

CHAPTER ONE

1.0 INTRODUCTION

Vehicle Registration in Nigeria began over 100 years ago and the records have been essentially manual which in turn has not help to raise the efficiency of general automotive services in recent years. Today, computer has been discovered as a very efficient instrument, which has played a very significant role in adequate management of information. Besides, it has played more roles in country. However, computerization has helped in many areas of life and due to vehicle owners, the thought of computerization of this operation becomes of great important in order to wipe out the manual data processing system from which many problem have originated. The problems, which have engulfed the objectives of motor vehicles registration, are extensively discussed in this project together with the new method that was innovated. This work is conducted towards the computerization of the various problems in processing data in order to identify the various problems that are been encountered in the registration of vehicles manually. This theory also compares the existing system with the new system, which is exact, and a faster way of processing data and the problem faced by customers when they are registering their vehicles. There are different programs that can be written to develop such programs, PASCAL, JAVA. VISUAL BASIC, and C++ etc. But I will be making use of PHP, Database (MySQL) they are both working with Apache server (Xamp). The Software design used Macromedia Dreamweaver, firework, flash, and switchmax.

The World is experiencing an information knowledge revolution that is fundamentally transforming the way in which human activities are carried out. Government's worldwide are adopting e -government as a means of improving their services to businesses and citizens, promoting economic and social development, and enhancing the effectiveness and efficiency of government operations.

Computer plays vital role in the development of any company it also saves some of its complex problem that is been faced by man and processes voluminous data within a short period of time or at an incredible speed. Recent emphasis on information and data processing in most of our business has grown adversely as in the case of motor vehicle license and plate registration. In as much as motor vehicle registration has been in existent for ages now, the old system of registration has been in adoption which did not play a significant role on highway safety until the development of the new system of vehicle registration where a reflective sheeting which is more visible to read even in the dark. This new system of motor vehicle and plate number registration, which is the main focus of this project, came into existent on the 19th March 1997 and handled by the motor licensing officer. It was introduced to enforce strict compliance to traffic rules and regulation as well as providing a proper data as to the behavior of road users. The

roles, which the introduction of computer system will play in this function, will about more efficiency, effectiveness and improve competence.

1.1 BACKGROUND OF THE STUDY

Vehicle Registration in Nigeria began over 100 years ago and the records have been essentially manual which in turn has not help to raise the efficiency of general automotive services in recent years. Motor licensing office Abuja only focuses on vehicle registration and inspection, and not on other supporting services such as vehicle tracking, learner's driving permission, and drivers' license management, monitoring of drivers and vehicles operations and documentation of both accident and crime report.

Vehicle registration in the city, state, and district offices burdened applicants by requiring them to personally deliver the certified copy of resident's registration and other documents.

Vehicle Registration used to involve manual recording of vehicle's information which ranges from cars to buses and later to trucks and heavy duty equipment on ledgers and tracking other related information such as registration, road worthiness test certificates, change of ownership, engine and chassis numbers; and expiration of road license. This process has been extremely

inefficient and the recovery of the information was not possible once ledgers were damaged or lost as it frequently occurs.

1.2 STATEMENT OF THE PROBLEM

These are the problems that are being encountered in the manual system of assigning a plate number to newly acquired vehicle in the department of vehicle licensing and registration, (Licensing office Abuja). The limited factors listed below have slowed realization of the good intention:

- (i) **Participation of Unauthorized Officers:** Unauthorized offices according to my observation are involved in this work especially in the registration of illegal vehicles which can encourage fraud.
- (ii) **Wrong Charging of Fees:** The officer in-charge is bound to charge a wrong bill to vehicle owners, which may be as a result of underassessment or over assessment of vehicles. This could be with motive to commit fraud or as a result of mistake on the part of the officer at work.
- (iii) **Wrong Sales Allocation:** Staff under a particular state motor vehicle licensing office indulges in registering of vehicles that does not belong to their state.

- (iv) **Improper Accounting:** There is the tendency of the cashier involved in the handling of income generated to make mistake during this process, thus having some measures of inaccuracy in the work.
- (v) There is difficulty at times in tracing a record/information cautioning a vehicle owner due to improper information keeping as a result of carelessness or volume in the size of record kept.
- (vi) **Mental/Manual Labor:** This involves the use of strength and Brain and the body. The officer in-charge goes through mental labor because he has to sort the records of the entire vehicle in his domain of jurisdiction. He suffers from Manual labor because he has to write all the way.
- (vii) **Excess Time Consumption:** There is excessive time consumption because the motor licensing officer has to write and enter the information of the vehicle after the person whose vehicle is to be registered has paid a prescribed amount of money to the licensing authority accompanied with duly completed application, depending on the type of vehicle, write personal information about the person whose vehicle is to be registered and the category of vehicle whether commercial, privates, special purpose and so on, then your plate

number and vehicle license is prepared after a given period of time.

When put together, the time spent on all of these is much.

1.3 OBJECTIVES OF THE STUDY

As we have seen from the statement of the problems, the things that stand's as puzzle in the manual system of motor vehicle registration aims at introducing a better system which is the computerized system which will contribute in providing solution to the problems.

- i. To reduce the amount of time spent in registration of motor vehicle and information for all the vehicle owners.
- ii. To ensure a very high level of accuracy during registration of certain vehicle or category of vehicles that are prone to errors in the manual system.
- iii. To develop a system that will allow for the generation and assignment of an infinite identification mark or number (that is, the vehicle plate number).
- iv. To replace the manual system of registration with a computerized system that will make registration simple and easy for registration officer and vehicle owner.

- v. To provide restriction of illegal access of this program will be limited therefore password will be created for the application software. This password will just be limited to the officer in charge of the work.
- vi. This also aims at giving an up-to-date report of the revenue generates from vehicle registration within a defined period.

1.4 SCOPE OF STUDY

The application of this study is a must for any country that wants to be Information and Communication Technology inclined and ready to reduce the vehicle crime rate and corruption in her system. The scope of this study should be for Liaison Offices and organizations like (Motor licensing office Abuja) that issue vehicle licenses and other vehicle registration documents.

1.5 LIMITATONS OF THE STUDY

In as much as I have so many areas where one could have covered for a wider generalization of result. Some factors have posed as an obstacle to this, and some of these constraints are as follows:

- i. **Finance:** This contributed in my project research since there was much money exhausted in moving to and fro to gather facts for this work.

- ii. **Time:** As students were probably involved in schoolwork like writing of assignment quizzes and other engagement, thus there isn't enough time to attend classes.

1.6 SIGNIFICANCE OF THE STUDY

Due to the constant rise in technology, it is necessary to use computer to process voluminous data within a short period of time or at an incredible speed. This project is to help provide efficiency, effectiveness and improve competence issuance of vehicle license, plate number and other related activities. The importance of this study includes:

- i. To expedite the efficiency of principal licensing officer in the processing of vehicle registration documents.
- ii. To develop a method that will allow easy storage and retrieval of vehicle and owner's registration information at any time in the future.
- iii. To develop a highly accurate method of generating and assigning plate numbers and how to interpret them.
- iv. To determine the easiest and fastest way to access vehicle owner's registration information and missing vehicles.
- v. To enable security agencies find missing vehicles.

- vi. To develop an easy method for generating and assigning plate numbers or identification mark.

1.7 ASSUMPTION OF THE STUDY

One of the major assumptions made in this study work is that manual methods of keeping records are ineffective, time wasting, prone to error and unsecured. It is also assumed that computerized base systems will motivate the staff members to work more effectively and efficiently when registering vehicles and other activities. I also believe that the facts and observation gotten from the office are all reliable for the study to be a very successful one.

1.8 DEFINITION OF TERMS/VARIABLES

The following are some of the terminologies used in the project work.

- **Vehicle Plate Number:** This is a metallic or plastic plate attached to a motor vehicle for official identification purposes. The number is made up of alphanumeric characters or numbers.
- **Vehicle Registration:** is the process where we add a vehicle's details to the motor vehicle register and issue its registration plates. You have to license your vehicle regularly at least annually and you must display a current license label on your vehicle windscreen.

- **Vehicle Licensing:** A regular fee paid to permit the use of one's vehicle on the public roads. The fee helps to pay for road projects and road safety programs. Your vehicle must be both registered and licensed for you to legally drive it on the road.
- **Vehicle owner:** is a person who has met up with the entire necessary requirement for owning a vehicle and has the right to drive it on public roads.
- **Vehicle Registration and Enquiry Software (VehRES) System:** This is application software that is a customizable data collection system, which can be used by law enforcement and motor vehicle agencies (i.e. Liaison Offices) nationwide. The VehRES are compatible with both laptop and desktop personal computers (PC) can be used to collect registered vehicle information for registration, renewal, updating, correction and tracking.
- **Licensing office:** A place where vehicle registration, licenses and other vehicle related documents are performed.
- **Licensing officers:** Is a person who registers vehicles in the licensing office.
- **Vehicle:** A mechanically propelled and wheeled object used for conveyance.
- **Computerization:** Introduction of the use of computer in an application

area by writing a program that will suit the work.

- **ICT:** This is an acronym for Information and Communication Technology.
- **Federal Road Safety Commission (FRSC):** They serve as law enforcement agency charged with responsibilities for, among others, policymaking, organization and administration of road safety in Nigeria.
- **E-Government:** There is no one common definition of E – Government, although the term is widely used. (Norris, 2005) view E – Government as a technology exercise, integrating individual database and websites of government, while (Batschneider, 1990) view it as a means of bringing the government closer to the common citizen through provision of public services online.
- **Driver's license** or **driving license** is an official document, which states that a person may operate a motorized vehicle, such as a motorcycle, car, truck or a bus, on a public roadway. The laws relating to the licensing of drivers vary between jurisdictions. In some jurisdictions, a license is issued after the recipient has passed a driving test, while in others; a person acquires a license before beginning to drive. Different categories of license often exist for different types of motor vehicles, particularly large trucks and passenger vehicles. The difficulty of the driving test varies considerably between

jurisdictions, as do factors such as age and the required level of practice

- **AutoReg Vehicle license:** Is the automated vehicle license registration and renewal system, which is for all vehicle owners to register or renew their vehicle license with the state government. It is renewed annually; it shows the details of the vehicle owner and Vehicle details.

CHAPTER TWO

LITERATURE REVIEW

2.0 URBANIZATION AND URBAN TRANSPORT CONDITION IN NIGERIA.

Transport system represents a major interface between the location of activities and the general movement of people in an urban system (Ayeni, 1998). Hitherto, urban transport problems are becoming more and more acute in the cities in Nigeria (Filani, 1994; 2002; Adesanya and Adeniji, 1998; Egunjobi, 1999; Ogunsanya, 2002; Oyesiku, 2002; etc.) World Health Organization (2000) recently articulated that health concerns related to traffic and transportation have become a worldwide phenomenon and will likely become more of an issue in the future. Findings from other recent studies suggest that stress from transportation may represent an important factor that influences the well-being of urban population (Asiyanbola, 2004; Gee and Takeuchi, 2004).

The trend of urbanization and city growth in developing countries are characterized by rapidity of urban increase, urbanization outpacing industrialization, and a high rate of urban population growth by natural increase and migration (Oyesiku, 2002a). In Nigeria, urbanization has a fairly long history in its growth and development. Historical account shows that extensive urban

development in Nigeria predates the British colonial administration. Early explorers, missionaries and merchants estimates of population of towns show the existence of substantial human settlements in this part of the world in the 19th century (Mabogunje, 1968). During this period, the major factors crucial to the growth and development of cities were trading, marketing and administration.

