

# **AUTOMATION OF VEHICLE REGISTRATION SYSTEM**

**A CASE STUDY OF FEDERAL ROAD SAFETY CORPS**

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SEPTEMBER 2001.

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A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF A POST GRADUATE DIPLOMA  
IN COMPUTER SCIENCE TO THE DEPARTMENT OF MATHEMATICS/  
COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY,  
MINNA, NIGER STATE, NIGERIA.

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## CERTIFICATION

I certify that this project work was carried out by **OGUNBIYI AKINTUNDE .O.** of  
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EXTERNAL EXAMINER

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SIGNATURE AND DATE

## DEDICATION

To God almighty, my creator and the lift of my head through whose grace and love I am an achiever today.

My dear and living parents who financially morally and religiously guided me through the educational step I take.

To my brothers and sisters for their care and support all through my year of studies and to that beautiful lady who has being a source of inspiration to me  
Funmi Falade

## ACKNOWLEDGEMENT

My profound gratitude goes to my project supervisor Mallam Audu Isah who out of his tight schedule gave me all the moral support needed for the success of this project. Also to my HOD, course coordinator and other lecturers in the department for their effort.

To all my course mates, Mr. Gambari, Mr. and Mrs. Oke, Shola, Bashiru, Lekan, Beki, Fatai and others I cannot remember their names.

My friends who are like brothers and sisters to me in parson of the Abdulmalik's, Ruke, Alao, Juliana, Iyabo, all the members of BSF and FCS.

May God in his infinite mercy bless them all.

## **ABSTRACT**

This project discussed and analysed fully the old system of vehicle registration in Nigeria and a possible solution, which is precise and concise as to the problems, encountered during the use of the system. An Automated program is designed to deal with this problem.

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# CHAPTER ONE

## 1.0 GENERAL INTRODUCTION

### 1.1 HISTORICAL BACKGROUND

The history of motor licensing office could be traced back to the colonial era of the British Government in Nigeria. In the pre-colonial time, the traditional leader was the undisputed landlord in his community. During this period, law and regulations were made by the community leader and imposed on their subjects. The system of transportation then was through the use of animals i.e. camel, Donkey, Horse, etc. while some by trekking.

During the colonial era, the imperialists found it to their advantage to retain those potential in their near supreme positions in the North so as to enhance their power in the South and curtail them in the East. To this effort native tax was imposed and community leaders form an integral part in the collection of this tax. As colonialism increases indirect rule was introduced and different tax-force was set up to collect tax from the local people. For easy and effective work of these tax-force workers, Bicycles were introduced into Nigeria and distributed to these people.

As civilization increases more bicycles were made for sale to people that can afford it. Later the colonial government imposed a tax to be levied on all the individual owners of a bicycle with a permit being issued to clarify ownership. Then for easy identification as more and more were being bought, each owner is being issued a unique number by the administrator in charge. The number were issued on a small square plate and attached to the bicycle. These consist of the name of the authority, registration number (Permit number)

printed on it. This at the initial cost a little but was later increased as more bicycles were made.

In order to reduce Administrative problem, the country was divided into regions i.e. North, West and East with each region having her own regional government. Later civilization brought about the introduction of motorcycles, to African countries, and Nigeria in particular. Each region had an administrative sector responsible for issuing number to motorcycle owners based on a laid down procedure. The number was also printed on a square plate, which contains all information as to the plate numbering. Hence the idea of registration office came into existence in each region and is responsible for issuing of license for all motorcycles and bicycles acquired.

These administrators later introduced motor vehicles into Nigeria. At the initial, the vehicles were been used by the colonial officers before more were introduced for the benefit of those that can afford its use. By 1952 divisional districts and local councils were developed and adopted in the western region. Each of these local councils was responsible for tax collection and issuance of license. These form a basis of revenue generation for the local council and the region as a whole. Hence the idea of a licensing office was first established in the west and later adopted by other regions.

At independence, there were three regional governments and Federal set-up. This position was increased by one in 1962 when the mid-western state was created and rules relatively to traffic regulation, license issuance, personal tax were made and hence motor licensing authorities were well established and more vehicles were brought to Nigeria by demand.

After independence, the federal government under the leadership of General Yakubu Gowon breaks regional activities into States and twelve states were created out of the existing

four regions in May 1967. Each state has its own local government area and each local council its own administrative sector responsible for issuing license to motorcycle and vehicle owners in their jurisdiction.

The twelve states were later increased to Nineteen, twenty one and finally thirty seven with each having its own local government area with a section responsible for motor licensing and the headquarters at the state motor licensing office.

### **1.1.1. FRSC AND VEHICLE REGISTRATION**

In the year 1977, the first road safety organization on the African continent was put together in Oyo State. However, this was stopped by a shortsighted political reason in 1983 by the Federal Government and in 1988 the same body seized back the initiative and inaugurated a Federal Road Safety Corps. From the inception, the idea of the commission was to build more scientifically on the successes of its predecessor.

Since the creation of FRSC apart from production of standard road conduct for vehicles on high way, its function includes co-ordination and production of vehicle registration numbers. This production is done at the FRSC office in Lagos for effective administration and distribution; the board of internal revenue for each state is involved in distribution and registration of vehicles. The distribution of numbers is done according to specification made by each state and these has accounted for the differences in price paid by vehicle owners for registration of vehicles from state to state.

The data collected as related to vehicle registered are gathered and sent through the state FRSC branch to the FRSC office in Lagos, which was then the National Headquarters. The production and storing of this information has been computerized. However at the distribution level, the registration process and data storing activities are still done manually.

Hence the need to computerize the registration process and information storage at this level becomes necessary.

In summary, the FRSC is the master planner and coordinator of registration activities while the licensing authority of each state is the marketer who deals with the public and this authority based on the laid down principles carries out the actual registration activities.

### **1.1.2 EARLY REGISTRATION ACTIVITIES**

The registration process as it was, was formally based on investigation of vehicles and document presented by vehicle owners. The procedure for vehicle registration before was the same with the present road safety numbering system and will be discussed fully in the next chapter of this project. The only difference is in the format of the plate number issued.

The registration number or plate number issued before had eight digit. The first two digits remain constant through out the state irrespective of the Local Government in which the vehicle was registered. This is the state code. The next four digits stand for the actual number itself while the remaining two digits stand for the Local Government code indicating the Local Government where the vehicle was registered.

Below are some states and their respective code before new states codes were introduced:

State	code	State	code
Oyo	OY	Niger	NG
Ogun	OG	Kaduna	KD
Ondo	OD	Kano	KN
Osun	OS	Plateau	PL
Lagos	LA	Anambra	AN
Kwara	KW	Katsina	KT
Imo	IM	Bauchi	BA
River	RV	Kogi	KG

Significant and major differences between the new plate numbers and the previous one is that the new plate number contains more information on it than the previous one. It shows the state name in full and their title. Below are two formats of the old and new plate numbers:

**OG 2344 YS** (Old plate number)

**OGUN  
GATEWAY STATE  
AA 234 YWS  
FEDERAL REPUBLIC OF NIGERIA** (New plate number)

## 1.2 INTRODUCTION TO VEHICLE REGISTRATION

In Nigeria today, almost all aspects of business and enterprises are either using or in the process of acquiring one or more computer systems for their use in problems or business requirement relating to data processing and information management for their day to day

operational needs. Organizations use information for function such as planning, controlling, organizing and decision-making.

Recalling back to the early 60's when the impact of computer was just being felt only through newspapers, magazines and other communication medium, but by the early 80's, the influence of computer became a reality and many people both the private organizations and government parastatals have come to realize the physical importance of computer in various areas of its application.

Taking the field of medicine for instance, the computer has been used to record the medical history of patients and proper diagnosis through computer test. Analysis followed by appropriate dispensing of drugs has had a great impact on the life span of mankind. Likewise in the banks, the use of computer cannot be over-emphasized. Customers of banks in Nigeria can now withdraw various amounts of money in any branch of the bank through the use of wide area network communication. This allow for inter-bank money transfer thus bringing about a reduction in the risks involved in carrying large sums of money about for various business transactions. This is made possible through the use of magnetic ink recognition (MICR) thus bank frauds have been greatly reduced through the picture and signature verification features.

In the industry, automated bodies (Robots) have been involved in mechanized goods production i.e. corking of bottles in the breweries which make the job very easy and fast and for some home made products where right from the initial stage of raw material mixing the process has been computer controlled and it passes the product from one level of production to the other through the inter-connectivity of the machines and at the end the finished product is packaged and stored.

During the Gulf war, computer was used to get the appropriate trajectory of missiles in order to hit set targets. Though destructive but it has also helped and served as checks and balances since any attacker knows that they could be easily attacked back with the help of computer.

Security and criminal records are being kept in order with the use of computers. The computer has also provided pleasure and relaxation through the use of various computer games. Among these various applications mentioned, the Federal Road Safety Corps is not left out in the computers especially for vehicle registration and thereby reducing car theft and hit and run cases.

The licensing office has been engaged in its vehicle registration activities by the use of manual process and the information are stored and handled manually thereby leading to slow information processing and pro-data management system.

This project **“VEHICLE REGISTRATION SYSTEM”** is concerned with the registration of vehicles at the licensing office. This system has met up to performance requirement and has taken over from the manual process of the vehicle registration procedure. The registration system is an avenue where all newly acquired vehicles are registered with the licensing office of a particular state. After the vehicles have satisfied all the registration criteria, the registration number unless fraudulently changed is meant to make every vehicle unique for easy identification.

Using the manual registration system the licensing officer of a particular licensing office record the particulars of the vehicle by registering it in the register of a motor licensing

office. This information could however be stored using the computerized system of vehicle registration that supports a Database Management System (DBMS)

The "Data Base Management System" is a computer-based record keeping system where information related to a particular subject or purpose are stored and organized in a specific order so as to make the location of those data/information very easy. All the information are collected and stored in an auxiliary memory device, which through interconnectivity could be accessed more readily by more than one user at a time at same or different locations.

