APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

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PGD/MCS/99/2000/960

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PRESENTED TO THE DEPARTMENT OF MATHEMATICS / COMPUTER SCIENCE IN PARTIAL FUFILMENT OF

THE REQUIREMENT FOR THE AWARD OF POST GRADUATE DIPLOMA IN COMPUTER SCIENCE.

SEPTEMBER, 2001

DEDICATION

This project is dedicated to God be the glory for His endless faithfulness towards me, not only in this study but also throughout my life endeavors.

I also dedicate the work to my wife, Ada for all her encouragement and my children, Blessing, Excel and Favour for their love.

CERTIFICATION

This is to certify that the title, application of computer to credit control system in NITEL Limited Minna, was done by N.L Ozoemelam, and that the work has been read and approved having met the requirement for the award of post- graduate Diploma in Computer Science in the Department of Mathematics and Computer Science of the Federal University of Technology, Minna.

..... **DATE.....**

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..... **DATE .....**

EXTERNAL EXAMINER

ACKNOWLEDGEMENT

I am grateful to Almighty God, Yahweh, the God of Abraham, Isaac and of Israel, the sustainer and the most merciful, for granting me the favour and success throughout this study at postgraduate level that will lead to high esteemed life, now and in the future.

My profound gratitude goes to my Supervisor in person of Mr. Abubakar Usman Yusuf for his guidance, encouragement, assistance and constructive criticism in the course of this project.
To be realistic, his constant supervision has contributed immensely to the success of this study.

My appreciation goes to the Head of Department, Dr. S. A Reju, Dean of Science Education, Prof. K.R Adeboye, Mallam Audu Issah, Prince Badmus and other staff of the department who contributed in no small measure to the success of this project

I am indebted to my wife (Ada) for her encouragement, patience and love throughout the period of this work. Same goes to my children (Blessing, Excel and Favour), for allowing me ample time to write this work sometimes at home.
I am grateful to everyone.

ABSTRACT

The inception of control system in Nigerian Telecommunication Limited, Minna came with myriad of problems, such as inaccurate reporting of account balance, increased average collection period receivables, leading to high level of investment in the company's working capital, manual update of subscribers' Ledger cards and other important documents prone to fraudulent activities.

The introduction of the proposed system or the application of Computer provides easy, effective and efficient services to the customer. With this system, it is easy to add new records, retrieve and access records by authorized user. Also, it enhances speedy production of Monthly bills to Customers.

For this system to work effectively, Database programme Language is used to develop the user's software and the programs can run on Foxpro 6.0 for window environments.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 INTRODUCTION TO CREDIT CONTROL SYSTEM

To a large extent, service-rendering companies resort to elaborate invoicing procedure after sales.

In this way a sale transaction is not always in cash and carry basis, thus, it is usually accompanied by a credit transaction. This is true of National Electric Power Authority, merchandise Companies, Nigerian Mobile Telecommunications Limited (M-TEL) and of course, Nigerian Telecommunications Limited (NITEL), to mention a few.

NITEL is not selling physical goods, but renders telecommunications services, which affords it the opportunity of involving her customers through bills distribution, to be paid within a credit period.

In this way, the service provider loans the customer the value of service rendered for future payment and the process is called credit. The bill specifies the terms of credit, location of service, current charges, amount due and all that.

When a firm sells its products or services without receiving cash immediately, it is said to have granted credit to its customers. Thus, accounts receivable are the claims against debtors generally arising from sales of goods and services. Credit sales, being receivables have some

peculiar characteristics. Firstly, receivables involves some element of risk, cash sales are riskless unlike credit sales whose cash are yet to be received.

Secondly, credit sales are based on economic values, to the customer, the economic value of the goods or services passes at the point of sale, while the firm expects an equivalent value in due course. Finally, credit sales imply future cash returns. The effective control of this account receivables is called credit control.

CREDIT: This is a permission to delay payment for goods and services until after they have been received.

SYSTEM: A group of things, interrelated elements, parts or procedures working together as a whole to accomplish a goal.