The second half of the 20th century witnessed rapid rate of urbanization and emergence of cities in various parts of Nigeria due to a number of factors among which are: introduction of wheeled transportation, particularly railway and road; categorization of settlement into hierarchical order of township; introduction of monetized economy and consequently production of cash crops and exploitation of mineral resources; continuous geopolitical restructuring, through creation of states and local governments in 1967, 1976, 1987, 1991 and 1996,; and the industrialization process between 1960 and 1975, which was based on import substitution strategies and consumer market for imported goods and services (Oyesiku 2002a).

In Nigeria the pace of urbanization has been dramatic showing extraordinarily high rates of 5 - 10 percent per annum (Egunjobi, 1999). Consequently, there has been rapid expansion of Nigerian cities' a real extent, which is now sometimes

tenfold their initial point of growth (Egunjobi, 1999; Ogunsanya 2002; Oyesiku 2002a). A crucial aspect of this is that city growth and expansion in Nigeria has been largely uncontrolled (Agbola, 1989; 1997; Egunjobi, 1999; 2002; Oyesiku, 2002a; Olanrewaju, 2004).

In many Nigerian cities, urban transport exhibits remarkable features. Several studies have revealed these features of Nigerian urban transport (Adeniji, 1993; Adesanya, 1996; Adesanya and Adeniji, 1998; Torres, 2001; Oyesiku, 2002b, Ogunsanya, 2002; Olukoju, 2003; Osita et al, 2003; Vandu-Chikolo, 2004, etc.). Among these features as summarized by Oyesiku (2002b:257).

(a) Features of Urban Transport System in the Nigerian cities

- 95% of urban trips are by road. Out of this, about 70% of the urban trips are made by public transport.
- Inter modality of trips is limited to public transport journey by road based public transport.
- Ownership and organization of road public transport systems are characterized by haphazard and uncoordinated operators.
- Complete absence of comprehensive and integrated of urban mass transit public transportation system. Specifically poor condition of city roads which

in turns shortens life span of motor vehicles and high cost of maintenance (Torres, 2001).

Filani (2002) notes that the country has the lowest level of motorization in West Africa with as low as 4 vehicles per 1000 inhabitants. To compound the problem further, the rate of vehicle growth is much lower than the population growth rate. Resulting from this mismatch is a general fall in the level of motorization in all parts of the country. Since 1982 and up till 1989/1990 there was a substantial reduction in new vehicle registration in all parts of the country

2.1 CURRENT NUMBER PLATES, DRIVER'S LICENCE EXPIRE 2013 –FG OF NIGERIA

THE current vehicle number plates and driver's license will become invalid by 2013, the Federal Government has said. While the driver's license will become invalid by October 1, 2013, the current number plates would not be allowed on Nigerian roads from July 31, 2013. The position of the government was made known on Tuesday, by the Joint Tax Board, at a news briefing.

The secretary of the board, Mallam Moha-mmed Abubakar, who addressed newsmen, said the board of the tax body approved a downward review of the enhanced vehicle and motor number plates, with effect from August 1, 2012. While those who wanted to revalidate their current standard plates were to

part with N10,000, those registering new vehicles would pay N12,000. For old motorcycle number plates, revalidation would cost N2,000, while new registration would cost N2,500. The prices of other categories of number plates and driver's license remained unchanged. It was also announced at the briefing that the Biometric Central Motor Registration or the Electronic Central Motor Registration would no longer be required for the registration of motor vehicles.

2.2 LAGOS EXEMPTS PRIVATE VEHICLES FROM COMPULSORY NUMBER PLATES

The Lagos State Government has exempted all private vehicles from obtaining its compulsory number plates before plying the state roads, a statement issued by the state Commissioner for Transportation, Kayode Opeifa, said on Sunday. It would be recalled that the state Chief Vehicle Inspection Officer, Abdulhafiz Toriola, had on October 4, announced that private and commercial vehicles in the state would be mandated to use the state's number plates. "Number-plates are unified all over the federation.

Government never made any pronouncement that vehicles with other states' number plates had been banned from plying Lagos roads. "Only vehicles operating as commercial public transport will have to obtain the state's number plates before being allowed to operate in and on Lagos roads. "This is necessary to

enable the government to have adequate information about such vehicles,” Opeifa stated. The commissioner explained that the step would also ensure the safety and security of residents.

According to him, Regulation 41 sub section 1 of the Lagos State Road Traffic Law stipulates that “No person shall operate or cause to be operated a commercial vehicle without having obtained a commercial vehicle operator license from the Lagos State Government.” He said that every license issued for a commercial vehicle would bear a distinct number which would be painted conspicuously on the front and rear of the vehicle.

The commissioner said that any commercial vehicle operating within Lagos State must obtain a permit from the state government and the owner must register it with the Lagos State Motor Vehicle Administration Agency (MVAA). The commissioner also urged motorists to always ensure the safety of other road users.

2.3 DIFFERENT NIGERIAN PLATE NUMBERS



1976 - 1992, Private Vehicle



1992 Series, Private Vehicle

www.worldlicenseplates.com



2.4 QUALITY OF VEHICLE REGISTRATION DATA

Quality is a major factor for the Vehicle Registration data collected. In Nigeria, Vehicle Registration data such as vehicle license, car insurance, driver's license and other vehicle – related documents are usually collected by officials of both the Federal Road Safety Commission (FRSC) and the State Liaison Office for both the Federal and State Governments respectively. Sometimes the data forms are collected away from the scene. These data collected often have problems including errors, incomplete information, illegibility due to poor handwriting, and

errors due to multiple data entries at various levels. The data obtained might not be of acceptable quality.

O'Day, [1993] defines data quality as accuracy, precision, timeliness, and completeness of the data. The various components of quality listed by O'Day are ascertainment (completeness of data coverage), consistency of coverage, missing data, consistency of interpretation, and the right data, appropriate level of detail, correct entry procedures, and freedom from response error.

Pfefer et al. [1998] defined data quality as a set of dimensions which includes accuracy, precision, completeness, coverage, timeliness, and consistency. The most commonly observed attributes of data quality are data accuracy, data completeness, data consistency, and timeliness of the data

2.5 PROCEDURES FOR OBTAINING DRIVERS LICENSE

- (a) Obtain form at a cost of N4000.00
- (b) Complete application form correctly and attach 2 recent passport size photographs;
- (c) Applicant goes to the V.I.O office for Highway Code and driving test
- (d) Authorized Vehicle Inspection Officer endorses the appropriate section of the form of successful applicants only;

(e) Applicant proceeds for physical capture of his/her image, thumbprints and signature;

(f) The information on the form is loaded into the system.

(g) Applicant is issued with the driver's license

2.6 PROCEDURE FOR OBTAINING RIDERS IDENTIFICATION CARD

The centers are charged with the sole responsibility of registering eligible bike riders on Lagos metropolis and its environs. The process for obtaining the rider's card is as follow:-

(a) Obtain riders application forms at a cost of N800.

(b) Correctly fill personal information & attach 1 passport sized photograph to form

(c) Proceed for testing and certification by vehicle inspection official:

(d) Application form is attested to by representatives of union:

(e) Proceed for physical capturing of image & biometrics:

(f) Printed riders card is issued to the rider

2.7 DEALERS LICENSING AND REGISTRATION

Getting a dealership license for auto or spare part requires compliance with various statutory requirements including safety and environmental laws. It is however important to ensure that information provided on the application form

are true, correct and accurate as they will be scrutinized by the agency. Any inaccurate or false information could stall your license quest.

1. PROCESS

- a. Obtain and Complete Dealership Application Form.

Completed application form should be submitted with the following:

- (i.) Proof of compliance with business registration
- (ii.) Place of Business Requirement

The auto dealer industry is regulated, down to the physical requirements of your dealership; whether you sell used cars or new, make sure your site adheres to the following:

- (a) Must have a permanent building that has a private office for the storage of documents
- (b) Must have a display area that can hold a minimum of four (4) cars with doors open.
- (c) All outdoor display area must be properly graded
- (d) Must at least have one phone line for business purpose.
- (e) Must have a sign attached to the building or built separate that displays the Dealership's name & can be seen by the public.
- (f) Your dealership must conform to all local building codes

(a) Upon submission

Dealership site must conform to regulations as enacted by:

- Ministry of Physical Planning and Urban Development,
- Ministry of Home Affairs and Culture (Fire and Safety Services)
- Ministry of the Environment, and
- Motor Vehicle Administration Agency

c. Where Permission is granted, applicant shall pay the prescribed Fees

₦100, 000.00 (Auto Dealers)} as the Law stipulates

₦ 50, 000.00 (Spare parts Dealers)

But for now to encourage compliance, there is a 50% rebate. Upon the payment of prescribed fee and compliance with the other requirements, the Hon. Commissioner may approve the issue of a certificate of registration in the prescribed form or format to any motor vehicle dealer.

(a) The certificate of registration shall be issued in the name of the motor vehicle dealer and shall be renewed yearly

(b) The dealer shall be required to display conspicuously a copy of the certificate in his place of business

(c) The dealer shall produce the certificate on demand by any authorized officer of the Agency

(d) Each premises/showroom/office/stockyard/service center shall be licensed as separate agencies

2.8- OBTAINING VEHICLE NUMBER PLATE

(a) Documents required for registration of Brand New vehicle:

- (i) Attestation letter from the company of purchase;
- (ii) Receipt of Purchase/Invoice;
- (iii) Delivery note from the company of purchase
- (iv) Passport photograph of the vehicle owner;
- (v) Motor Vehicle Duty Certificate (Book C.191/FormC191) (Custom Card) to be submitted later for clearing.

(b) Documents needed for registration of imported used Vehicle

- (i) Motor Vehicle Duty Certificate (Book C. 191/Form C. 191 (Custom Card)
- (ii) Payment Schedule (Form Sale 156) (attached to Custom Card)
- (iii) Certificate of Entry (Form sale 157) (attached to Custom Card)
- (iv) Bill of Lading containing the Chassis Number
- (v) Engine Number (to be copied out from the engine of the vehicle)
- (vi) Receipt of Purchase

- (vii) Terminal Delivery Order (attached to Custom Card)
- (viii) Vehicle Releasing Invoice (attached to Custom Card)
- (ix) Form C2010 in duplicate
- (x) Passport photograph of the vehicle owner.

(c) Registration forms to be completed

Upon satisfaction with the documents listed above, the registration officer issues registration forms to be completed by applicant which includes:

- (a) Allocation of Registration Number of New Vehicle Form/Blue Form
- (b) Auto vehicle License Form
- (c) Form B
- (d) Federal Road Safety Form, FRSC Form
- (e) Tax Form
- (d) Police Confirmation and Endorsement

After the completion of the Forms listed in (2) above, the registration officer will forward them to the Police Officer attached to the Licensing office to append his/her signature on the Allocation form after verifying and satisfied with the documents along with the vehicle brought for registration. This is to ensure that the vehicle under registration satisfies all the existing laws binding motor vehicle registration and that the vehicle to be registered is risk free.

