</table>
</td>

```



```

}
-->
</style> ..
<style type="text/css">
div#listmenu {
width:100%;
float:left;
border-top:1px solid #660;
border-bottom:1px solid #0660;
font-size:.8em;
background-color:#000000;
margin-top:3px;
}
div#listmenu ul {margin: 0 10px;
}
div#listmenu li {
float:left;
list-style-type:none;
background-color:#FF6600;
}
div#listmenu a {
text-decoration:none;
color:#99CCFF;
}
div#listmenu a:hover {
color:#FFCC00;
}
a:link {
color: #9DC9F0;
text-decoration: none;
}
a:visited {
color: #9DC9F0;
text-decoration: none;
}
a:active {
color: #9DC9F0;
text-decoration: none;
}
a:hover {
text-decoration: none;
color: #709CB5;
}
.style28 {
color: #000048;
font-family: Geneva, Arial, Helvetica, sans-serif;
font-size: 18px;
}
.style14 {
font-size: 10px;
color: #000048;
font-family: Geneva, Arial, Helvetica, sans-serif;
}
.style29 {font-family: Geneva, Arial, Helvetica, sans-serif}
.style22 {font-family: Geneva, Arial, Helvetica, sans-serif; color: #9DC9F0;}
.style23 {color: #014D7F}
body,td,th {

```



```

        <td height="21">&nbsp;</td>
        <td>&nbsp;</td>
        <td>&nbsp;</td>
        <td>&nbsp;</td>
    </tr>
</table></td>
</tr>
<tr>
    <td height="401" valign="top" bgcolor="#000048"><table width="700" border="0" align="center">
        <tr>
            <td height="21" bgcolor="#036EB6" class="style28">Select Record </td>
        </tr>
        <tr>
            <td height="270" align="center" valign="top" bgcolor="#036EB6"><? echo "$contact_list";
?></td>
        </tr>
    </table>
    <p>&nbsp;</p>
    <table width="704" border="0" align="center" bgcolor="#036EB6">
        <tr>
            <td align="center"><span class="style14">All Rights Reserved Federal Road Safety Commission
&copy; 2008, Designed Malaspigar </span></td>
        </tr>
    </table>
    <p>&nbsp;</p></td>
</tr>
</table></td>
</tr>
</table>
</body>
</html>

```

```

# phpMyAdmin MySQL-Dump
# version 2.2.3
# http://phpwizard.net/phpMyAdmin/
# http://phpmyadmin.sourceforge.net/ (download page)
#
# Host: localhost
# Generation Time: Apr 06, 2007 at 11:12 AM
# Server version: 3.23.47
# PHP Version: 4.1.1
# Database : `FRSC`
# -----

```

```

#
# Table structure for table `vehicle`
#

```

```

CREATE TABLE vehicle (
  id int(11) NOT NULL default '0',
  name varchar(100) NOT NULL default "",
  vehicle_no varchar(30) NOT NULL default "",
  brand varchar(30) NOT NULL default "",
  model varchar(30) NOT NULL default "",
  color varchar(30) NOT NULL default "",

```

```
chassis_no varchar(30) NOT NULL default ",
engine_no varchar(30) NOT NULL default ",
date_pur varchar(30) NOT NULL default ",
receipt_no varchar(30) NOT NULL default ",
reg_date varchar(30) NOT NULL default ",
purpose varchar(30) NOT NULL default ",
lga varchar(30) NOT NULL default ",
period varchar(30) NOT NULL default "
) TYPE=MyISAM;
```