Relating the use of the Database to the vehicle registration system. It would be allowed the storage of all information collected by the licensing officer about all registered vehicles in an auxiliary medium for easy operation. Investigation has shown that the **MANUAL SYSTEM** is not all that effective due to its slow retrieval and information processing method for the tracing of and file used for quite a long time. All these made it mandatory for the design and development of this project to allow for an effective and easy retrieval method with a fast information processing method with security being kept in mind. Thus a Data Base Management System would serve as a solution to combat the ineffectiveness of the manual system by using "**A COMPUTERIZED VEHICLE REGISTRATION SYSTEM**".

### **1.3 OBJECTIVES:**

The major objective of designing this project is to eliminate all the in-appropriation observed in the existing system and to make the system of vehicle registration as effective as possible. The project is to closely study the concept of the computerized set up of the registration system and a thorough understanding of the limitations of the manual method in

the production of registration numbers and recommend ways of improving on it, which is by computerization of the system.

The project is aimed at producing a better data retrieval and information processing through the introduction of data base management system of information which would enhance the accuracy of stored information and also make access and retrieval of information easy and faster than that of the **MANUAL SYSTEM**.

To achieve the stated objectives, the "**AUTOMATED VEHICLE REGISTRATION SYSTEM**" is designed to serve as a tool toward the achievement of these goals.

#### **1.4 PROBLEM STATEMENT**

In this project, full consideration is given to the vehicle registration system. The manual system is discussed and possible automation of the system tried. Programs will be developed that will appropriately deal with car registration and owners particulars ~~with full~~ documentation. The advantages of the automated system over the manual are equally discussed.

#### **1.5 SCOPE**

The scope of this project will only cover the application of computer to vehicle registration in the department of **MOTOR LICENSING OFFICE**.

#### **1.6 DEFINITION OF TERMS**

The following terms are defined in the operational sense in which they are used in this project work.

**AUTOMATION:** - This is the design and implementation of a computer based data process system, which automatically enhances the speed and efficiency of data computation.

**INFORMATION:** - This is a communicated knowledge expressed in a form that makes it immediately useful for decision-making that is a processed data suitable for computer usage.

**DATA:** - A collection of raw facts, figures, letters, charts or symbols that represent an idea condition, objectives or situations that need to be processed to promote a meaningful information.

**PROBLEMS:** - These are undesirable condition or situation that prevent or cause expected to prevent the business from fully achieving its business purposes, goals, objectives, and policies.

**OPPORTUNITY:** - An opportunity is a chance to improve the business system even though the existing system is performing acceptably.

**DIRECTIVES:** - A directive is a new requirement that is imposed by the management, Government or some other external influence in the decision making of an organization.

**DATABASE:** - This is an ordered file of information organized so that particular records pertaining to a vehicle can be quickly and easily retrieved.

**SYSTEM ANALYSIS:** - This is the method of determining how best to use computers with other resources to perform tasks, which met the information needs of licensing office in vehicle registration

## **CHAPTER TWO**

### **2.0 ANALYSIS OF VEHICLE REGISTRATION SYSTEM**

#### **2.1 MANUAL SOLUTION TO THE PROBLEM**

Vehicle registration system as it has been described in the introductory part of the project is a system whereby any newly acquired vehicle is registered with the vehicle licensing officer of the state where the vehicle is to be used or any state of interest. It also covers the re-registration of resold vehicles. The registration involves the writing down of the particulars of the vehicle in a car license register. Manual written information about the vehicle includes its brand name, date of purchase, date of registration, expected life, chassis number, engine number etc. All those are recorded and the vehicle is issued with a registration number.

Particulars of the owner i.e. owners name, address, occupation, age, Nationality and next of kin are also recorded. The vehicle is now licensed and owners pay some tax annually, which is a source of revenue to the Government. In Nigeria this exercise was vested in the Local Government Authority but later handled by the Federal Road Safety Corps.

#### **2.2 SYSTEM INVESTIGATION AND ANALYSIS**

System investigation is the act of gathering all the necessary information concerning an existing system of an organization knowing the weakness and strength of such system.

The information gathered would help the analyst in designing a suitable system that will take care of problems encountered by the old system. System investigation are made for the following reasons:

- (i) Modifications are needed in the existing manual system that no longer meet the needs of the state-licensing officer.
- (ii) A new system is needed to solve the problems that have previously not been identified.
- (iii) Management believes that the existing manual system can be computerized so that it will be more effective in data management.
- (iv) The ongoing system audit of the Manual System indicates a variety of problems such as lack of control and Security of information.
- (v) New technology advances have occurred that should be investigated to an automated system than a manual one.

This request for a new system study can come from the Federal Government or the licensing officer. All requests are handled in a uniform manner. A form should be used and a procedure established for processing their request in all the Local Government Licensing Units.

The vehicle registration project was meant to be a simple manual process involving the use of pen, manual typewriter to type individual names into a register meant to accommodate the particulars of all car owners registered in that Local Government.

The techniques adopted in the investigation are

1. **ORAL INTERVIEWS:** - This is an act of obtaining information by means of a face-to-face conversation with respect to person, place, time and mode in view to collect relevant information.
2. **EXAMINATION OF DOCUMENTS:** - This involves having a look at the documents used in the operation or process of vehicle registration.
3. **QUESTIONNAIRES:** - A method of collecting information by providing questions relating to the information being sought.

### 2.3 PROCEDURE CHART

Procedure chart gives the flow of information through a specific procedure. The procedure chart for vehicle registration is illustrated below and is the same for all the Local Government in the states.

#### **LOCAL GOVERNMENT REGISTRATION UNIT (LGRU)**

##### **LICENSING OFFICER**

Inspect vehicle particulars with the vehicle owner

Issue registration for to be filled by the owner



**LGRU**

##### **VEHICLE INSPECTORATE OFFICER (VIO)**

Inspect the vehicle and compare genuineness of particulars

Presented by the vehicle owner.



**LGRU**

##### **LICENSING OFFICER**

Verify registration form for possible error and omission

Token fees paid by vehicle owners to collect completed form from the vehicle owner issue

registration number.



**VEHICLE INSPECTORATE OFFICER**

In case of commercial vehicle, to weigh the vehicle to know the outlay carriage capacity

## **2.4 PROCEDURE FOR ISSUING REGISTRATION NUMBER**

As summarized by the procedure chart the procedure in each Local Government are the same and it will be discussed under the following heading:

- (i) Form filling procedure
- (ii) Registration number issuing procedure
- (iii) Report generation procedure.

### **2.4.1 SCRUTINIZING PROCEDURE**

When the vehicle owner takes his/her vehicle to the local Government licensing office for registration, the officer in charge will request for the vehicle particulars from the owner in order to check for correctness and genuineness of the particulars.

These particulars comprise of the following

- (a) Custom duty certificate
- (b) Sales Invoice receipt
- (c) Delivery note from dealer
- (d) Purchase receipt
- (e) Schedule of payment

- (f) Custom paper authorizing licensing officer to register the vehicle.

Note: - The original copy of each is received for record purposes. Each of these is critically examined to eliminate chances of fraudulent practice.

During registration, much consideration is given to the custom paper. The owner who is unable to tender the custom paper would have to produce a cover letter from the dealer stating when the custom paper will be available.

The custom paper consist of the following information:

- (i) Port (Airport/Station)
- (ii) Name of Importer
- (iii) Address of Importer
- (iv) Type of vehicle
- (v) Model
- (vi) Make of vehicle
- (vii) Chassis number
- (viii) Engine number
- (ix) Cubic Capacity
- (x) Custom entry number and data
- (xi) Amount of duty paid
- (xii) Exemption granted under tariff
- (xiii) Signature of Importer
- (xiv) Custom and Excise official stamp.

#### **2.4.2 FORM FILLING PROCEDURE**

This is the process of filling the form ML-2. The vehicle owner fills it and the officer in charge can offer help where information required are not well understood by the applicant. The computer forms are duplicated and a copy given to the officer in charge, including other particulars such as custom Duty Certificate, Sales invoice, receipt and delivery note from the dealer for reference purpose.

The completed forms are signed by the officer in charge, which will be forwarded to the vehicle inspectorate officer (VIO). These are scrutinized for genuineness, In case of re-registration of resold vehicle. Since the information of such vehicle must have been previously made available at motor licensing office where the vehicle was originally registered. A different form called ML-7 is issued for filling to the new owner.

After submission of this form a sum of charges depending on the purchasing price of the vehicle and the vehicle is registered in a register. This form filling procedure is the major source of the input data to the system. Through the form filling, all the necessary information as input data are acquired.

#### **2.4.3 REGISTRATION NUMBER ISSUING PROCEDURE**

After the scrutinizing and form filling procedure the vehicle is taken to the VIO who inspects the documents and roadworthiness of the vehicle with appropriate action taking before the final registration number issuance commences.

Under normal circumstances, registration is given to vehicles in a serial order and it consists of eight-character code after the state title. After the state code, the first two alphabetic characters represent the order in which the number has been arranged. The next

three numeric characters represents the orderly serial number followed by the three alphabetic characters, which is the local government code.

The Local Government Code is unique and identify precisely with where the vehicle is registered among the local government offices in the state. The description given above is peculiar to the New Federal Road Safety Corps recommended registration system. The serial number ranges from 001 to 999 and restart again for the next registration. This definitely affects the first two alphabetic characters, which will also change to indicate the beginning of another round. The Local Government Code is constant for a particular Local government and also remains the same throughout the registration carried out in the state.

Registration of a resold vehicle from the public are not re-issued and the registration number, but a vehicle resold by any government parastatal is re-issued new registration number because it was formally using a special number specially designed for cars belonging to Government parastatals.