(e) Issuance of Number Plate

Upon receipt of the police endorsed document, the registration officer then process for payment based on the type and capacity of vehicle;

Items	Fees (₦)
(a) Standard Plate number	5,000.00
(b) Weighing Reg.	2,500.00-5,000.00
(c) Vehicle License:	
1.0 -1.5 engine capacity	- 1,000.00
1.6 – 2.0 engine capacity	- 1,500.00
2.1 – 3.0 engine capacity	- 2,000.00
Bus (Private)	- 2,000.00
Bus (Commercial)	- 2,500.00
Tipper/Lorry	- 3,000.00
Truck	- 3,000.00-5,000.00

(f) Documents to be issued to the client

- A. Brand New Vehicle
 - i. Original copy of the Attestation letter
 - ii. Original copy of the Invoice
 - iii. Photocopy of the Delivery Note

iv. Central Motor registry (CMR) Information in 24 hours but photocopy of the

B. Imported used Vehicle

i. Counterfoil copy of the Allocation Form/Blue Form

ii. Treasury receipt on Weighing Reg.

iii. The Proof of Ownership Certificate (POC)

iv. The Auto-Vehicle License

v. Photocopy of the cleared custom card and central motor registry (CMR) (a)

(a) Information to be collected after 24 hours.

vi. Photocopy of Payment Schedule (Form Sale 156) (attached to custom card)

vii. Original Certificate of Entry (Form sale 157) (attached to custom card)

viii. Original copy of Bill of lading containing the chassis Number

ix. Original copy of Receipt of Purchase

x. Original copy of Terminal Delivery Order (attached to custom card)

xi. Original copy of vehicle releasing invoice (attached to custom card)

xii. Photocopies of Forms C2010 in duplicate (One with EXCHANGE & 5

inscriptions and the second with other & 7 inscription).

Note: Photocopies of all the original documents to be returned must be made and kept.

(v) **Collection of issued Number Plate**

The issued number plate will then be handed over to the applicant.

Note: Registration of right hand Steering Vehicle had been abrogated since 1978 not to be registered in Nigeria.

2.9 OUT-OF-SERIES REQUIREMENTS

- (1) All shipping documents, along with the
 - (a) Customs Card, bill of lading etc; where the Car is shipped into the Country.
 - (b) Attestation letter and purchase receipt where car is Bought brand new from an auto dealer in the Country
- (2) Two passport photographs of owner of the Car
- (3) Registration Fees, Number Plate fee, Weighing and Reg. fee and Vehicle License fees.

2.10 STEPS TO OBTAINING THE NUMBER PLATE

- (1) Applicant's desired number is sent for verification.
- (2) Documents submitted for registration of vehicle are confirmed with the above stated requirements.
- (3) Filling of special number request form by applicant after which payments are made to appropriate banks.
- (4) Applicant returns duly completed form and proof of payments

(5) Produced special plates are documented and handed to the owner alongside other documents.

2.11 CONVERSION OF VEHICLE NUMBER PLATES

Request for conversion plates are in two (2) categories

- (i) From private to commercial use or
- (ii) From Commercial to Private use.

(a) Procedure Of Conversion

- (1) Upon statement of request for conversion, applicant is given
Number Plate Conversion Application/Attestation Form to fill, (all documents required for conversion are explicitly stated on the form).
- (2) Applicant takes completed number conversion/attestation form to the Original number issuing station for attestation by the Station Manager or Deputy where Head is not available.
- (3) After attestation payment is made
- (4) On receipt of payment, the new plates are issued in replacement of the old ones
- (5) The Old number plates are withdrawn for destruction

(b) Replacements of Number Plates

Replacements are done in situations where applicant has either:-

- (i) lost both or one of a pair of number plates
- (ii) Damaged either of the plates or
- (iii) When such plates have lost their original coating of colour

(C) Procedure

- (1) On receipt of request, Applicant is made to fill a Replacement/attestation form
- (2) Applicant is asked submit:
 - (a) Two passport photographs
 - (b) Proof of Ownership of the Car
 - (c) Originals of Police report and Affidavit of intent
- (3) Applicant fills the request/attestation by the Station Manager or Deputy where Head is not available.
- (4) Applicant then makes appropriate payments
- (5) Applicant returns the form and evidence of payment
- (6) Number Plates are entered into a replacement ledger and then issued to appropriate owners.

2.12 CHANGE OF OWNERSHIP PROCEDURE

To effect the change in ownership of a vehicle, the new owner of the vehicle must present the following documents to the licensing officer at the office of initial registration.

- (a) The allocation of Plate Number Form i.e. (Blue Form)
- (b) Valid vehicle license
- (c) Receipt of purchase
- (d) Letter of Authority to effect change of ownership
- (e) Sworn Affidavit by the new owner
- (f) Police Report to support the change of ownership
- (g) The CMR Information for change of ownership
- (h) Passport Photograph
- (i) Change of Ownership Form completed by the owner and endorsed by the Police Officer attached to the Station.

Upon presentation of documents, the application is processed and assessment made for payment.

Change of ownership fee	N2,000
Capital Gains Tax	N 500

NOTE: - The vehicle must have been registered for at least a period of six month before change of ownership can be effected.

2.13 OPERATIONAL PROCEDURE FOR NEW AUTO-HACKNEY

The Auto-Hackney Permit System was introduced to shorten the process time of obtaining the Hackney Permit Certificate. A prospective motorist wishing to obtain the Auto-Hackney Permit Certificate is expected to present the following documents.

- A. Valid Vehicle License
- B. Valid Road Worthiness Certificate
- C. Valid Insurance Policy

The above documents are to be presented to the Terminal Operator alongside the payment teller for the issuance of Hackney Permit.

2.14 NEW VEHICLE NUMBER PLATE, DRIVER'S LICENSE MIRED IN CONTROVERSY IN NIGERIA

Recently, the Senate ordered the Federal Road Safety Commission (FRSC) to stop the issuance of new vehicle number plates and drivers' licenses, a position sequel to a motion by Dahiru Kuta alleging that the FRSC had abandoned its

primary mandate of ensuring safety on Nigerian roads. It also alleged that by so doing, the commission has turned itself into a revenue generating agency which it is not. During the debate on the motion, many of the lawmakers described the new vehicle number plates being issued by the commission as “illegal”. The senators also alleged that the Act setting up the commission did not empower it to issue vehicle number plates.

The floodgate to shoot down the FRSC’s new number plates was opened when the Chairman of the Rules and Business Committee of the House of Representatives claimed that its investigation had revealed that a syndicate, whose identity it did not disclose, has flooded the country with fake vehicle number plates.

However, the row over the introduction of the new number plate and drivers’ license continued as government road safety managers had to face the drilling of law makers. The gradual phase-out of the old plates number and driver license by Federal Roads Safety Commission (FRSC) was initially opposed by Nigerians and National Assembly who raised concern over the recommended cost of obtaining new ones.

But stakeholders in the road sub-sector including Road Transport Employers Association of Nigeria (RTEAN), Nigeria Bar Association (NBA) and Department of Road Inspection, popularly called VIO, expressed support for the introduction of the new vehicle plate number and driver license considering its security strengthening.

Price details for the new number plate as approved by the Joint Tax Board (JTB) including all the state tax boards reveal the following N3,000 (new price) as against N750 old price for motorcycle; N15,000 (new price)as against N2,500 old price; N20,000 (new price) as against N3,000 old price for articulated vehicle.

Furthermore, the new price for Out of Series is put at N40,000 as against N6,000 being the old price. The price for Fancy is put at N80, 000 as against N18, 000 (old price). Aside this, the new price for dealers is placed at N30,000 as against N7,500 as well as N15,000 against N5,000 old price for Government and N40,000 against N10,000 old price for Government Fancy.

To obtain the new driver's license, the JTB approved upward review of prices from N3, 000 to N6, 000 for vehicles while driver's license for motorcycle was raised from N1, 500 to N3, 000.

But members of the House of Representatives, during the debate on the motion, asked FRSC to halt the issuance of the new number plates and driver license until final resolution of the issue. The Senate similarly, concurred with the House resolution.

While justifying the statutory functions of the Commission, Osita Chidoka, Corp Marshal, FRSC at the investigative public hearing on the planned phase-out of the old vehicle number plate and driver's license, noted that the proposed number plates have additional security features that will enhance the road safety on major highways and check activities of criminals in the country.

Chidioka maintained that the scheme would allow the Commission to provide central data base platform for other security agencies including State Security Service (SSS), Nigeria Police among others opportunity to access the facility for security purposes.

2.15 SENATE OF REPUBLIC OF NIGERIA LIFTS NUMBER PLATE SUSPENSION, SLASHES FEES

Senate on Thursday finally rested the controversy surrounding the introduction of the new number plates and vehicle registration by the Federal Road Safety Corps, slashing the price by 30 per cent. It also lifted the suspension on the issuance of the plates and new driving licenses, just as it barred the police from conducting another vehicle registration.

Senate on Thursday lifted the suspension placed on issue of new number plates and driving license by the Federal Roads Safety Corps with a 30 per cent reduction in fees to be paid by motorists. Adopting the recommendations of its Committee on Federal Character and Inter-Governmental Affairs, approved the recommendation that the deadline for compliance with the new scheme be extended from August 2012 to February 2013.

On the police registration, it directed the police to “suspend the introduction of Bio-metric Central Motor Registry and the N3,500 that goes with it as this is an additional burden and unnecessary duplication of the ongoing scheme by the FRSC on the vehicle owner which is capable of translating into hike in transport fare for commuters”.

Presenting the report, Chairman of the committee, Dahiru Awaisu Kuta, said “The current suspension on the issuance of the new drivers’ license and vehicle number plates now in its fourth month, resulting in a huge backlog of demands for these items by the motorists be lifted immediately, taking into account 30 percent reduction.”

Kuta added that the committee further recommended that the FRSC should call for replacement of drivers’ license only at the point of renewal on expiration to avoid double payment. Before the National Assembly suspended the new exercise, FRSC collected N15,000 for new number plates and N6, 000 for new driving licence. But the committee recommended that standard motor vehicle number plates be reduced from N15,000 to N8,400 and Driver’s License from N6,000 to N4,000.

2.16 AUTOMATIC NUMBER PLATE RECOGNITION

Automatic number plate recognition (ANPR) is a mass surveillance method that uses optical character recognition on images to read vehicle registration plates. They can use existing closed-circuit television or road-rule enforcement cameras, or ones specifically designed for the task. They are used by various police forces

and as a method of electronic toll collection on pay-per-use roads and cataloging the movements of traffic or individuals.

ANPR can be used to store the images captured by the cameras as well as the text from the license plate, with some configurable to store a photograph of the driver. Systems commonly use infrared lighting to allow the camera to take the picture at any time of the day. ANPR technology tends to be region-specific, owing to plate variation from place to place.

Concerns about these systems have centered on privacy fears of government tracking citizens' movements, misidentification, high error rates, and increased government spending.

2.17 ALGORITHMS REQUIREMENT FOR IDENTIFYING A LICENSE PLATE

There are six primary algorithms that the software requires for identifying a license plate:

1. Plate localization – responsible for finding and isolating the plate on the picture.
2. Plate orientation and sizing – compensates for the skew of the plate and adjusts the dimensions to the required size.

3. Normalization – adjusts the brightness and contrast of the image.
4. Character segmentation – finds the individual characters on the plates.
5. Optical character recognition.
6. Syntactical/Geometrical analysis – check characters and positions against country-specific rules.