CREDIT CONTROL SYSTEM: From the above, credit control system can be defined as the ability to direct the management of payment in the sale of goods and services in an interactive environment of inter-related elements, downloaded in a document (bill) that contains as much as they are to pay for the service being rendered to them and when payment is due.

1.2 HISTORY OF NITEL (NIGERIAN TELECOMMUNICATIONS LIMITED)

The Nigerian Telecommunications Limited (NITEL) is a Federal Government owned Company that provides public telecommunications services in Nigeria. Although, the Federal Government, through the Nigerian Telecommunications commission recently liberalised the industry by issuing GSM (Global system for Mobile) license to independent operators.

Set up in 1985 as an amalgam of the Telecommunications Division of the defunct P&T Department and the Nigerian External Telecommunications Limited (NET). NITEL Limited has staff strength of about 12,000. The Federal Government has implemented the merging of NITEL and M-TEL (Nigerian Mobile Telecommunications Limited), while retaining the name, NITEL.

Fully commercialized under the privatization and commercialization policy of the Federal Government, NITEL Ltd; more than ever, is committed to the provision of efficient, reliable and cost effective telecommunications services nationally and internationally. This set of objectives has remained the guiding principle on which the company's operations are based.

NITEL has about 800,000 Telephone lines and about 13,000 telex lines in the network. With the introduction of digital system into the network from 1990, the total installed capacity of telephone lines is expected to reach one

million at the beginning of this Century. About 450,000 telephone lines of the existing capacity are digital lines.

Other relatively new services provided by the Company are the INMARSAT services, the network paging service and Audio Mail service, internet service and on – line billing. NITEL has eventually secured one of the licenses, which will flag – off the actualization of the company's GSM (Global System for Mobile) service programme.

NITEL has continued to live up to the expectations of the Federal Government by improving on its achievements in the efficient management of the Nation's telecommunications network. The Company has consolidated its corporate existence and is firmly on the path to providing adequate, effective, modern and viable telecommunications services for the Nation's development.

1.3 THE ORGANISATIONAL STRUCTURE OF NITEL

NITEL operates a three – tier organizational structure, that is, corporate Headquarters, 6 zonal and 39 Territorial Administrations; a system that enhances decentralization. Currently, the 6 zones of NITEL are known as:

Lagos zone, with headquarters in Lagos Island.

Northwest zone with headquarters in Kaduna.

Northeast zone with headquarters in Bauchi.

Southwest zone with headquarters in Ibadan.

Southeast zone with headquarters in Enugu, and

Central zone with headquarters in Central Area, Abuja.

Each state of the Federation and the Federal Capital represent a Territory. Lagos is however, structured into 3 territories.

Nigerian Telecommunications limited (NITEL) is headed by a Managing Director, who co-ordinates and manages the three directorates under him, namely, Mobile Communications, domestic national Communications and long distance communications, ably piloted by Executive Directors. The Managing Director reports to a Board of Directors. The Ministry of Communications plays a supervisory role over NITEL.

Each zonal headquarters of NITEL is headed by a General Manager, whose duty is to Co-ordinate the operations of Territories within the zone. Likewise, each territory is headed by a Territorial Manager who reports to the General Manager of the zone where it is located.

The Credit Control function of the Company is carried out at the Territorial level, where Telephone Services lines are allocated to subscribers, leading to Credit Control activities. However, the territories are sub-divided into Territorial headquarters and Exchange Areas (headed by Exchange Area Managers), where the credit control function proper is carried out at the shopfloor.

1.4 SERVICES OFFERED BY NITEL

NITEL provides a variety of services, which include the following:

- Telephone with IDD (International direct dialing),
- Telegraph and Telex Delivery Service,

- Telegraph and Registered Telegraphic address,
- Local and International public card payphone,
- Transmission and Reception of real time Television for network Services,
- Private leased Telephone and Telex Services,
- Pal –Secam Tape Conversion,
- Maritime Mobile Services (MMS),
- Leased Telephone and Telegraph services,
- Alternate Voice Data (AVD) Circuit,
- Voice cast and press Reception,
- International Public Counter Services,
- Nifax Services (Public facsimile),
- Satellite Mobile Communication (INMARSAR) Service,
- Data Switching System,
- Electronic Mail (National Service Only),
- Press Reception and Broadcast,
- X400 Electronic Messages,
- Air Traffic Sub-System,
- Digital PABX with IDD (Direct Inward Dialing),
- Internet Service,
- Cellular Service,
- GSM (Global System for Mobile) Service.