#### **2.4.4 REPORT GENERATING PROCEDURE**

Report generation is an important task carried out since all the record from each local government are forwarded to the state office and every thing finally to the Federal office.

Each local government record is kept in a file for that Local Government record. A general file containing records for all the local government is sent to the state head quarters and to the Federal sector.

## **2.5 CONSTRAINTS ON VEHICLE REGISTRATION**

During the process of registering vehicles, not all vehicles are being registered because there are standards set up which the vehicles and the particulars must meet before being registered. These requirements form the constraints, which must be met before a vehicle is registered.

In the case of number issuing the licensing officer in charge has the right to reject the registration of any vehicle without the following being satisfied: -

- (i) The custom duty must have been paid on the vehicle to be registered.
- (ii) There must be a payment receipt from the dealer.
- (iii) All payments connected to importation must be satisfied. I.e. custom duty certificate, Bill of lading, entering permit etc.
- (iv) There should also be an evidence of correspondence of the information on the papers presented with information on the vehicle itself.

With all these satisfied, registration number can be issued out.

## **2.6 DRAW- BACKS ON THE MANUAL SYSTEM.**

The following problems are claimed for the ineffectiveness of the manual vehicle registration system.

- (i) FRAUDULENT CUSTOM PAPER

Lack of Interaction between the vehicle registration office and custom and excise duty department could bring about inadequate validity of the presented custom papers. As a result of this there is a possibility of acceptance of forged custom certificate and ignorantly the vehicles are registered.

- (ii) MALPRACTICE AMONG WORKERS – Workers in charge could at times overlook the procedures and single handedly handle the process of vehicle registration after receiving bribe from the car owner.
- (iii) SLOW PROCESS OF MAKING ENQUIRIES – Checking through old registers when an enquiry is being made is very slow and energy consuming due to the manual method of registration.
- (iv) RE-REGISTRATION OF STOLEN VEHICLES – The manual registration procedure enumerated above do not have a security protection against re-registration of stolen vehicles in the same state because whenever a vehicle is taken to the registration office for registration and it has been cleared, there is no further confirmation by referencing the existing file to ensure that such vehicle has not been registered before. The existence of such could be confirmed using chassis number and engine number for identification and since this is not possible due to a large volume of the files, then the probability of registering stolen vehicle is vivid and it will go untraced.
- (v) FAR CENTRALIZATION - This is the problem associated with the provision of monthly reports, which involve the other branches of vehicle registration offices taking their reports and documents to the central motor registration unit. So a delay in one brings inefficiency.

## **2.7 ANALYSIS OF THE PROBLEM**

All over the world, vehicles purchased must be registered. This is necessary in order to know car owners and prevent car theft. In a situation where cars are not registered people could easily forge receipts and claim certain vehicles, which probably belong to an

organization or the Government as theirs. Accident cases must be appropriately recorded and probable warnings given to owners who are found to be mostly involved in accident or does not obey the code and conduct of road usage.

## **2.8 MERITS OF AUTOMATED VEHICLE REGISTRATION SYSTEM**

With the automated system and through a good communication network, car particulars that have been duly registered can easily be traced anywhere in the country when an attempt is made to re-register them. The fact is that each vehicle has a unique chassis and engine number, which can easily be checked with the use of a computer unlike the cumbersome and time consuming method. One of the most important advantages of the automated system is that vehicle registration is done faster since appropriate checking for duplication is done before an eventual registration.

Apart from this a lot of space is conserved where with manual registration a lot of record is kept which with time turn out to be a large volume of registers but can be stored on only the hard disk of a computer.

With this a limited number of personnel is employed though a disadvantage because it will keep some people stagnant in the labor market but it is overridden by its efficiency. These people can be employed in other sectors where more hands are required.

In the long run, cost benefit analysis show that with automation, the total cost involved is much lower than the manual system. The money saved through automation can as well be used to improve the standard of other sectors.

## CHAPTER THREE

### 3.0 ANALYSIS AND DESIGN OF THE PROPOSED SYSTEM

#### 3.1 APPROACH TO THE SYSTEM

The common approach to a computer system is on-line system, off-line system, and batch

Processing method, time sharing method, real time processing.

**ON-LINE SYSTEM:** - This is a system where the terminals are linked directly to the central processing unit and controlled by it. It allows users to directly access their file and update them.

**OFF-LINE SYSTEM:** - This is direct opposite of on-line system. In other words, the terminals are not controlled by it.

**BATCH PROCESSING SYSTEM:** - This is one of the systems of data processing where data are collected for a period of time before processing in batches. Jobs are entered and stored on disk in a batch queue and then run one or more at a time under the control of the operating system.

**REAL TIME SYSTEM:** - A computer system, which is capable of processing data quickly that, the result are available to influence the activity taking place.

**TIME SHARING:** - A system of processing where users share one computer processor. It allows them to operate or use a centrally located computer simultaneously in such a way that each user is not aware that another person is making use of the computer processor. In fact

the computer serves each user in sequence, its high speed makes it appear that the jobs are all handled simultaneously while each is really getting a few milliseconds of the computer's attention in turn.

A good knowledge of the old system will be a helpful guide in the design stage of a new system. Approaching this new design will require one to take into consideration the wide tentacles of the motor licensing project. An approach to this system will consider the form of input to the system and how frequent the output will be generated.

### **3.2 FEATURES OF THE PROPOSED SYSTEM**

The features of the new system will cover the set objective, which the system has to attain, and the advantage of the computerized system. This objective will be promoted in such a way that it becomes the characteristic of the system.

The objectives of a computerized vehicle registration system are to improve on speed, quality, credibility and accuracy so as to avoid delay in issuing of registration numbers to vehicle owners. It is to check or prevent data duplication and reduce the high cost of clerical and administrative workers. It also protects against alteration, tampering, simulation and counterfeiting which are easily verifiable.

It is the objective of the proposed new system to inter link all the vehicle registration systems of all local government licensing authority. This will allow all of them to transmit data stored to the state head quarters and later to the National Sector thereby reducing and eliminating errors, endless packs of filed forms being sent for storage and verification.

If properly applied and utilized the following advantages would be derived from the computerization of the proposed vehicle registration system.

**ACCURACY:** - Main objective of any automation is to achieve accuracy in the result produced with up to date information about vehicle would always be maintained at central motor vehicle registration of files and other sub-station of vehicle licensing office.

**EFFECTIVENESS:** - Effectiveness generates information from an active regular report. The system will be designed to incorporate necessary control so as to produce report whenever the need be.

**RELIABILITY:** - The information, which shall be provided by the computer, would be justifiable and back up both the previous and current information about vehicle registered to avoid possible loss of information.

**SPEED:** - Since Computer operates at an electronic speed which is very fast, Information accessibility in the computer could be fast and retrieval could be made easy and as well fast too.

**FLEXIBILITY:** - Information stored on computer system would be flexible in the sense that modification when necessary can be made to the records stored on the database file with no difficulty. So it is important to have a reasonable and trust worthy personnel to man the system.

### **3.3 ANALYSIS STAGE**

Analysis could be defined as the broad process through which a complex procedure is simplified into an easy to follow steps. The analysis approach in this vehicle registration will be discussed under the following heading:

Data entry procedure analysis

Transaction processing analysis

Report format analysis

### **3.3.1 DATA ENTRY PROCEDURE**

This computerized vehicle registration is a comprehensive system that accepts input interactively through the screen for record entries and file maintenance. The input to the system could either through Batch method or on-line.

**BATCH METHOD/MEDIA:** - The oldest and most traditional input method. Here source document are collected and periodically forwarded to data entry. Data entry operator keys the data using a data device that translated the data into the machine-readable format. This method allows for many validation of data before the batch process commence. There are numerous medium alternatives for batch input. This consists of punched card magnetic media.

**ON-LINE METHOD/MEDIA:** - The current trend in data input involves around on-line methods. This trend makes sense capture data at its origin and directly input that data to the computer. The most common on-line media is the Cathode ray tube (CRT) terminal also referred to as video display terminal (VDT) or Video display unit (VDU). For the sake of this project, the researcher recommends the batch method of data entry using the magnetic disk as the media. This will allow for easy maintenance and a back up can be done on the disk as the media. This will allow for easy maintenance and a back up can be done on the disk.

### **3.3.2 TRANSACTION PROCESSING**

The input data, which has been entered during data entry procedure stage, is verified to ensure that they conform to the registration criteria stated earlier on and also to ensure that the vehicle to be registered is not stolen. This is achieved by checking through the master file to ensure that the vehicle identification has not been registered previously and if already registered it should be a resold vehicle.

However, if vehicle were found not qualified to be registered and given registration number, then a message would be displayed on the screen to alert the attention of the vehicle registration officer in charge to take appropriate action. Otherwise the processing is continued in actual processing stage where registration number is issued to the vehicle concerned.

### **3.3.3 REPORT GENERATION ANALYSIS**

At this report generation stage, information necessary for management purposes are produced and this is obtained from the master file. Here the output format is analyzed to eliminate unnecessary information from the report. The question answered here is, what information will the report contain.

For the purpose of this research, the following information is included in the output in order to generate good and accurate information. This essential information: -

CHASSIS NUMBER

ENGINE NUMBER

REGISTRATION NUMBER

MAKE OF THE VEHICLE

NAME AND ADDRESS OF THE OWNER

MODEL OF THE VEHICLE

TYPE OF BODY/COLOUR

REMARK: -

Based on the above information the following report will be produced.

DAILY REPORT: - Comprises of the daily transaction of the vehicle registration being carried out at every licensing office of the state for the day.

MONTHLY REPORT: - This gives the overall transaction of vehicle being registered throughout all the branches for the month.

### **3.4 SCOPE OF DESIGN**

The scope of the design cover only the activities handled by the computerization process. Before computer starts the heading and processing of data, it is expected that the gathering and collation of data have been met in accordance with the specification of the authority concerned with vehicle registration.