The complexity of each of these subsections of the program determines the accuracy of the system. During the third phase (normalization), some systems use edge detection techniques to increase the picture difference between the letters and the plate backing. A median filter may also be used to reduce the visual noise on the image.

2.18 AUTOMATION AND LAW ENFORCEMENT

Cronkhite (1974) stated that ‘information is the life blood’ of any law enforcement agency. The accurate and rapid flow of information is essential for effective law enforcement. Without information, police work would come to a standstill. Without a fast and reliable means of obtaining and communicating police information, manpower is wasted and police operations are degraded. As the rate at which vehicle crime increased from 1999 through 2007 (65% increase in major crimes nationally) so has the amount of information the police have to

handle (The Punch Newspaper, 2007). It has reached such volume in most police agencies that information no longer can be manually manipulated with any degree of accuracy and efficiency. Automation can assist law enforcement to be more effective, particularly in relationship to two major problems areas:

- Reducing crime
- Optimizing police manpower
- Tracking Vehicle Online
- Gathering information to locate owners of recovered vehicles

But, one problem, which seems to plague all of the automation systems, was the length of time it took to get data into the computer. Northrop (1995) in a study conducted discussing the effectiveness of police computer use and the problems that exist with this use. It was found in that study that the respondents in forty-four cities across the United States view computers as a major force in the fight against crime. This too could be applied in Nigeria if properly established and managed.

Cronkhite (1974) concluded that automation is not a panacea but rather just a tool for:

- Rapidly correlating crime and criminal information from massive amounts

of data

- Quickly locating and dispatching field forces
- Storing, correlating, manipulating and retrieving massive amounts of data accurately and promptly.
- Speedily transmitting and interchanging information from field personnel to data files and from one agency to another.

2.19 CATERGORY OF VEHICLES AND THEIR COLOR STRIPES

- Private vehicles
- Commercial vehicles
- Government vehicles
- Dealers vehicles
- Special or Customize vehicles

Some color stripes are:

- Green stripe- Motorcycle
- Blue stripe- Private
- Red stripe- Commercial
- Yellow stripe- Diplomatic Corps

2.20 THE NEED FOR TECHNOLOGIES AND COMMERCIAL SOFTWARE FOR COLLECTING VEHICLE REGISTRATION DATA

A variety of technologies have been tested and used by many law enforcement agencies in Nigeria. The technologies used in data collection and processing include a variety of systems such as optical scanners, Mobile Phones, printers, optical storage disks, portable computers, and digital cameras.

The current computer technologies allow shareholders to pay their collection/renewal bills at the designated banks or existing offices, electronically transfer the payment to the state agency account and provide deposit slips for the collection of receipts at the state agencies. The use of on – line error checks, and subsequently the needs for reentering Vehicle detailed data are not inevitable. At the beginning, these devices seem to be the best solution to all the registration problems because it tackles the issues of payment of vehicles registration dues into the government's cover.

However, it still has its limitation, as they have not met up with the demands to the masses that spend endless time anxiously waiting for their demands to be met at the Licensing/Commission offices. Hence, the full computerization has not been effected as expected while technology and

software programming has advanced in other countries. Shall we continue to wait for the criminals to get away with our stolen vehicles? Shall we keep spending endless time waiting on queues in which have been divulged are corrupt practices of officials based on personalities? Shall we spend endless time searching for owners of whose vehicles have been recovered when software can be developed to tackle such problem like these?

The merit of automation is far reacting more than just saving time and holding down persons cost, automating gives motor vehicle licensing the means to truly streamline the vehicle registration processes. Automating manual processing tasks let registration officers eliminate duplicate data entry, move towards a completely paperless environment and process multi-day function.

Emphasizing the use of technology in vehicle registration. Peter Jacobs K., and Moses Abiola B. (2003), opinion was that “in developing computerized system which can help motor licensing officers and offices to automatically register with ease, so that the process becomes an automatic day-to-day operation. The solution can help motor licensing officers and offices to:

- **Improve registration:** By automating the manual based process, error caused by manual interventions can be reduced and electronic process support enables faster processing time.
- **Meet regulatory demands:** Archive, email and documentation so that it is easily accessible, usable and quickly retrievable for legal demands.
- **Reduce costs:** By reducing the administrative burden of paper management and error prone and repetitive data entry.

For a computerized system to work efficiently and effectively, a strong and reliable database is needed.

According to Microsoft encyclopedia, database is;

- A structured format for organizing and maintaining information that can be easily retrieved. A simple example of a database or a spreadsheet.
- Data stored in a computer in such a way that the computer can easily retrieve and manipulate the data.
- A collecting of records describing information resources usually computerized.

According to Ahmed Suleiman T. (1991), “there are many reason for vehicle registration, take for instance, if you just bought a vehicle and completed all the

registration requirement and you are given your vehicle license, then on your way back from the village, you were attacked at gun point and the vehicle snatched from you, you reported to the nearest police station and if you are lucky, your vehicle will be found”. It would be difficult for you to get your vehicle within a short period because of the existing manual system.

According to Balogun, Segun A. (2006), states in his Road Safety Practice in Nigeria that “the method of vehicle and plate number registration and identification has caused a lot of people pains, a pregnant woman die on the queue in her quest for vehicle registration.”

According to Dr. Ikechukwu David N. (1995), states that “our vehicle registration offices today are faced with potential rise and inefficiencies associated with manual i.e. paper based processes which are costly, prone to error and require mental and manual labor. Heightened regulation in the country is also placing these vehicle owners under pressure to meet litigation needs”.

According to Oyeyemi, Biodun O. (2003), states in his Stand in Road Traffic Administration states “the level of tediousness the manual system of vehicle registration is so alarming that requires a new modified method that will be easy and simple.”

According to Engr. Manager Emmanuel T. (2000), “most vehicle owner finds it difficult to register their vehicle on time due to the manual process which consumes time. For you to register your vehicle within a short period, you need to know one or two persons in the licensing office. This factor is peculiar to most Nigerian offices”.

According to (Bishop, A., 2003), vehicle crime accounts for a quarter of all recorded crime; it costs over £3 billion a year and causes immense distress and inconvenience to its victims to track their records. That is why there is need to setup a national target of reducing vehicle crime by 30% over the next five years in Nigeria.

According to Dr. Marcellina Hembadoon A. (2006), “the vehicle plate number is very important because it is an identification mark that distinguishes vehicle from each other. It shows the country a vehicle belongs”.

2.21 VARIOUS REGISTRATION PLATE NUMBER OF DIFFERENT COUNTRIES



Botswana plate.



Cameroon license plate



Morocco, Agadir license plate



South Africa license plate (1995)



Argentina's Registration plate



Mexico - Sonora license plate



Standard Michigan plate



Standard Pennsylvania plate



Afghan license plates primarily use Arabic script text and numerals.



An Iranian license plate - Shiraz



Iraq license plate 1964 – 2001



Japanese License Plate



Jordanian private vehicle registration plate



People's Republic of China



Hong Kong license plates



North Korean license plate from Pyongyang (1992)



Russian registration plate



Saudi Arabia license plate - ('70s)



Current Ukrainian regular plate

CHAPTER THREE

SYSTEM ANALYSIS AND METHODS

3.0 RESEARCH METHODOLOGY

Robinson et al, 1970 define system analysis as the methodological study of a system, its current and the future required objectives and procedures in order to inform a basis for the system and the design. Jerry, 1989 also define system analysis as the process of analyzing system with the potential goals of improving and modifying it. In other words, system analysis is the detailed look at the current system and what a new system will be required to do; system analysis always leads to system design which is the development of new system that will meet the future requirements.

The basic tool of system analysis is the ability is to probe, enquire, observe more and reconciles all what happens in any situation. With this alone, the information gathered is analyzed to identify the components of the system, creating a structure from which the essential requirements can most efficiently be met.

The scope of the research covers the Motor Licensing office Abuja in the registration of vehicle and identification of missing vehicles in the country.

3.1 FACT FINDING MEHOD USED

The data used in the study were collected from two sources of data collection, the primary and secondary source.

- **Primary Source:** This involves oral interviews conducted with various personnel in the licensing office Enugu state, the licensing office and the Board of Internal Revenue in reviewing and sharing their experience about

the difficulties they undergo in using the manual system in vehicle and plate number registration issuance and allocation.

- **Secondary Source:** These include the use of textbooks, dictionary, journals newspaper and Internet downloads to collect data in order to understand what the vehicle and plate number registration and identification is all about.
- **Close Observation Method:** This involves my personal visit to the Motor Licensing office Enugu. I observed the untidiness of the offices, long queue of the vehicle owners and the difficulties the staff face in preparing these documents.

3.2 ANALYSIS OF EXISTING SYSTEM

Vehicle Registration used to involve manual recording of vehicle's information which ranges from cars to buses and later to trucks and heavy duty equipment on ledgers and tracking other related information such as registration, road worthiness test certificates, change of ownership, engine and chassis numbers; and expiration of road license. This process has been extremely inefficient and recovery of the information was not possible once ledgers were damaged or lost as it frequently occurs.

The current manual process employed by the state agencies and parastatals charged with administering motor vehicle documentation and registration has over the years failed to effectively address the objectives of the stakeholders to the process i.e. the federal and state authorities, and the vehicle owners and users in the country.

An organization's operation is always out by employing a particular system or method, which may be by use of machine or manual system of operation. Enugu motor licensing offices carries out their operation on motor vehicle registration manually.

During this process of manual operation, the applicant who requires that his (New Vehicle, fairly use or Brand-New Vehicle) should be registered, the motor licensing Authority (M.L.A) expects him to fill three copies of form B. He should also come with the necessary documents like custom duty certificate, bill of entry, bill of lading, custom payment schedule, import duty certificate, receipt authenticating the total amount paid to the former owner be it government or the vehicle dealer together with the host of other document. These documents are checked in order to make sure that they are bear custom stamp and signature and also complete. After he has gone through this, he now instruct the inspector officer in writing on the completed form for the applicant to go ahead with registration of his vehicle as well state the fees to be paid for the vehicle.