1.5 NITEL SUBSCRIBERS IDENTIFIED

Subscribers to NITEL Services fall into two groups, viz,

- Business or Commercial, and
- Private

BUSINESS SUBCRIBERS

These are telephone lines allocated to entities that engage in the activity of making, buying, selling or supply goods and services for money, e.g. Sole trader, Enterprises, Commerce or trade and Companies (Limited and Unlimited)

PRIVATE SUBSCRIBERS

These are subscribers to NITEL lines for personal use or belonging to or for the use of one particular person or group of persons (family) only.

1.6 OBJECTIVES AND RELEVANCE OF THE STUDY

The goal and objective of this study is to investigate the present credit control system of NITEL Limited, Minna, identify its shortcoming with a view to applying computer programs to improve the system and retrieval of subscribers' information.

The application of computer to the credit control system of NITEL Limited, Minna will go along way in achieving the following:

- Minimize the level of investment in the Company's working Capital, particularly in Accounts receivable;
- Improve the Company's cash flow base to enhance the ability of the company to fund her operation,
- Reduce the average collection period,
- Maintain accurate financial records of her customers,
- Keep accurate and –up-to-date data of her numerous customers,
- Keep bad debts to an acceptable level and at the same time maintain and sustain the subscribers' interest,
- Eliminate manual update of subscribers' ledger cards,
- Prompt treatment of subscribers' complaints of uncredited payments and adjustments,
- Prompt distribution of bills to customers,
- Easy reconciliation of subscribers' accounts,
- Reduction of manual jobs,
- Timely rendition of all monies collected by the bank on behalf of NITEL,
- which is the primary source of crediting subscribers' accounts,
- Timely production of bills, and
- Collection of all outstanding debts.
- At the end of the study, it would be possible to make useful recommendations that will install a credible credit control system in NITEL, Limited, Minna.

1.7 SCOPE OF STUDY

This study does not attempt to cover credit control system in NITEL as a whole, as it is restricted to NITEL Limited, Minna alone. Due to constraints of time and resources intra zonal or Territorial comparism was not attempted. Similarly, this work does not cover a variety of services rendered by NITEL.The project is developed for analysis of effective credit control system of telephone service subscribers' in NITEL Limited, Minna. It is not possible to apply all the solution options.

The work does not cater for telex, telegraph, Internet, INMARSAT, Cellular, GSM, E-mail, special and other services.

1.8 LIMITATIONS

During the process of this study, a lot of problems were encountered. The National Library and Federal University of Technology, Minna Library are both situated at the outskirts of the town. The poor facilities, paucity of relevant texts, and congestion of students at this reference centres was a cause for worry and constraint. The trips were not easy in terms of time and cost involved.

Another serious limitation was the non-availability of reference materials for the literature review. Due to poor library facilities, it was a difficult task to borrow and use reference materials from all possible sources.

Collection of data, memos, circulars and other materials from NITELwas an arduous task, as most of these inputs materials are classified or secret. Again, topics on credit control system in our conventional texts are scarce and not easy to come by.

Most textbooks do not allocate many pages of management of accounts receivables Vis -a-vis debt collection, as credit control techniques are mentioned by passing.

The greatest of this limitation was the intermittent access to personal computer (pc), especially the software program options relevant to this topic. The computer programming is a specialized knowledge in computer science. However, these problems and limitations never in anyway undermined the quality of this project.

1.9 SUMMARY

An attempt to study, investigate and apply computer to credit control system in NITEL Limited, Minna, cannot be complete without first introducing the credit control, and a briefing of the history, Organisational structure, services offered, relevance, scope and all limitations.