It is the aim of the design stage to take into consideration the set specification of the motor licensing and the meticulous process of giving data into output. The scope of the design of this computerized system is taken from various stages such as

- Collection of input form from applicants
- Design of computer system, which is capable of storing data contained in the application form.
- Processing data into output
- Generation of both daily and monthly report.

This design covers only the new method and registration number format introduced by the Federal Road Safety Authority. The system will take against measure to prevent damages to the kept in formation on the disk and also the backup procedure for the stored information. The recovery procedure will also be described so that lost file can be recovered and made available for us.

### 3.5 DESIGN STAGES

This stage requires the creative ability, which would enhance the efficiency and accuracy of this project under development. It includes all design approach starting from the design of input data to design of on parcel output from the project. It also entails the designing of all files used and processing steps required to produce the output.

This stage follows immediately from the analysis stage. It involves the design of the control to be used in producing desired output. Hence the design approach to this project.

Follows the pattern below:

OUTPUT DESIGN

FILES/DATABASE DESIGN

INPUT DESIGN

METHOD AND PROCEDURE DESIGN

### 3.6 FILE ACCESSING METHODS

The order in which records are accessed in processing may or may not be directly related to the order in the file. There are different methods of accessing files. Some of these methods include the following: -

- (i) **SEQUENTIAL ACCESS:** - This method is used when data is stored on a tape and data is accessed one after the other. Certain operations such as sorting merging are also employed under this method.
- (ii) **RANDOM ACCESS:** - This is the direct way of locating data in the file. Files are accessed in a random form and the content of a file can

be referenced through its key or code. It is best situated in on-line processing environment.

- (iii) **INDEX SEQUENTIAL:** - Under this method, files are accessed sequentially as well as randomly with the use of indexes since batch processing is the ideal method of processing chosen for the purpose of the computerized vehicle registration system. The index sequential access of files is recommended for the following reasons.

The storage medium used for file storage is magnetic disk.

It offers rapid access to the next record in a file.

Key-in the registration number via the keyboard make the computer checks for the existence of such number and retrieve it when it exit or return an error message where such number does not exist.

### 3.7 DATA VALIDATION METHOD

Data validation requires that special input edit programs be written to perform input checks. Validation of data to be processed by the computer is a very sensitive and important part of the input design stage. During the part of design stage it is necessary we have a defined format and condition under which data can be entered into the computer system.

Every amount of data to be stored in the computer is very necessary and should be handled with care. The essence of the facts and authenticity of the data stored with credibility of methods of validation is to produce a reliable output. It is the aim of this level of design to ensure that all reliable methods of data validation is designed and used. The step below will constitute a good guide in the design for data validation.

- i. Store all records and assign unique number to all records that have passed through the validation process and are confirmed valid.
- ii. Print out the list of all valid records with unique number
- iii Copy records of the list of valid records with unique number to an external storage device for enquiry.
- iv Run an update procedure in the state licensing office.
- v Access the database in order to update the data base by keying in registration number.

## **CHAPTER FOUR**

### **4.0 THE AUTOMATION**

### **4.1 SYSTEM CONFIGURATION**

#### **A. HARDWARE**

With automation, computer systems must be purchased. The configurations of the system that may be employed are:

Pentium III 806 Intel [ATX PC 133]

128 MB RAM

20GB HARD DISK DRIVE

6.4 GB FLOPPY DISK DRIVE

8MB SVGA

14" CTX Color monitor

CD ROM Drive 56x

Windows keyboard

Microsoft mouse.

The above would serve as the server and other small units, which could be used as intelligent terminals, are purchased for network. This will have the configuration given below:

Pentium II 233 Intel MMX

32 MB RAM

10 GB HARD DISK DRIVE

1.44 MB FLOPPY DISK DRIVE (2)

1.2 MB FLOPPY DISK DRIVE (1)

4MB SVGA

14"CTX Color monitor

Windows keyboard

Microsoft mouse.

#### **B. SOFTWARE:-**

Microsoft Disk operating system (MS-DOS) will be the main operating system with UNIX taking care of the network operations. Other software that are required include Microsoft windows. Database management are of course the developed package called REGROAD, LOTUS 123 could be installed to assist in mathematical computations.

## **4.2 INPUT SPECIFICATIONS**

### **4.2.1 INPUT DESIGN**

The system is designed to register a newly acquired vehicle or a change of ownership.

The input data about the owner are:-

- (i) Name of owner
- (ii) Address of owner
- (iii) Occupation of owner
- (iv) Age of owner
- (v) Security number issued
- (vi) Nationality
- (vii) Next of kin's name

(viii) Next of kin's address

Other input data required as particulars of the vehicle are:-

- (i) Vehicle brand name
- (ii) Vehicle type (whether commercial or private)
- (iii) Status of vehicle
- (iv) Expected life of vehicle
- (v) Registration number issued
- (vi) Chassis number of vehicle
- (vii) Engine number of vehicle.

#### 4.2.2 FILE DESIGN

The two files contain the input data as described below. Each is given under the headings field description, field name, field size, field type and decimal. In the creation of the database. However field description is not part of the input.

##### 1. OWNER.DBF (Owner Registration File)

FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	SIZE	DECIMAL
SECURITY NUMBER	SECUNUM	NUMERIC	5	0
NAME OF OWNER	NAME	CHARACTER	15	
ADDRESS OF OWNER	ADDRESS	CHARACTER	20	
OCCUPATION OF OWNER	OCCUPA	CHARACTER	15	
AGE OF OWNER	AGE	NUMBER	2	
NATIONALITY OF OWNER	NATIONAL	CHARACTER	15	
NEXT OF KIN	NEXTKIN	CHARACTER	15	
NEXT OF KIN ADDRESS	KINADRS	CHARACTER	20	

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1. VEHICLE.DBF (Vehicle Registration File)

FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	SIZE	DECIMAL
SECURITY NUMBER	SECUNUM	NUMERIC	5	0
VEHICLE BRAND	BRAND	CHARACTER	12	
VEHICLE TYPE	TYPE	CHARACTER	6	
VEHICLE STATUS	STATUS	CHARACTER	10	
REGISTRATION DATE	REGDATE	DATE	8	

### 4.3 OUTPUT SPECIFICATION

There are three main reports that are generated. These reports are:-

- (a) Registered vehicle listing
- (b) Vehicle owners listing
- © Vehicle listing by status.

The file specification for these reports are given below:

**a) REGISTERED VEHICLE LISTING**

This will contain the following

Brand Name

Vehicle type

Registration Data

Expected life of vehicle in years

Registration Number

Chassis Number

Engine Number

Owners Security Number.

**(b) VEHICLE OWNERS LISTING**

This will consist of the following

Owners' security number

Owners Name

Owners Address

Owners Occupation

Age of Owner

Vehicle Number

**VEHICLE STATUS LISTING**

This will contain the field:-

Vehicle Number

Brand Name of Vehicle

Chassis Number

Engine Number

Owners Name.

**4.4 PROGRAM SOURCE LISTING**

Each module of the thirteen package is developed using Dbase III + to write the program.

A total of thirteen (13) program modules were developed. These and the purpose are stated below:

**(a) REGROAD**

This is the main program that link up all other sub programs of the package.

**b) REGSCR**

This displays the submenu for registration. It request from users whether data records are to be added, modified or deleted.

(c) **REGINIT**

This program initializes memory variables.

(d) **REGMEN 1**

This displays the screen for data capture.

(e) **REGMEN 2**

This program displays screen for addition of new records.

(e) **REGMEN 3**

This displays records retrieved from data files.

(g) **REGMEN 4**

This retrieves field from database files for display and modification

(h) **REGMEN 5**

This displays screen format for inquiry by security number

(i) **REGTRAN 1**

This program module store data input into Database file.

(j) **REGMEN 6**

This retrieve field from database files for display and subsequent deletion.

(k) **REGTRAN 2**

This program retrieves database files and store them in memory variables.

(l) **REGQUIR**

This displays the enquiry menu

(m) **REGREPO**

This displays reports menu.

Detailed source listing of programs are shown in appendix I.

#### **4.5 FLOWCHART**

Flowcharts are being drawn for each of the program module indicated in above. This flow charts are shown in appendix 2.

#### **4.6 EXECUTING THE PACKAGE**

- (a) Change directory to Dbase by typing CD/.DBASE and press ENTER
- (b) Start Dbase by typing DBASE and press ENTER
- © Press ESC key to go to command mode and then type REGROAD and press ENTER.

The main menu is then displayed and one can choose from options by pressing the number corresponding to the option required. An entry of zero (0) on any menu options returns one to the previous screen display. Screen display prints out are shown in appendix 4.

#### **4.7 SYSTEM VERIFICATION AND VALIDATION**

Except for a very small computer program it is unrealistic to assume that the installed program is working to specification without carrying out the detailed test of its functioning. The entire process of examining a software product to confirm that it operates intended is often referred to as system verification.

The following stages of testing are possible:

**FUNCTION TESTING:-** Function testing is the basic lever of testing in which the function/procedure making up a module are tested to ensure that they operate correctly.

**MODULE TESTING:-** A module is made up of a number of functions which may co-operate with each other. After the function test, it is necessary to test the co-operation of those functions as a module.

**SUB-SYSTEM TESTING:-** This is the testing process where module are put together to form sub-system as module co-operate and communicate, sub-system testing should concentrate as testing module interface under the assumption that the module themselves are correct.

**SYSTEM TESTING:-** System testing is carried out when the sub-system are integrated to make up the entire system. At this stage, the testing process concerned with finding errors in design and coding of the program.

#### **4.8 CHANGE-OVER PROCEDURE**

In the majority of case, system start up is not so case, when an old system is to be replaced with a new one, often it is necessary to transfer all existing file data to the new system. This usually takes some time, depending on how much data there is and how it is stored.