The fees are charged based on the following:

- The category of the vehicle
- The amount the vehicle is bought
- The purpose the vehicle will serve

These fees are summarized below:

N500.00 (Motorcycle)

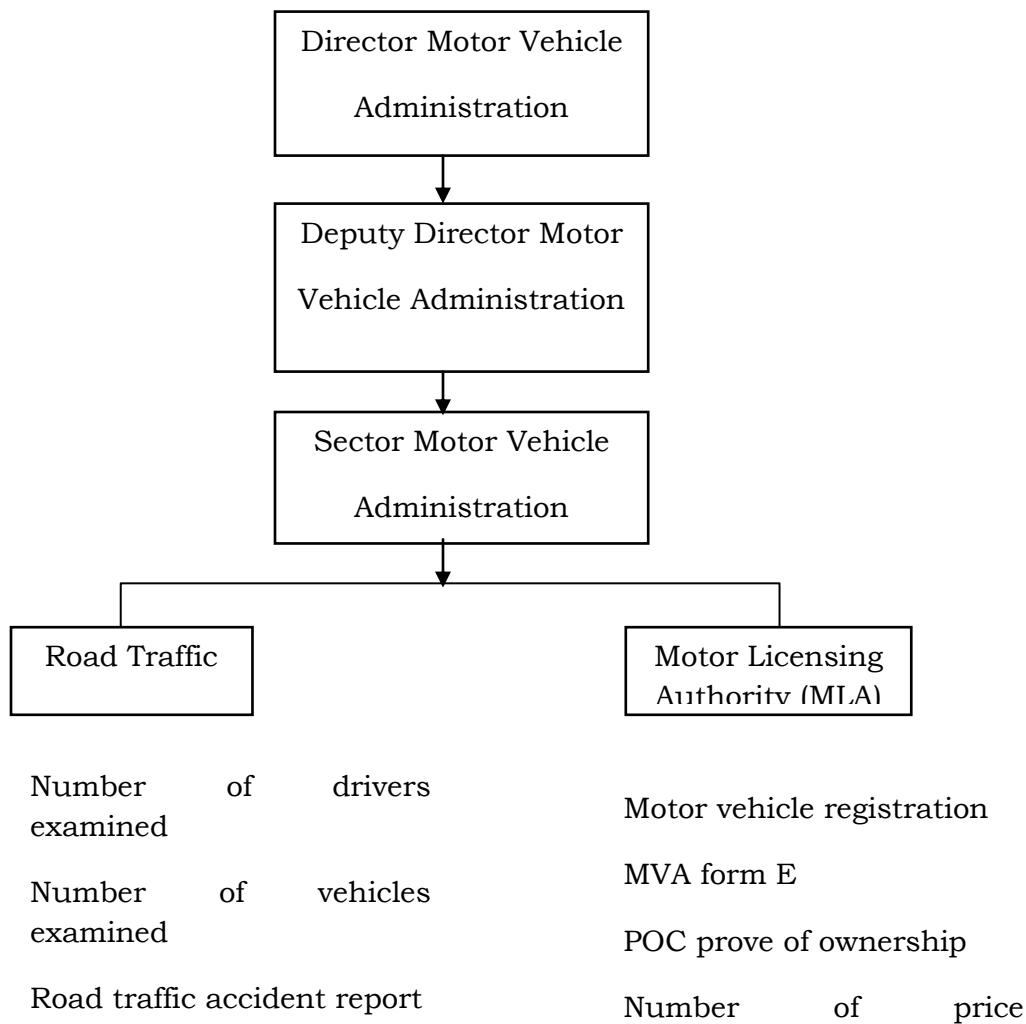
N1, 000.00 (Motor vehicle bought below one million naira)

N20, 000.00 (Commercial vehicle bought up to one million naira)

N3, 000.00 (private vehicle bought up to one million naira)

After the applicant has been charged the next person who is the inspection officer will now inspect the vehicle to know if the vehicle component numbers are filled in the form like the chassis and engine numbers with what he has on his vehicle. After inspection, the officer will now forward the form to the sub-cashier, who collects the money, write a receipt specifying the amount paid and pass back the receipt to the motor licensing authority for signing.

3.2.1 Data Collection Flow Chart



3.3 ORGANIZATION STRUCTURE OF MOTOR LICENSING OFFICE ABUJA.

Board of internal revenue to an establishment that yields money for the government through motor licensing operation of which motor vehicle registration is one of the functions. Motor licensing office, Abuja is a body, which has their operational area at different local government and districts.

Motor licensing office, Abuja has the Directorate of motor vehicle administration as one of the order of command. They are in charge of administration of motor licensing operations all over the state, which is headed by Directorate of motor registration who is under the order of chairman of board of internal revenue, which is the apex of this structure. Below the directorate of motor vehicle administration is the principal licensing officer who is in control of the urban licensing offices: M.L.O Gwagwalada M.L.O Wuse zone 3 and M.L.O Central Area.

M.L.O. Wuse zone 3 operates under the command of motor licensing authority as the boss having three departments attached to it namely AutoReg, administration and assessment departments. Administration department is headed by a administration officers working under him is the secretary of this department in charge of correspondence, management and public affairs of the office.

The assistant motor licensing authority heads assessment department. They are in charge of every inspection done both in the vehicle and the form. They have clerks that write for them.

AutoReg is a proprietary, web-based, business solution, developed and trademarked by Courteville Business Solutions PLC, to address the inefficiencies of the motor-vehicle administration system in Nigeria. Courteville Business Solutions

PLC is proud to be partnered with the following banks: Oceanic bank, Bank Phb, Sterling Bank, Afri Bank, Uba, Skye Bank, Fidelity Bank, Intercontinental Bank, Eco bank, Unity Bank, Wema Bank, Fin Bank.

Government approved inspection officer's heads AutoReg department and it is presently controlled by Fin Bank. Vehicle licenses are to be renewed annually and they give the vehicle the right to drive on Nigerian roads within that period. It has been designed to show the details of the vehicle owner and vehicle details.

Since the commencement of AutoReg, over fifty thousand (50,000) cases of number plate duplication have been discovered and sorted out in Lagos State alone. The following are the inherent benefits of the AutoReg:

- Creation and maintenance of a credible data base and provision of accurate statistics of number of vehicles within the state
- We have more than doubled the revenue of the states the business solution has been deployed
- Quick and easy access to renewing genuine vehicle license
- The business solution model has been able to control crime in case of stolen vehicles

Auto Reg was deployed first in Lagos State in (February 2007), Oyo (June 2008), Delta (Jun, 2008), Anambra (Mar 2008), Abia (Dec 2008), Rivers (Jan 2009), Enugu (Sept, 2008), Niger (Oct, 2009), Kebbi (Nov, 2009), Borno (Jan, 2010) and Sokoto (Jan, 2010)

Auto Reg Hackney Permit: it is an automated permit issued to owners of commercial vehicles, trucks, buses, commercial motorcycles, staff buses and all

other heavy-duty vehicles. This was launched in Lagos State in Dec 2007, Oyo (Nov, 2008), Abia (Dec, 2008), Anambra (July, 2009), Niger (Oct, 2009) and Kebbi (Nov, 2009)

3.3.1 Diagram Showing the Organization Structure

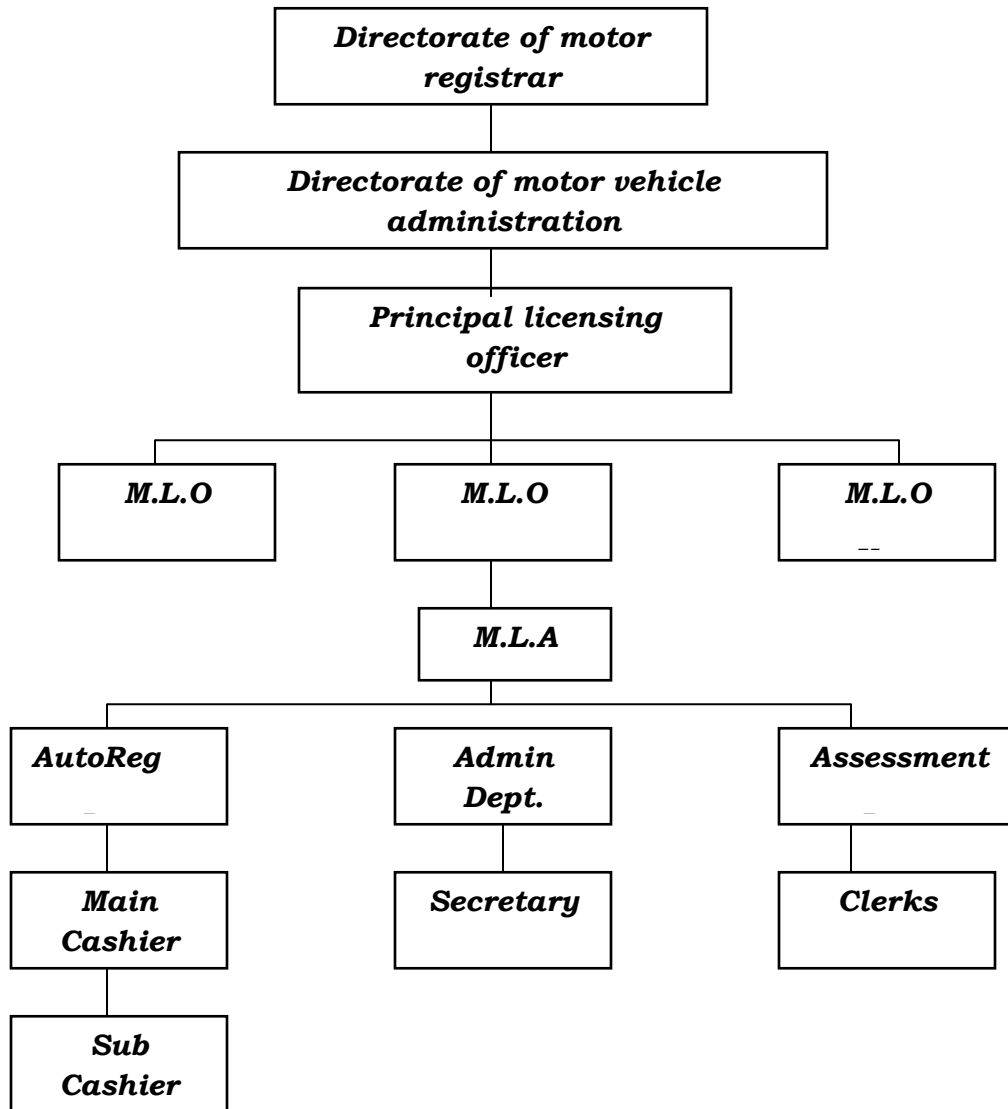


Fig 3.1: Organizational Structure

3.3.2 Information Flow Diagram

Information, which is a source of organizational life, is important to be adequately communicated. The diagram below shows the way information flows in the motor licensing office.

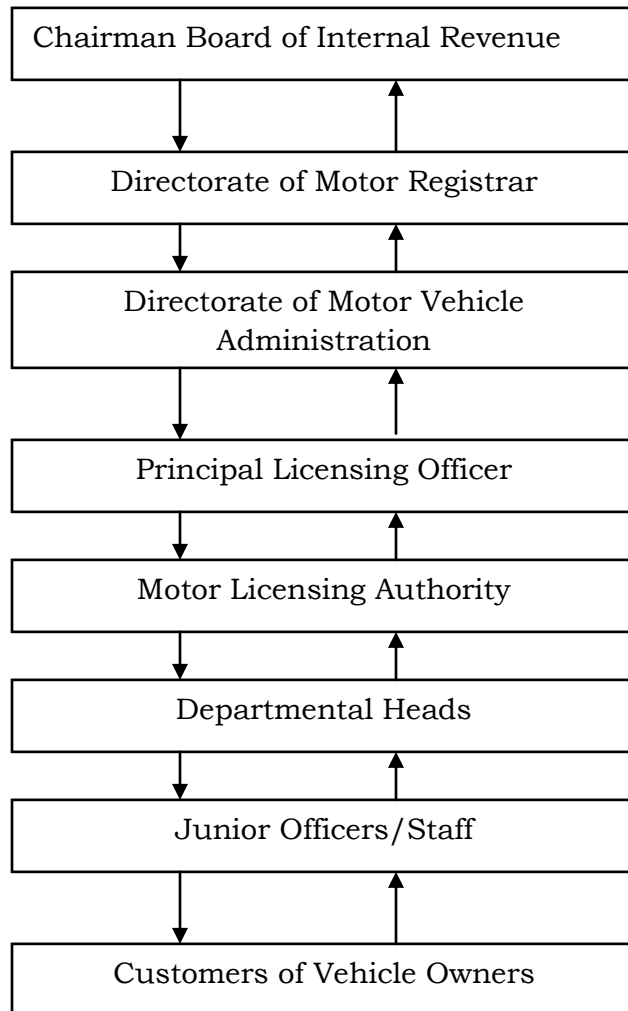


Fig 3.2: Information Flow Diagram

3.4 OBJECTIVES OF THE EXISTING SYSTEM

The existing system i.e. the manual system of operating motor licensing office has some objectives which they want to achieve as much as possible to its maximum.