NITEL limited is a service parastatal that operates credit system of sales, that is, services are rendered prior to receipt of cash. The parastatal operates a six-tier zonal and 39 territorial administration that offers more than 23 telecommunications services.

The objective is to use computer to improve the system of credit control. However, there are many limitations in carrying out this study, as scarcity of reference materials, which does not underline the quality of the project.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE

Until recently, talk or attempt to apply computer to effective credit control system in NITEL Limited, Minna was alien as it was absurd. Credit control borders on account receivables, which represent the extension of open account credit by one firm to another and to individuals. Account receivables are extremely important investment and therefore requires careful analysis and effective control, so that the level of investment in them is optimal.

The use of suitable computer software program affords precise production of bills, distribution and monitoring of account balances within credit control limits and reporting deviations for management action.

In this chapter, we shall discuss related literature based on the above facts.

2.1 CREDIT CONTROL SYSTEMS AND COMPUTER

(Aishat 2001), observed that a computerized credit control package makes it easy for effective and efficient credit control system. She studied and developed an application package which is called customer service control package (CSCPACK). This package provides continuity from the end of one billing cycle to the beginning of the next billing cycle. Some output from the billing system service serve as input to the application package which are:

- ❖ International details transaction

- Inland tickets
- Payments
- Customer billed transaction profile etc.

Output from this package also goes as input to the billing system as customer information update. Enquiry on such request as bills matter are made available to customer outside the billing period with the use of the system supported by the last billing cycle database. With data communication network in place, information flow will be free between the package and the billing system. The subscriber's transaction profile generated during activities at the next bill production will be updated with daily activities at the telephone exchange using the package until the next bill production, so that at the end of the day, the package would have provided customer information for bill production and it will be very difficult to falsify any figure manually in the ledger cards, as this will create difference with what the computer has and the ledger card.

Similarly, (Akpan 2000), observed that in NITEL, Minna, a Computerized account receivable system offers good trade services to its customers. The system helps to manage the customer's accounts and assists with the timely collection of amounts due for bill production. He used a database file approach, which permits efficient storage of data in the system and of the system and involves the considerations of all outputs of the system to determine all storage needs.

Associated with these are the maintenance of customer information, the tracking and evaluation of customer account transactions and the generation of reports. He created an integrated environment which allows several of these accounts receivables to be related to other business processes, such as sales and customer services.

2.2 MANAGEMENT INFORMATION REPORTS

(Aishat) (2001) further observed that the management information reports generated from the system will include the following:

1. The new subscription form,
2. The edit form for new subscribers,
3. The delete form for new subscribers,
4. New payment form for customers,
5 Editing payment for customer form,
6. Deletion of payment form,
7. Processing bills form,
8. Updating bills for customers form,
9. Deleting bill process form,
10. Inland query Information,
11. International call details query form,
12. Bill profile for customers,
13. New subscribers report form,
14. Payment profile for customers, and
15. Payment received by the management.

(Akpan) (2000), identified such reports as follows:

1. Detail sales report,
2. Credit sales transaction report,
3. Summary detail report,
4. Account balance report, and
5. New subscribers report form.

2.3 SUMMARY

Based on the above facts, we have seen that accounts receivable or credit sales are extremely important investment of a business. They therefore, require careful analysis and effective control, through the use of suitable computer software program, which affords precise control of accounts balances within approved limits. This can only be possible and meaningful through the generation of relevant report, which aid management.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

3.1 INTRODUCTION

System analysis for the purpose of this project can be defined as determining how best to use computer with other resources to perform a task, which meets the information needs of an organization. System design is a process of planning a new system or to replace an existing one or complement an existing system.

The following processes are followed in analyzing and developing a new system of credit control for NITEL, Minna. They are known as Bill life – cycle, which will now be discussed in detail, thus:

3.2 BILL PRODUCTION

Analogue meter photographs and digital meter tapes are sent to the MIS and DP (management information service) and DP (data processing) center, Abuja from all exchanges within the Territory, through the customer service department, while following the bill input submission procedures of NITEL. The cut – off date is the last day on which MIS,(management information service) Abuja, must receive all inputs for the production of bills, which is 17th of every month.