The process of changing from an old system to a new system is referred to as “**CHANGE OVER PROCEDURE**” This depend on a number of factors! If the same hardware is being used without any additional central software, it will be easier than when a totally new computer system is being used. Although there are several approaches that can be used in converting from and old system to a new system, the three most widely used conversion methods are **DIRECT, PARALLEL AND PARTIAL** convection.

The vehicle registration process requires conversion from the manual system to the new computerized system. This conversion can be done in parallel or direct method will be

appropriate if it is possible to close down the registration process for a few days, so that existing data can be entered using the appeal customer program from the main menu.

If it proves to be impossible to shut down the registration for a time necessary to transfer the data, the parallel method can be used. While keeping the old system running, the data can be transferred in batches, for example you can begin with all the registration of a local government for a specific state and proceed to other local government councils in other states, until all necessary records have been entered.

## CHAPTER FIVE

### 5.0 SYSTEM DOCUMENTATION AND CONCLUSION

#### 5.1 ANALYSIS OF THE NEW SYSTEM

The project should not be considered complete until a system audit is performed. In many ways, system audit is similar to the initial investigation. Someone is assigned the task of evaluating the system to do this the people involved with the system are interviewed to determine the view points regarding the success of the system.

The evaluation of the project in terms of the objective defined from the system and for each procedure is clearly seen. It is now an observed fact that computerization is a success. The newly developed computer software from Niger State vehicle registration project is capable of storing registration number of all valued vehicle in the local government and state headquarters Computer Center database. The procedure involved in the computerized process is known to be a little complex and time consuming. But the final output brings out the fancy in the meticulous steps Follower towards achieving the goal.

The analysis of this design has revealed that the cost of the project development and implementation as well as its on going cost is reasonably close to the project cost. Generation of report from the new Computer system will not allow delays on date, time in which relevant information could be traced. Clear and adequate controls are built into the computer system to activate error in the security of the resident program, this also include easy use of the system by the user. The new systems have been found to be more reliable in terms of data retrieval, record access and better report which is produced by the system.

Analysis of the system shows that the now system is easy to understand and use. Problems associated with the old system can now be identified and solved under the

computerized system. Report generated from the new system contains the proper amount of detail and are available when needed.

A complete document which show the self-explanation of how to use the system have been included in the program. Operators know how to set up batch jobs by referring to a particular local government, respond to messages, recover from error, restart a job that has aborted and distribute report. Procedure are program have been completely tested. Programs are now considered operational as the system testing is completed. Backup and disaster recovery procedure have been clearly defined and include in user training.

## 5.2 **LIMITATION AND SUCCESS IN HARDWARE AND SOFTWARE REQUIREMENT.**

During implementation of the system, an understanding of its limitation is observed with use. This understanding of hardware and software feature will enable users to explore the new system within the limit of its specification and design.

It is not the aim of the new system to do any thing outside of what it is designed to do. Carefully understanding the procedure and capability of the existing equipment, it will be noted that all mechanical and electronic equipment are subject to wear and tear with use.

Turning the entire exercise over to the teamwork of the resident software program and hardware periphery will enable a fast and accurate data processing at the National licensing authority. The success entails string of copies of input source in the Headquarters. They can be referenced and confirmed from any part of the start via a linked network of programming access.

### 5.3 THE TAKE-OFF AND TRAINING OF MANPOWER

At the compilation of the design stage, the system is fully ready after the implementation stage, which involve the entire system testing to determine its effectiveness. After implementation, the system has to be put into operation by the operation assigned to it. A take off of the vehicle registration project is required to put the new system into use. The appropriate step is that the management of the licensing office should have the understanding of the available feature of the computerized project and then assign the set of computer operators to be invited in using the new system for training.

Likewise a one-on-one identification of all the procedure in the registration process, understanding their various functions are explained by the consulting designers and system developer. The equipment are format of the form filling have to be made clear by the management to individuals involved in the screening of the applicants. Training manual and to be provided for all states in the department who have been detailed to man the new computer set up.

Training on the use and precautions in handling both the software and hardware should be conducted in order to acquaint the new operators with the use of the entire system. All local government registrations unit are to be given extensive training on the procedural operations system for generating registration number, hardware equipment and software. They are to understand every process that goes on in the computer and must be ready to train local staff in their various local government computer departments.

If a number of people must be trained in the use of a software package or on a particular piece of equipment, it may be more economical to bring the classroom to the students. The data entry operators, computer operators and registration personnel should be trained on how to execute procedures and use the available facility to prepare data for entry

long before the new system will be considered fully operational. The Site need be prepared and equipment put in operation before the organization employed can be trained.

If there is a training department within the organization, it is the responsibility of the department to determine which alternative can be used most effectively. If there is no training department, it is left to the headquarters computer manager to describe how to obtain the necessary training for new system. The decision will be reached by determining the resources that exist within the organization and those that are available within the community. The training suggested need to include all ramifications of vehicle registration process that the computer operator will not see only data independent without knowing how each data is generated. This type of training will enable the operator to identify error that comes from generation activities.

#### **5.4 CONCLUSION**

Manual method was carefully analyzed and was time to have a lot of problem in its use. The new automated system helps in eliminating these problems and also in improving the accuracy, effectiveness and efficiency in the vehicle registration implementation.

I am of the opinion that if vehicle registration can be fully computerized, vehicle owner can readily obtain their registration number. Since a system cannot work perfectly in vacuum, there is need to ensure maximum co-operation of all members of staff involved in the vehicle registration process. They should be made to know the computer neither take over job nor does it encourage unemployment but rather it aids the workers to be skillful and increase modern ways of satisfying their customer.

## 5.5 RECOMMENDATION

After a tireless study of the manual system and a careful research and observation of the automated system, the following are recommended:

- (i) There should be incentives for the staff of the establishment to avoid luring them to accepting bribe there by introducing malpractices into the system, which can allow for stolen vehicles to be re-registered.
- (ii) Computer literacy should be required of any prospective employee in the licensing office especially the computerization of the establishment.
- (iii) This computerized vehicle registration is based on a situation where there is an interaction among all vehicle registration officers in all the states and the local governments. Therefore it is strongly recommended that the vehicle licensing authority all over the country be computer networked to make vehicle registration easier for both vehicle owners and registration staff. This will also avoid the delays in danger of carrying materials from information communication.

In conclusion if this system is computerized, the set back caused by the manual system will be overcome.

## REFERENCES

- ALAN S. (1986). Advanced Techniques in dBASE III, Sybx/Tech publishing USA
- ATANDA I.A. (1983). Proceedings of the National Conference on Nigeria since Independence; Zaria, March Volume Pg 115 – 158.
- CAMPBELL, M. J.(1965), The structure of Local Government; The politics and Administration of Nigeria Pg 130 – 150.
- DICKLER H. (1992). dBASE IV 1.5 Developers handbook. Sybex/Tech publications USA
- JEFFREY L.W. (1990). System analysis and design methods, Times Mirror/MOBY College Publishing, USA.
- SUDESH M.D. (1992). Business Programming using dBASE IV Macmillan Publishing Singapore.

VEHICLE REGISTRATION SYSTEM  
CENTRAL MOTOR LICENCING AUTHORITY  
HEAD OFFICE ABUJA

REPORT FOR THE MONTH OF SEPTEMBER 1999  
LOCAL GOVERNMENT: AGEGE LAGOS

DATE	REG. NO	CODE	ENG. NO	CHAS. NO	OWNER'S NAME	OWNER'S ADDRESS	MAKE	TYPE	REMARK
02/09/99	AA127	AG	56432	45673	COL ADEKUNLE	ARMY BARARACK OSHODI	BENZ	230	D/BLUE
04/09/99	AA208	AG	34564	33422	MRS S ADAMU	67 OLUMORE ST. OKE-OBA	PEUGEOT	504	WHITE
04/09/99	AB121	AG	22346	46548	ALH IDIRIS MOTORS	67 AGEGE	TOYOTA	TERCEL	N/BLUE
23/09/99	AE342	AG	32453	188478	KOJO &CO	OKO-OBA AGEGE	NISSAN	LAUREL	GREEN
12/09/99	AT097	AG	65543	24438	OKARTEX & BROTHER	SHELTER HOUSE STADIUM RD AGEGE	PEUGEOT	504	L/GREEN
22/09/99	AT231	AG	98876	35478	MRS OLAYIWOLA	2 AGEGE MTR RD AGEGE	MAZADA	626	YELLOW
27/09/99	AX186	AG	22343	23634	MR S A ADAMU	43 PANADA RD AGEGE	BENZ	200	WHITE
30/09/99	AX321	AG	43232	63572	MR HABUBAKAR	67 MATERNITY RD AGEGE	NISSAN	LAUREL	L/BLUE
15/09/99	AX345	AG	76544	33223	MR D OLOWE	BLK 77 FL2 LCHE AGEGE	TOYOTA	COROLA	L/BLACK
18/09/99	AZ642	AG	64367	55532	MRS OKOLI	4 LOVE HALL KETU	BENZ	230	YELLOW
16/09/99	BE089	AG	76554	23332	MR S IGE	LAWAL ROAD ISHERI OJODU	VOLKS	BEEBLE	D/BROWN
19/09/99	BT564	AG	32215	34345	ALH OLOWOTUTU	72 - 74 OLOWE STR. IJU ISHAGA	NISSAN	JEEP	GREY COLOUR
23/09/99	BT875	AG	23367	23442	MR J DAVID	D CLOSE HOUSE 2 FL2 SHAGARI ESTATE IPAJA	NISSAN	LUREL	D/GREEN