The following are the objectives:

- (i) This system aims at eliminating fraud by making the process to pass from one person to another yet it has not been possible since authorized officers still involve themselves in the work.
- (ii) This system has aimed at rendering/offering quick service to customers not minding that it is done by hand, which they know will help in pleasing their customers by attending to them within few minutes which has not been achieved.
- (iii) This existing system aims at keeping accurate account of money yielded in the registration of vehicles.
- (iv) This system keeps a comprehensive record of all registered vehicle owners in the states at large.

3.5 PROBLEMS OF THE CURRENT SYSTEM

Presently, the mode of storage is both in paper form and in digitized (i.e. computer) form. Owing to lack of proper database maintenance plan, database recovery plan coupled with the increase in the vehicle registration various problems raise their ugly head in various fashions. The problems are itemized below.

- Poor performance experienced during information retrieval, due to Lack of efficient storage of data.

- Lack of proper, correct, accurate and concise information about the car owner.
- The delay associated with the registration, because of the manual methods of operation.
- Lack of proper and accurate keeping of information about old records that have been stored for some time.
- The issue of security of records.
- Time wastage: some activities are time consuming in the system for instance, searching for a particular car owner's record will take some time.
- As different people are in charge of registration, it is possible for registration anomalies to result.
- The problem of work monotony and tediousness that result from doing the same thing repeatedly.

3.6 EVALUATING THE EXISTING SYSTEM

We can conclude that the existing system is:

- Ineffective
- Tedious
- Monotonous to its operation
- Inaccurate
- Inconsistent
- Incapacitated
- Unreliable
- Unproductive

- Substandard etc.

Having considered all these, it becomes obvious that a new computerized system is needed.

3.7 JUSTIFICATION OF THE CURRENT SYSTEM

New system, which is computerized, has so many benefits that will obviate the problem experience in the current system. The need this new system cannot be over emphasized as it is aimed at achieving;

(i) **Accuracy of Computation:** Measures of accuracy will be achieved since the computer system will maintain stability in assigning fees based on assessment and making of accurate calculation.

(ii) **Neatness/Reduced Use of Paper:** Computerization gives room for production of a very neat job. Besides, since the vast volume of paper, which is used in keeping/storing information, will no longer be needed, it will help in keeping a very neat office.

(iii) **Reduction of Cost:** The computerized system will keep in reducing cost of operation due to constant production of forms and registers for keeping records as less form will be used.

(iv) **Use of Less Space for Record Storage:** There will be elimination of much space used in storing records by introducing a computer storage media (disks) which can keep vast volume of information in a less space.

(v) **Speed Optimization:** This will eliminate the problems of time wasting in registering records, checking from one line to the next as well as preparing a revenue report which is faster than using manual process to do it.

(vi) **Quick Retrieval of Information:** There will be fast retrieval of information, which has advantage over the manual system that enables the user to retrieve information faster most especially as it concerns the vehicle owner by making use of his/her vehicle registration number to call up their information than in manual system where you search for information record line after the other.

(vii) Less tedious

(viii) Reliability

(ix) Effectiveness and efficiency by reducing work intensity

(x) Ease of update and maintenance of operation

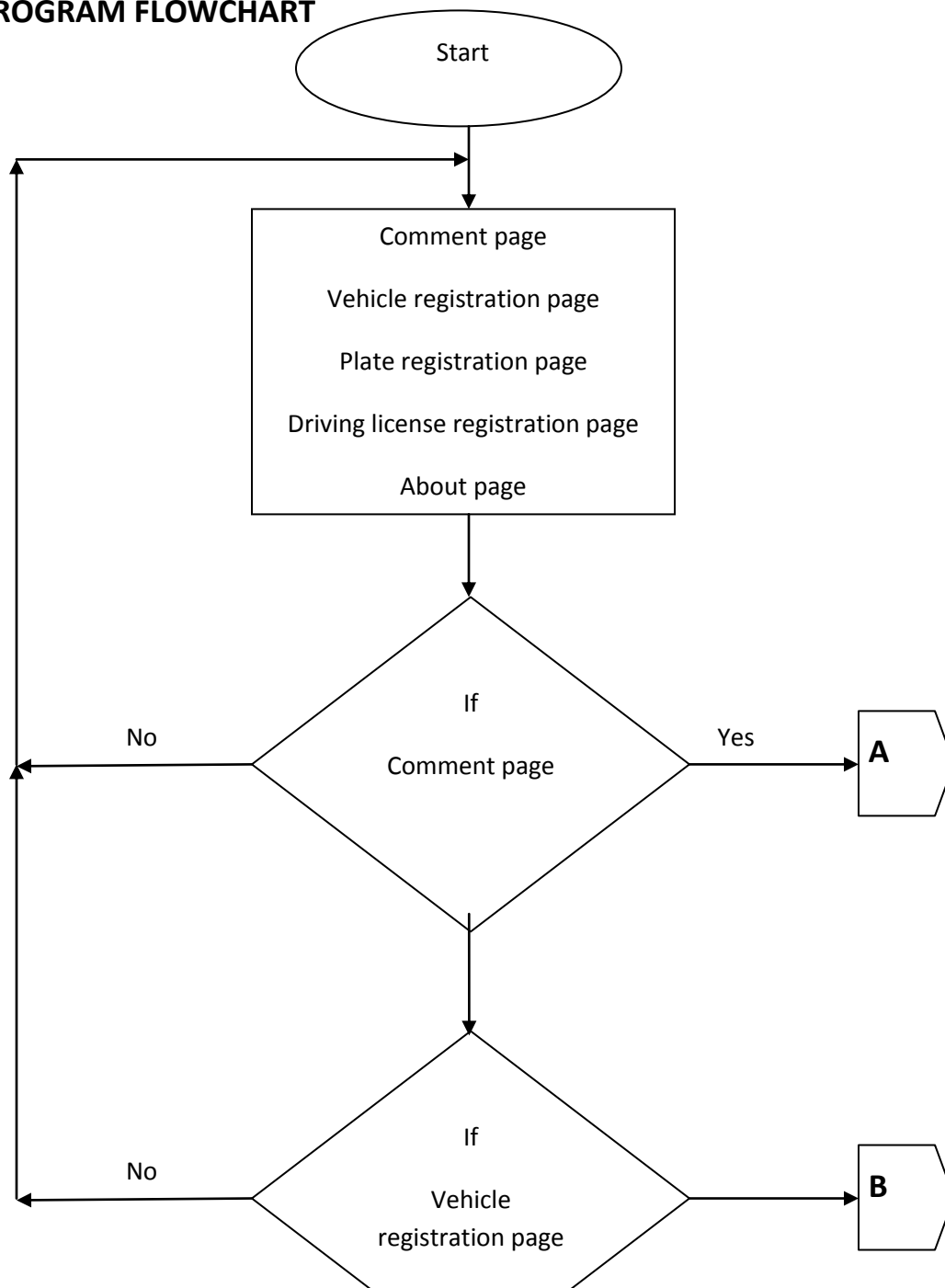
(xi) Consistency of data

CHAPTER FOUR

4.0 DESIGN, IMPLEMENTATION AND TESTING OF THE NEW SYSTEM

There is need for one to design system by showing what the system entails, identifying and defining the various components of the system before the actual implementation. The whole aim is to determine how the information can be built. This gives the design the chance of making a choice of the way the problem can best be solved.

4.1 PROGRAM FLOWCHART



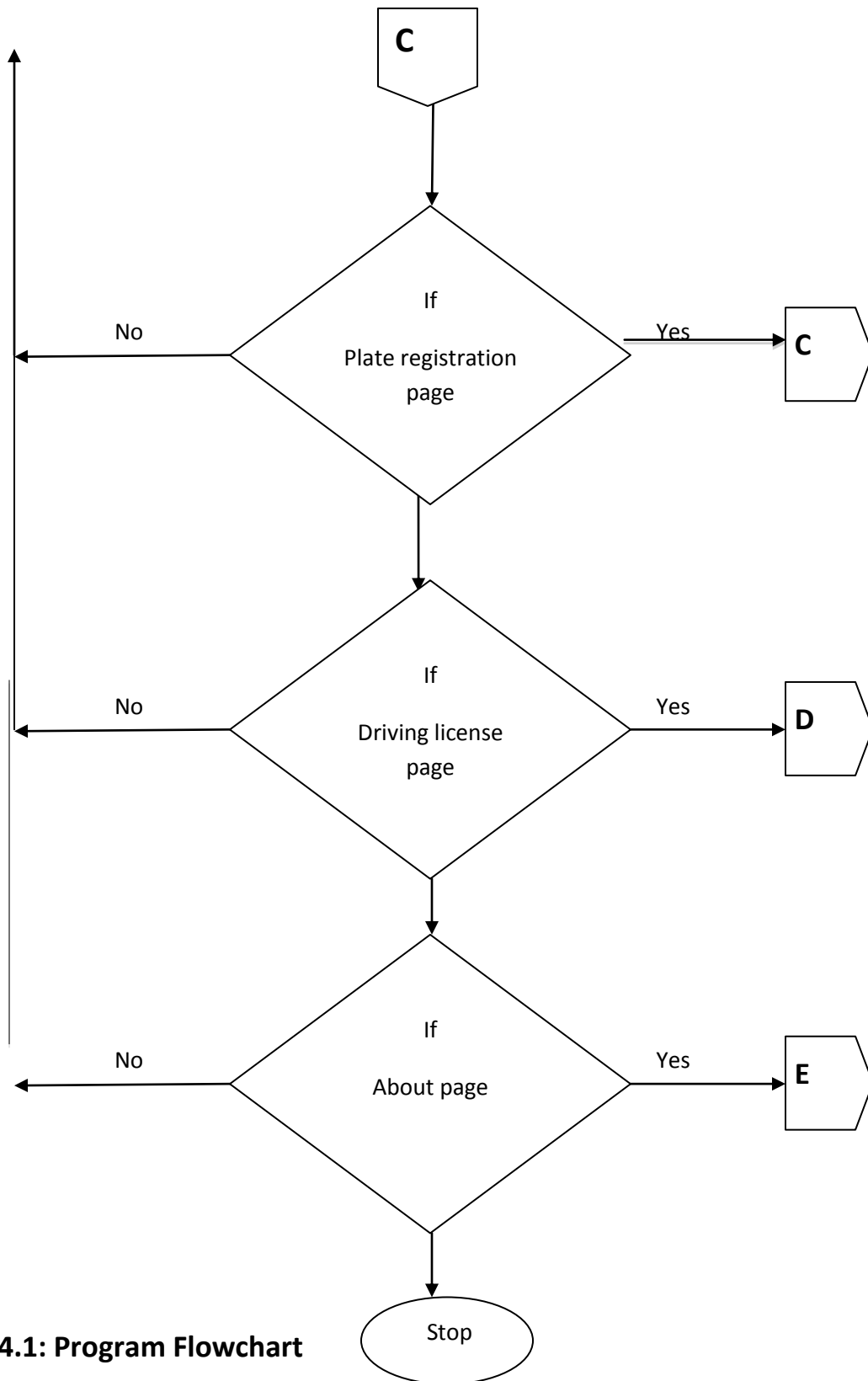


Fig 4.1: Program Flowchart

4.3 COMMENT FLOWCHART

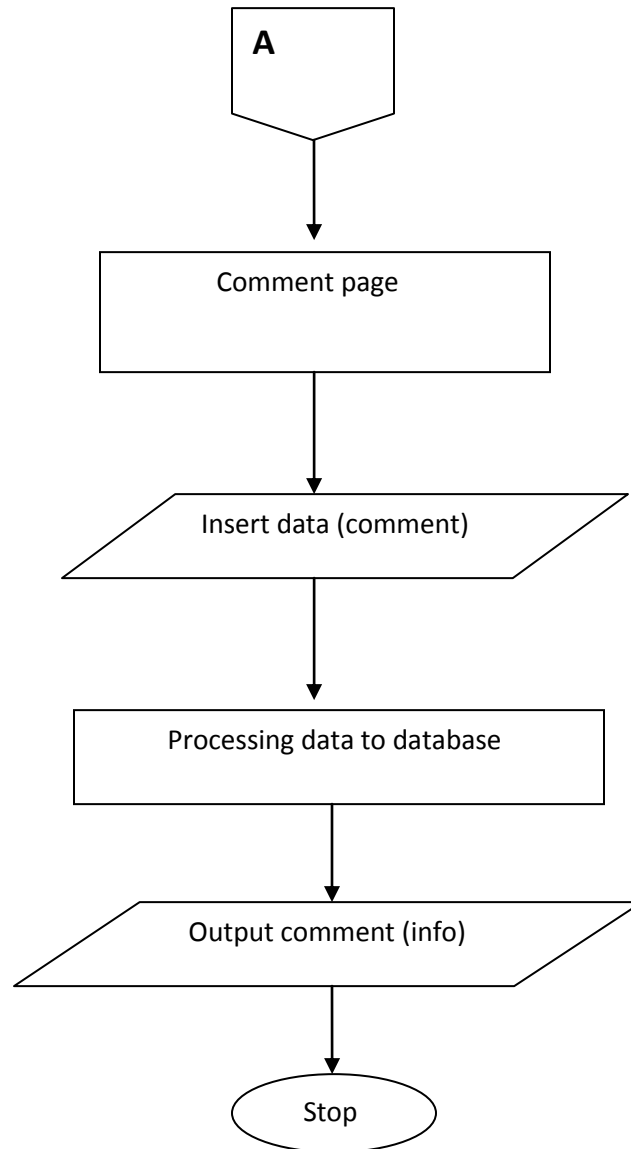


Fig 4.2: Comment Flowchart

4.5 REGISTRATION FLOWCHART

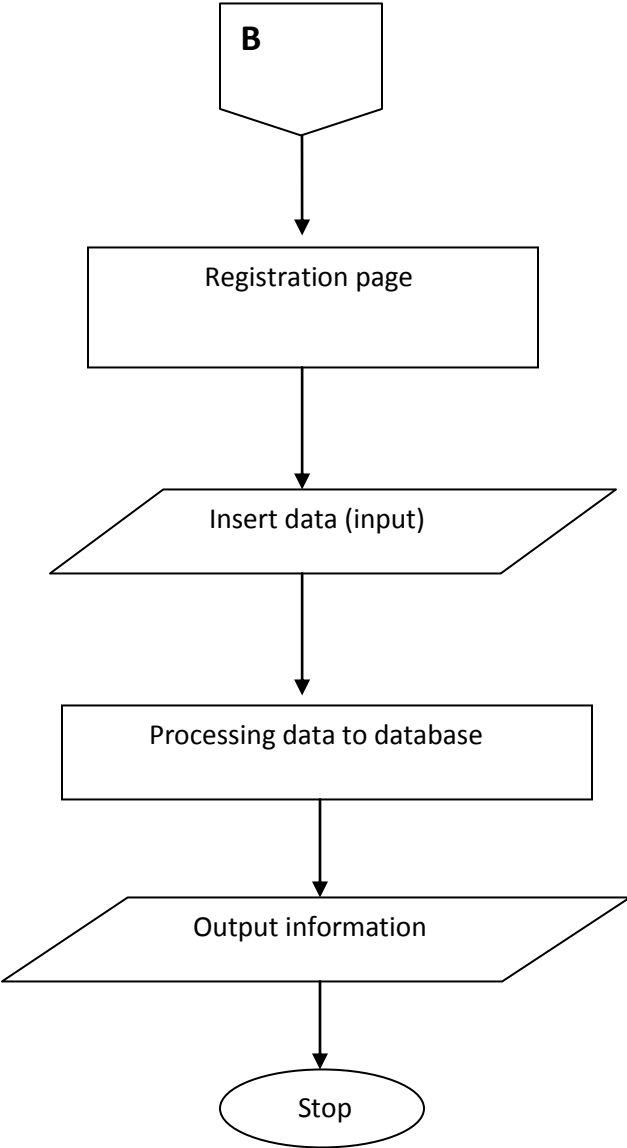


Fig 4.3: Registration Form

4.6 PLATE REGISTRATION FLOWCHART

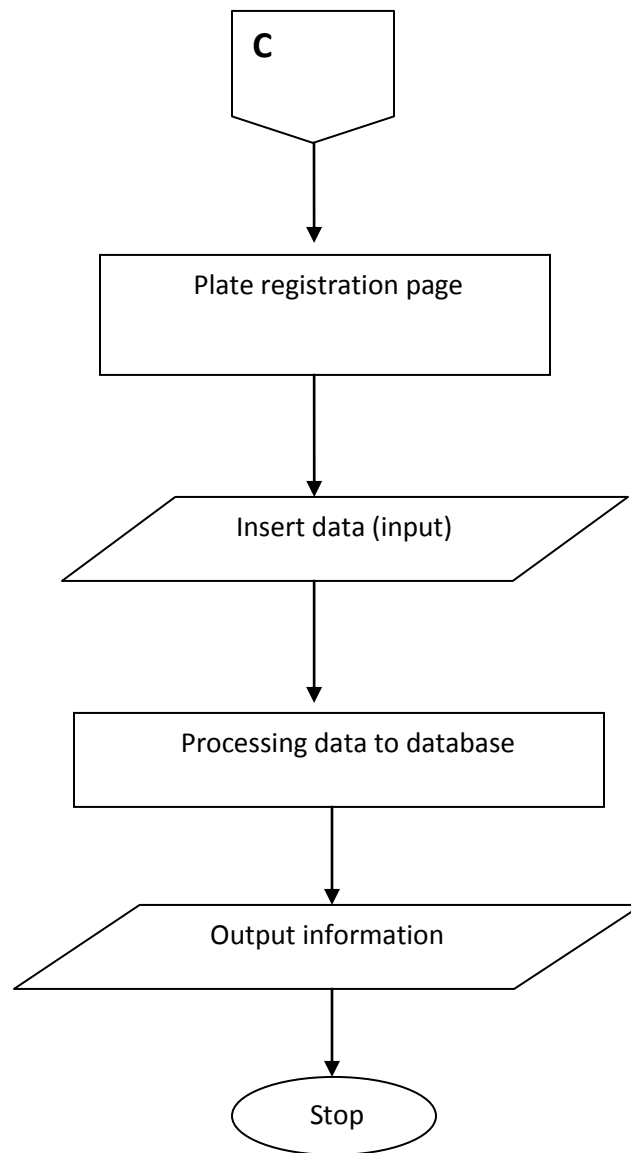


Fig 4.4: Plate Registration Form

4.7 DRIVING LICENSE REGISTRATION PAGE

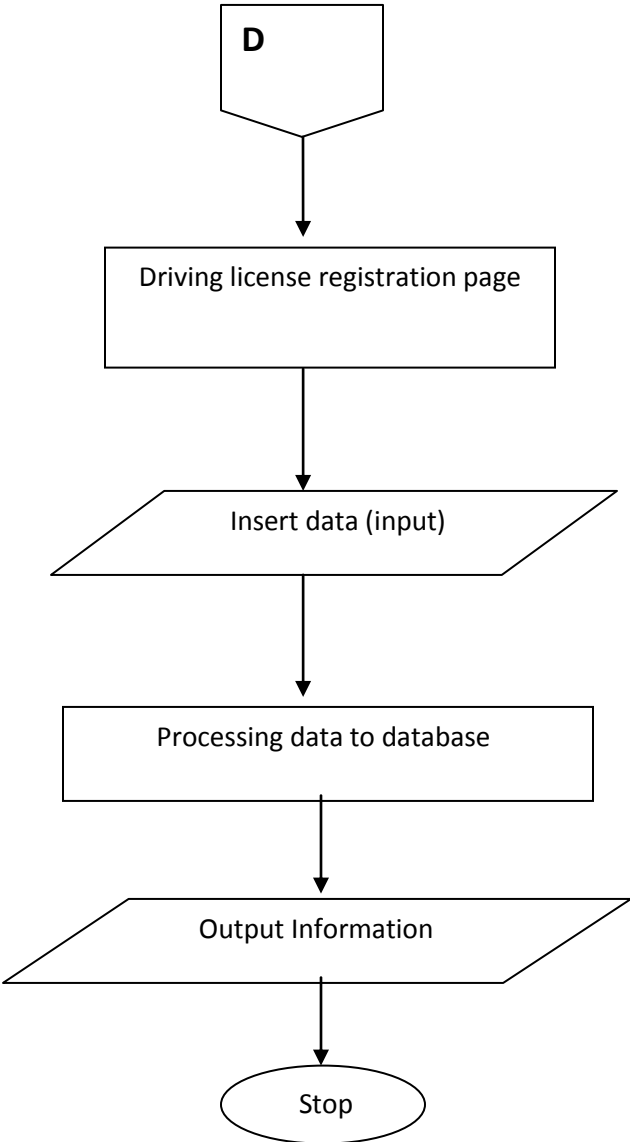


Fig 4.5: Driving Licence Registration Page

4.8 ABOUT PAGE FLOWCHART

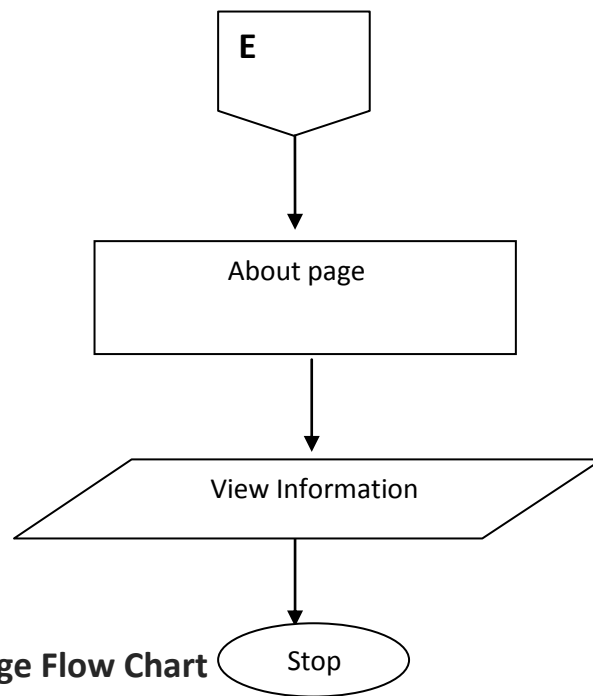


Fig 4.6: About Page Flow Chart

4.9 FILE DESIGN

A file is a collection of related records, which is made up of fields, field in this context means data items. Random file processing and access technique shall be employed because of the need for random retrieval of the needed record regardless of its location in the memory. The automated or computerized method of registration of a vehicle uses MySQL and the database holds its important data and their specifications.