VEHICLE REGISTRATION SYSTEM  
CENTRAL MOTOR LICENCING AUTHORITY  
HEAD OFFICE ABUJA

REPORT FOR THE MONTH OF OCTOBER 1999  
LOCAL GOVERNMENT: AGEGE LAGOS

DATE	REG. NO	CODE	ENG. NO	CHAS. NO	OWNER'S NAME	OWNER'S ADDRESS	MAKE	TYPE	REMARK
02/10/99	BT914	AG	56432	45673	MR NWOSU	26 OLADE ST OGUDU	PONTIAC	F34	N/ BLUE
04/10/99	BT958	AG	34564	33422	MR S AHMED	67 OLUDARE ST. OKE-ODO	PEUGEOT	505 SR	WHITE
04/10/99	BT976	AG	22346	46548	MRS KOJO	14 FATADE ST AGEGE	TOYOTA	COROLA	N/BLUE
23/10/99	BQ342	AG	32453	188478	MRS S SHADA	OKO-OBA AGEGE	NISSAN	BLUE BIRD	WHITE
12/10/99	BQ497	AG	65543	24438	ALH SUMAIL	12 AMOSU ST SHASA	PEUGEOT	504	WHITE
22/10/99	BW231	AG	98876	35478	MRS IBRAHIM	2 IDITU RD AGEGE	MAZADA	926	WHITE
27/10/99	BW486	AG	22343	23634	MR S KUDU	43 PANADA RD AGEGE	BENZ	220 X	WHITE
30/10/99	BX321	AG	43232	63572	MR B JUBRIL	67 MANIGI RD AGEGE	NISSAN	LAUREL	L/BLUE
15/10/99	BX345	AG	76544	33223	MR F KAZEM	BLK 13 FL6 LCHE IPAJA	TOYOTA	COROLA	D/GREY
18/10/99	CE642	AG	64367	55532	MRS OKOGIE	4 LOVE HALL KETU	BENZ	220 E	YELLOW
16/10/99	CF089	AG	76554	23332	MR S IDI	34OLOWOYO RD OJODU	VOLKS	JETA	D/BROWN
19/10/99	DA564	AG	32215	34345	ALH OGUNBAMIWO	37MABORUKOJEST IKEJA	TOYOTA	TERCEL	L/BLUE
01/10/99	DD875	AG	23367	23442	MR W ILETO	IDIATU ST SHOGUNLE	BENZ	190	D/GREY

## APPENDIX I

- Program.: REGROAD . PRG

SET TALK OFF  
SET BELL OFF  
SET STATUS ON  
SET ESCAPE OFF  
SET CONFIRM OFF  
SET COLOR TO W/B ,R/W ,N

PUBLIC MNAME , MADDRESS , MOCCUPA , MAGE ,MNATIONAL ,MKEY  
PUBLIC MNEXTKIN , MKINADRS , MDATE , MBRAND, MTYPE , MANS  
PUBLIC MSTATUS , MLIFE , MREGNUM , MCHASIS , MENGINE

DO WHILE .T.

CLEAR

@ 2, 10TO13,69 DOUBL  
@ 3,32 SAY [M A I N M E N U ]  
@ 4,11 TO 4,68 DOUBLE  
@ 7,35 SAY [1. REGISTRATION]  
@ 8,35 SAY [2. ENQUIRIES]  
@ 9,35 SAY[3. REPORTS]  
@ 11,35 SAY '0. EXIT'  
STORE 0 TO Selectum  
@ 13,33 SAY " select "  
@ 13,42 GET selectnum PICTURE "9" RANGE 0, 3  
READ

DO CASE

CASE selectnum = 0  
SET BELL ON  
SET TALK ON  
CLEAR ALL  
CLOSE DATA  
RETURN

CASE selec num =1  
\*DO REGISTRATION

DO REGSCR

CASE selectnum =2  
\*DO ENQUIRIES

DO REGQUIR

CASE selectnum = 3

- DO REPORTS

DO REGREPO

END CASE  
ENDDO T  
RETURN

- EOF : REGROAD . PRG
- PROGRAM..: REGSCR.PRG

SET TALK OFF  
SET BELL OFF  
SET STATUS ON  
SET ESCAPE OFF

DO WHILE.T.

CLEAR

@ 2,10 TO 14,69 DOUBLE  
@ 3,29 SAY [REGISTRATION]  
@ 4,11 TO 4,68 DOUBLE  
@ 7,30 SAY [1. ADD RECORDS]  
@ 8,30 SAY [2. MODIFY RECORDS]  
@ 9,30 SAY [3. DELETE RECORDS]  
@ 11,30 SAY '0. EXIT'  
STORE 0 TO SELECTNUM  
@ 13,33 SAY " SELECT"  
@ 13,42 GET "SELECTNUM"  
@ 13, 42 GET selectnum PICTURE "9" RANGE 0,3  
READ

DO CASE

CASE selectnum = 0

SET BELL ON

CLEAR ALL

RETURN

CASE Selectnum = 1

\*DO ADD INFORMATION

DO REGINIT

DO REGMEN1

DO REGMEN2

CASE Selectnum = 2

\*DO CHANGE INFORMATION

DO REGINIT

DO REGMEN1

DO REGMEN2

CASE Selectnum = 2

\*DO CHANGE INFORMATION

DO REGINIT  
DO REGMEN1  
DO REGMEN4

CASE selectnum = 3

- DO DELETE INFORMATION

DO REGINIT  
DO REGMEN1  
DO REGMEN6

ENDCASE

ENDDO T  
RETURN

\*EOF: REGSCR.PRG  
\* REGINIT. PRG

PUBLIC MSECUNUM, MNAME, MADDRESS, MOCCUPA, MAGE, MNATIONAL  
Public mnexkin, mkinadrs, mdate, mbrand, mtype, mstatus  
PUBLIC MLIFE, MREGNUM, MCHASIS, MENGINE

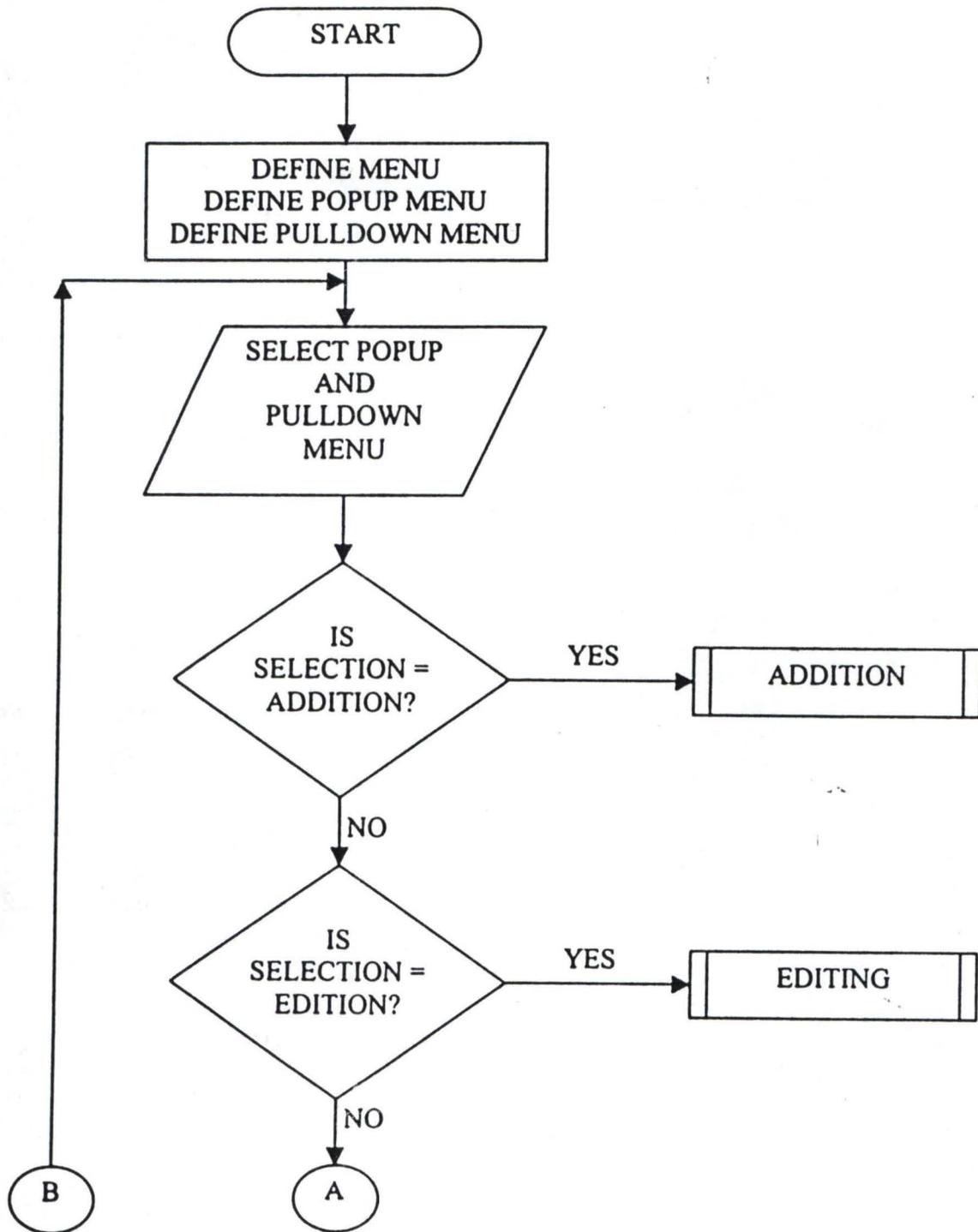
MSECUNUM = 0  
MNAME = SPACE (15)  
MADDRESS = SPACE (20)  
MOCCUPA = SPACE (20)  
MAGE = 0  
MNATIONAL = SPACE (15)  
MNEXTKIN = SPACE (15)  
MKINADRS = SPACE (20)  
MDATE = date()  
MBRAND = SPACE (12)  
MTYPE = SPACE (6)  
MSTATUS = SPACE (10)  
MLIFE = 0  
MREGNUM = SPACE (8)  
MCHASIS = 0  
MENGINE = 0  
RETURN