4.10 IMPLEMENTATION

The implementation requirement for software development varies and these requirements depend on some predefined factors, at these points we won't dwell on what those factors are but on what is required of the vehicle registration system.

Another area of this systems development that is analyzed in this chapter is the use of modules, not only forms are used in this design. Modules are non-object oriented entities in visual basic that place an important role in programming application.

The simplicity of the programming language employed in the developments of this software makes the whole development process less tasking, which is a very important feature of software development. The software can run conveniently on a system of Pentium IV processor with at least an operating system of window 7, considering the platform upon which the software was developed.

4.11 PROGRAMMING PARADIGM AND METHODOLOGY

Understanding the method and paradigm of proper programming is essential in the implementation of presentable software. The following points are important in coming about this.

- WRITEABILITY
- READABILITY
- ABILITY TO HANDLE EXCEPTION
- MODIFIABILITY

- OPTIMISABILITY

4.11. 1 Writeability

The ability to express a program in a way that is natural for the problem is an attribute of a good programming language, in that the write-ability of the programming language itself is a way that opens up an understanding of the problem solving the ability of the programs that is written therein. The programming platform used in the development of this software is highly write-able and easy to understand.

4.11.2 Readability

Another feature of a good programming language or of a well written programming code is the readability of codes, in that it should be easy to read through sequence of codes, how they follow through the achieving of what they are implemented to do.

4.11.3 Ability to Handle Exceptions

No written programming code is perfect in every sense, no matter the programming language used and so the ability to cater for unforeseen and expected errors in written code is very essential.

4.11.4 Modifiability

Think of a case when the line of code as stretched to a lengthy sum and in the implementation there are no modules (sub programs) when the need to modify the code comes up it becomes very tasking because every aspects of the program has to be modified which is not professional, it means therefore that another

feature of programming language is modifiable that is the ability to easily modify when the need arise.

4.11.5 Optimisability

Just like in the case of modifying, optimisability is more of been able to upgrade an already implemented program, often times when problems become larger the need to increase the efficiency of the program implemented to solve the problem becomes necessary and when the program is not written in a way that will not make that very easy, it determines the ability of the programming language even if it caters for such.

4.12 SYSTEM PERFORMANCE ANALYSIS

In analyzing the performance of this software, some features would be considered one of which is the speed of information retrieval and storage though this might depend on the speed of the machine on which the program is installed considering this therefore this program was installed on a Pentium IV system with corresponding processor speed, it was observed that speed information storage and retrieval is real time i.e as soon as information is stored, it can be retrieved almost at the same time to reflect what was stored.

4.13 SYSTEM SPECIFICATION/ REQUIREMENT

The system requirements are the software and hardware requirements. The system requires a set of instructions that controls a computer action. It is a computer program that accomplishes some specific applications or tasks. This software can be purchased or a user can develop the software from software developers.

The hardware requirements unlike software refer to the physical components of the computer i.e the peripherals in this design. The hardware and the software requirements for this system are listed below:

- System's software application requirements
- System's Hardware requirement

4.13.1 System's software application requirements

- Operating System: Windows 7 or Windows Vista
- Software designer: Micromedia Dreamweaver, Micromedia firework, flash, switchmax
- Local Server (Xampp)

4.13.2 System's hardware requirement

- Pentium IV processor (minimum)
- 256MB-4GB RAM/ memory space
- 10GB hard disk space (minimum)
- Standard keyboard
- SVGA Colour monitor
- Mouse
- A Stabilizer
- CD ROM driver or DVD driver
- 1600V uninterrupted power supply (UPS)

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

Vehicle registration used to involve manual recording of vehicles information, which ranges from cars to buses and later to truck and heavy duty equipment.

Vehicle registration in Nigeria began over 100 years ago and the records have been essentially manual which in turn is not helped to raise the efficiency of general automotive services in recent years.

The federal government of Nigeria has identified economic development as a major for achieving the 2020 socio-economic development. The vehicle registration system is a must for any country that wants to be information and communication technology inclined and ready to reduce the vehicle crime rate and corruption in her system.

5.2 CONCLUSION

The understanding of the problems that very peculiar to vehicle registration system was opened up also in the chapter one and three of this project these problems includes ineffective, time consuming, tedious, in accurate, inconsistent etc. which vary from operating system compatibility to machine dependencies.

However big a software project is, these problems and more are what they face and the bigger the software are project the more probable it is that they face these problems.

When the first computer was designed, the development of all that came after the first computer is founded on the concept of the very first and now it has gone from development of just computers to the development of software as this

project is done so far.

Vehicle Registration in Nigeria began over 100 years ago and the records have been essentially manual which in turn has not help to raise the efficiency of general automotive services in recent years.

This is only focused on vehicle registration and inspection, and not on other supporting services such as vehicle tracking, learner's driving permission, and drivers' license management, monitoring of drivers and vehicles operations and documentation of both accident and crime report.

5.3 RECOMMENDATIONS

If one thing must be researched in the Computerization of vehicle registration system with the mind of perfecting it and making it more useful in the real sense of things, it is the security of information handling software. The security of vehicle registration system is very crucial considering the prevention of vehicle crime and similar vices so it is worth further researching.

Therefore, I Recommend that motor licensing office Abuja should set up a computer based system.

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APPENDIX

```
Private Sub Adodc1_MoveComplete(ByVal adReason As  
ADODB.EventReasonEnum, ByVal pError As ADODB.Error, adStatus As  
ADODB.EventStatusEnum, ByVal pRecordset As ADODB.Recordset)
```

```
With Adodc1.Recordset
```

```
    If .EOF Then
```

```
        Adodc1.Caption = "End of File"
```

```
    Else
```

```
        Adodc1.Caption = "Record " & .AbsolutePosition & " of " &  
.RecordCount
```

```
    End If
```

```
End With
```

```
End Sub
```

```
Private Sub cmdAdd_Click()
```

```
    intbou = Val(txtbou.Text)
```

```
    Adodc1.Recordset.AddNew
```

```
    cbot.SetFocus
```

```
    cmdsave.Enabled = True
```

```
    cmdadd.Caption = "&Register"
```

```
cbot.Locked = False
txtf.Locked = False
txtm.Locked = False
txtl.Locked = False
cbos.Locked = False
cbos.Locked = False
txtadd.Locked = False
cbostate.Locked = False
txtd.Locked = False
txtp.Locked = False
txte.Locked = False
txtpl.Locked = False
cbopro.Locked = False
txtmodel.Locked = False
txtbou.Locked = False
txtbou.Text = FormatCurrency(intbou)
```

End Sub

Private Sub cmdDelete_Click()

With Adodc1.Recordset

.Delete

.MoveNext

If .EOF Then

 MsgBox "Recordset is Empty", vbInformation, "No Records"

End If

End With

End Sub

Private Sub cmdedit_Click()

 cbot.Locked = False

 txtf.Locked = False

 txtm.Locked = False

 txtl.Locked = False

 cbos.Locked = False

 cbos.Locked = False

 txtadd.Locked = False

 cbostate.Locked = False

 txtd.Locked = False

 txtp.Locked = False

 txte.Locked = False

```
txtpl.Locked = False
cbopro.Locked = False
txtmodel.Locked = False
txtbou.Locked = False
cmdsave.Enabled = True
cmdadd.Caption = "&Register"
```

```
End Sub
```

```
Private Sub cmdSave_Click()
    Adodc1.Recordset.Update
```

```
End Sub
```

```
Private Sub Form_Load()
```

```
    cbot.Locked = True
    txtf.Locked = True
    txtm.Locked = True
    txtl.Locked = True
    cbos.Locked = True
    cbos.Locked = True
    txtadd.Locked = True
```

```
cbostate.Locked = True
```

```
txtd.Locked = True
```

```
txtp.Locked = True
```

```
txte.Locked = True
```

```
txtpl.Locked = True
```

```
End Sub
```

```
Private Sub mnuAdd_Click()
```

```
    Call cmdAdd_Click
```

```
End Sub
```

```
Private Sub mnuDelete_Click()
```

```
    Call cmdDelete_Click
```

```
End Sub
```

```
Private Sub mnuDeve_Click()
```

```
    MsgBox "Developed by Faruna Stephen Monica", vbInformation,  
    "Developer"
```

```
End Sub
```

```
Private Sub mnuFiledb_Click()
```

```
    Unload Me
```

```
    frmbase.Show
```

```
End Sub
```

```
Private Sub mnuFileHome_Click()
```

```
    Unload Me
```

```
    frmvehicle.Show
```

```
End Sub
```

```
Private Sub mnuphone_Click()
```

```
    Dim strphoneno As String
```

```
    Dim vntbookmark As Variant
```

```
    On Error GoTo handleerror
```

```
    strphoneno = InputBox("Type Phone Number", "Find Number")
```

```
    With Adodc1.Recordset
```

```
        vntbookmark = .Bookmark
```

```
        .MoveFirst
```

```
        .Find "phoneno Like '" & strphoneno & "*'"
```

```
        If .EOF Then
```

```
    MsgBox "No Matching Records Found", vbOKCancel, "Type the  
correct Phone Number"
```

```
    .Bookmark = vntbookmark
```

```
End If
```

```
End With
```

```
mnuphone_click_exit:
```

```
Exit Sub
```

```
handleerror:
```

```
    MsgBox "Operation Failed", vbInformation, "Type the correct Phone  
Number"
```

```
End Sub
```

```
Private Sub mnuplate_Click()
```

```
    Dim strplateno As String
```

```
    Dim vntbookmark As Variant
```

```
    On Error GoTo handleerror
```

```
    strplateno = InputBox("Type Plate Number", "Find Number")
```

```
    With Adodc1.Recordset
```

```
        vntbookmark = .Bookmark
```

```
    .MoveFirst
```

```
.Find "plateno Like "" & strplateno & "*""
```

```
If .EOF Then
```

```
    MsgBox "No Matching Records Found", vbOKCancel, "Type the  
correct Plate Number"
```

```
    .Bookmark = vntbookmark
```

```
End If
```

```
End With
```

```
mnuplate_click_exit:
```

```
Exit Sub
```

```
handleerror:
```

```
    MsgBox "Operation Failed", vbInformation, "Type the correct Plate  
Number"
```

```
End Sub
```

```
Private Sub mnuRegister_Click()
```

```
    Me.Hide
```

```
    frmform2.Show
```

```
End Sub
```

```
Private Sub mnuSave_Click()
```

```
    Call cmdSave_Click
```

```
End Sub
```

```
Private Sub Timer1_Timer()
```

```
    lbltime.Caption = Time
```

```
    lbldate.Caption = Date
```

```
End Sub
```

o