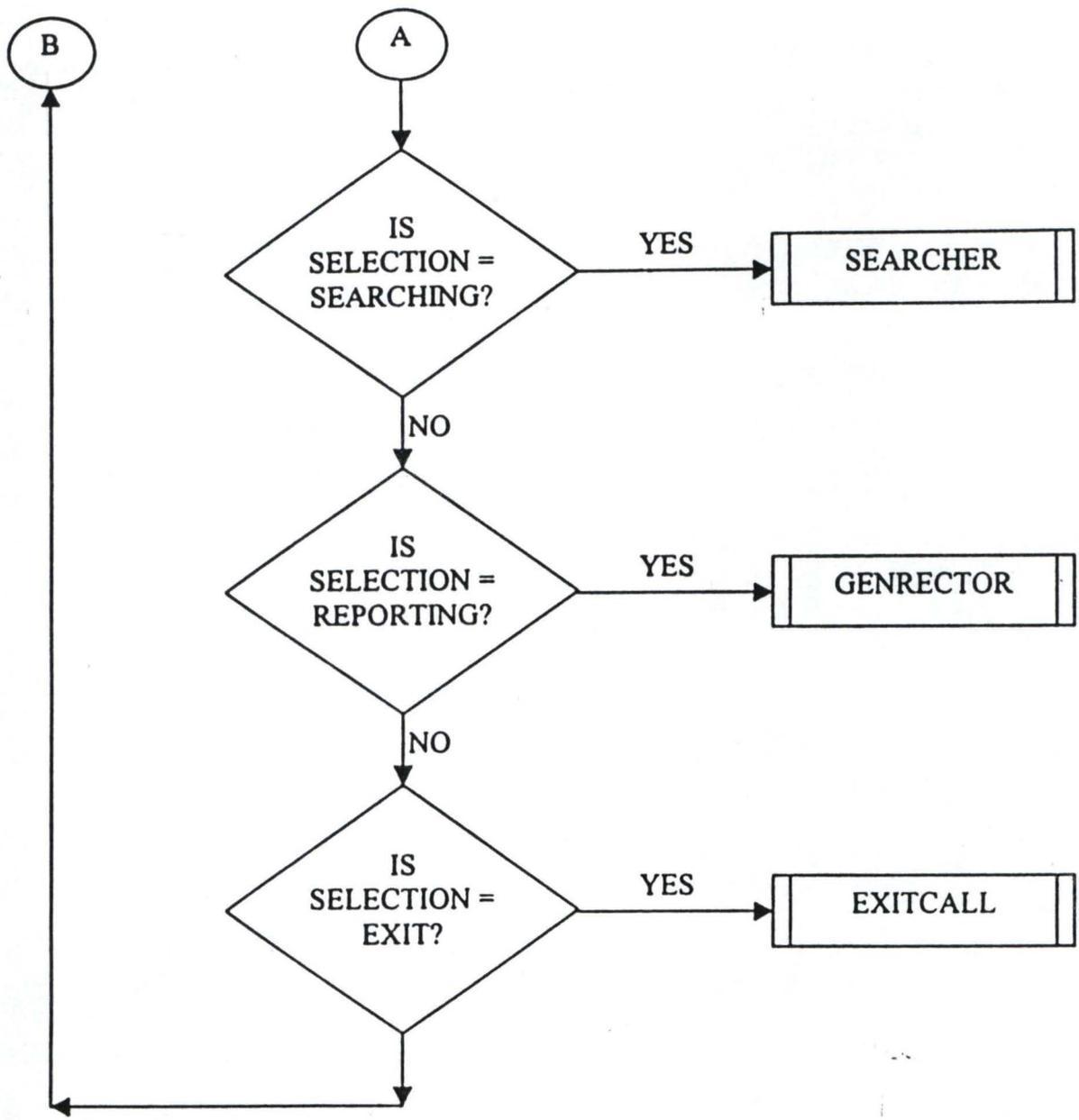
\* EOF REGINIT. PRG

# APPENDIX II

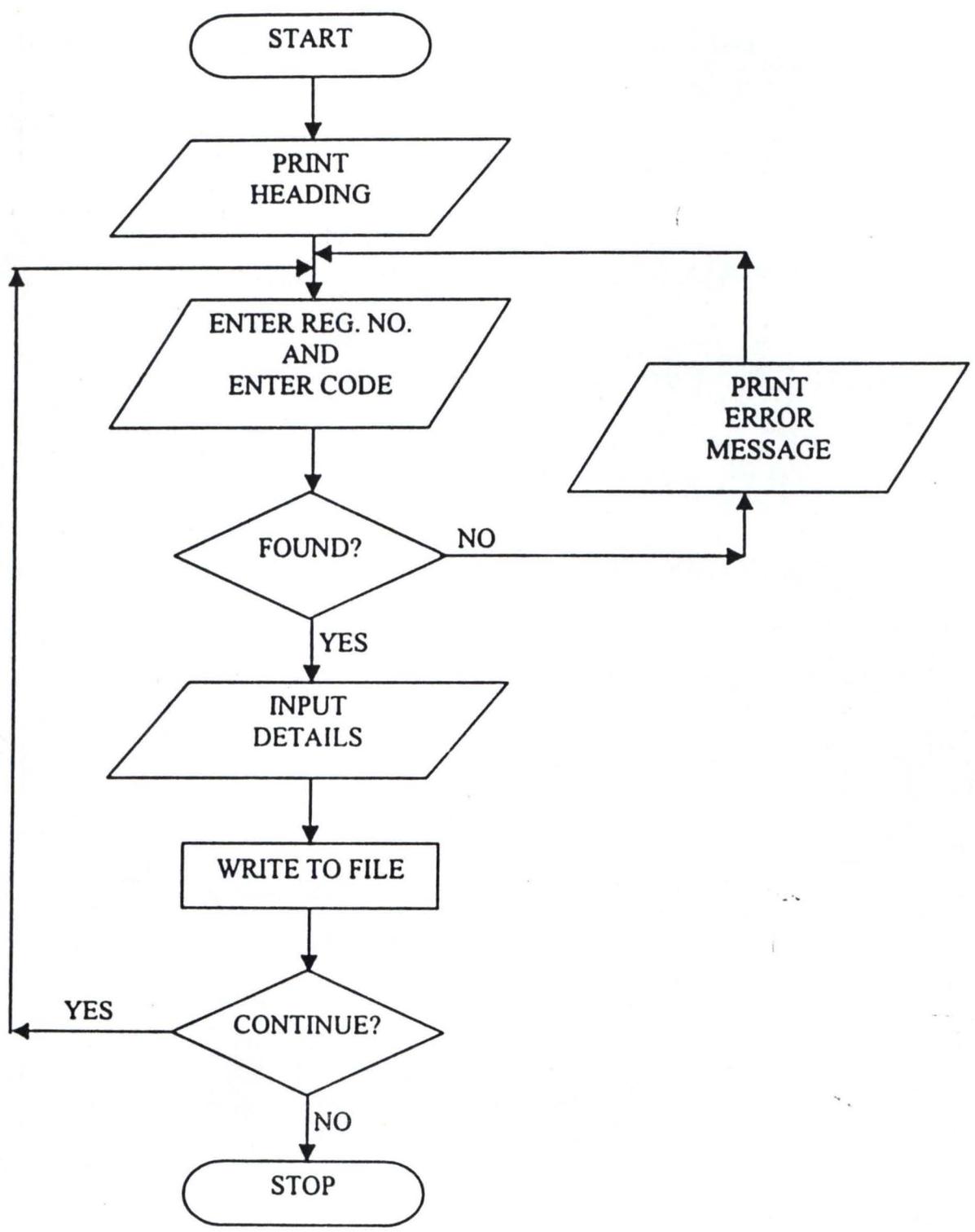
## PROGRAM FLOWCHART

### FLOWCHART FOR VEHICLE REGISTRATION

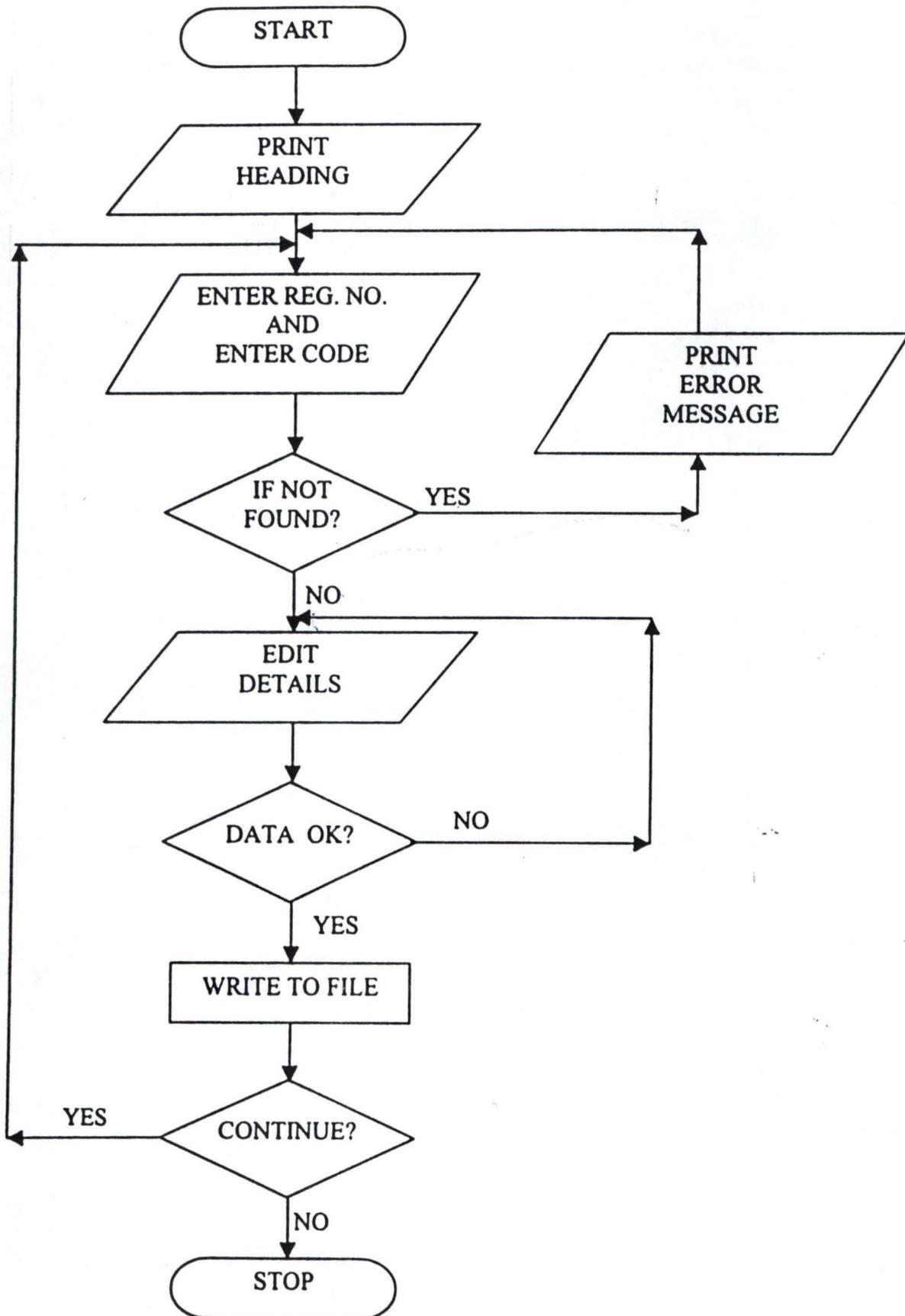




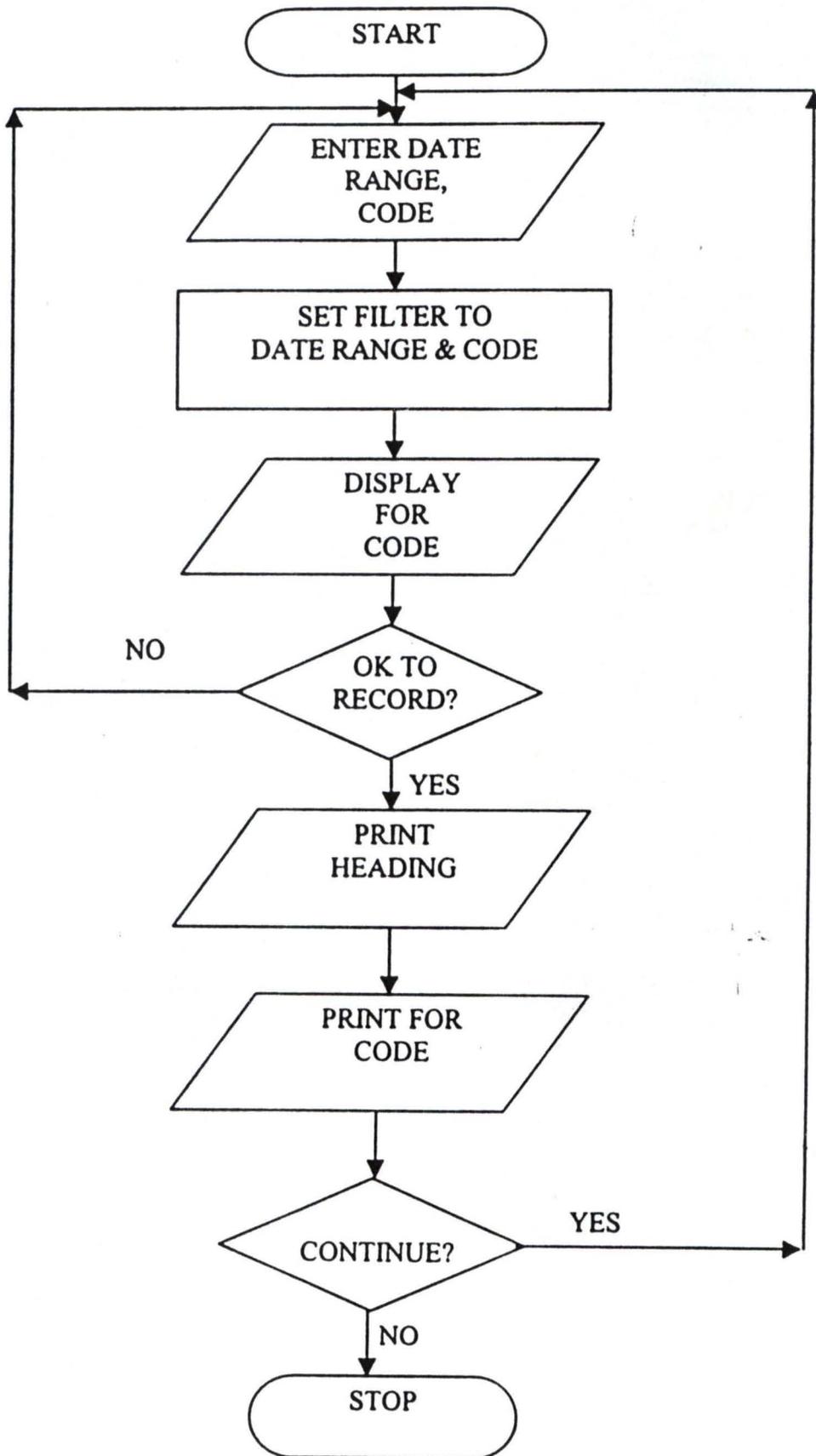
# ADDITION/APPEND PROGRAM



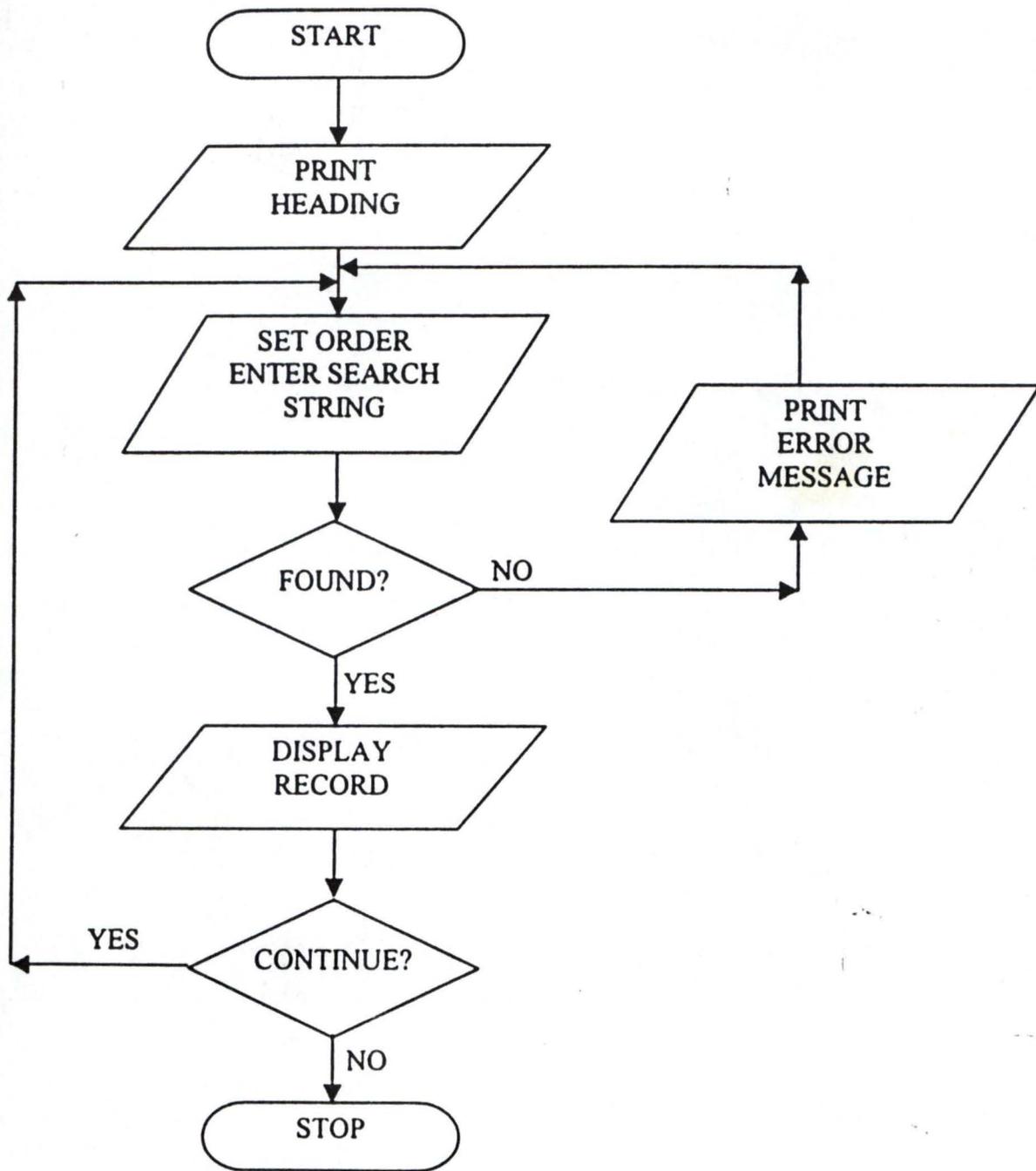
# EDIT/CHANGE PROGRAM



# REPORTING PROGRAM



# SEARCH PROGRAM



DELETE PROGRAM