The processing of bills commences after this cut – off date. The actual bill processing starts as from 25th and runs for one week before which physical bills would be ready for collection. Bill and reports produced are collected by the respective territories within 48 hours of fax advice. Sanctions are imposed on erring territories.

3.3 BILL DISTRIBUTION

Credit control function actually starts from bill distribution, which include:

- The sorting and collation of bills to their various categories, ready for dispatch.
- The dispatch of bill, using various methods, depending on which of this method gets the bill fastest to a target subscriber.

Some of these methods are:

A. Post – office Box / Private mail Bag through the Nigerian postal service department (NIPOST),

B. Motorcycle dispatch riders, moving from doorsteps to doorsteps,

C. Dedicated telephone calls to subscriber to notify that bills are ready for collection,

D. Cabinet by cabinet bill distribution through NITEL Technicians,

E. Radio and Television giggles and customized advertisements packaged monthly.

- Contact subscribers whose bills carry wrong or insufficient billing addresses through the telephone. To avert the incidence of

undistributed bills, the credit control department performs additional functions to:

(a) Manually fill the correct billing addresses for MIS input,

(b) Advise subscribers to always come to NITEL and pick up their bills first week following the relevant month bill,

(c) Discourage subscribers from relying on postages through NIPOST as most post office boxes or Private mailbags are blocked for non-payment.

3.4 BILL SETTLEMENT

One of the functions of credit control, which naturally follows bill distribution, is to ensure that subscribers settle their bills promptly.

SUMMARY OF ACTION ON BILL SETTLEMENT

PERIOD	ACTION
1ST Within 14 Days from bill date.	TELEPHONE CALLS Reminding subscribers.
2ND After 14 Days i.e. due date.	Put Temporary out of service (Tos).
3RD 3days after putting temporary out of service.	Letters to subscribers stating possible recovery.
4TH 3 days after letter delivery.	Personal visit to find out other services in use and tos action on other services.

5TH 3 days after personal visit.	Advice the chief executive to recover services.
After reallocation.	Refer to legal Department.

The Nigerian Telecommunications Limited subscribers settle their bills through designated banks. The payment is made through the monthly telephone bills sent to them, made up of copies viz:

1. Customer copy – original (white colour),
2. Finance copy or bank drop – Duplicate (Blue copy),
3. MIS copy (or computer copy) –Triplicate (Green colour),
4. Bank copy – Quadruplicate (Purple colour),

The Banks render daily and weekly returns to NITEL'S nearest office through:

1. Daily bank schedules which list current payments by subscribers, accompanied with finance copies or bank drops of a bill.
2. Weekly bank schedules, which list historic payments by subscribers, rendered with MIS copies, bank statements, debit advices or notes, schedule of uncleared effects, dishonored cheques (if any) and forwarding letters.

A weekly schedule is consolidated daily schedules, used to reconcile daily transactions of the relevant week. The reconciled weekly schedule is then sent to MIS, Abuja in batched forms, as part of the billing input.

3.5 BILLING INPUTS

A summary of the billing inputs to MIS (management information service) is as follows:

- **PAYMENT INPUT** – As stated above, payment input via weekly bank schedules and MIS copies of bills (stamped paid and initialed by designed banks) are batched to MIS for subsequent bill production.

- **METER READING** – These are digital tapes and analogue meter photographs, which contain monthly dial calls processed and batched to MIS. The monthly dial call charges comprise of local and international calls made by subscribers.

- **ADVICE NOTES** – Telephone advice notes (TANS) are documentary media, through which new installations, transfers, change of ownership and other changes are sent in batches to MIS for introduction into the billing system. Conversely, telephone recoveries are sent to MIS through TANS, so that they can be expunged from the billing system.

- **ADJUSTMENT** – Approved payment or billing adjustments for errors are collated and batched to MIS for further processing.

3.6 PROBLEMS OF THE EXISTING SYSTEM

Myriad of problems face control system:

- Payments are not reflected on subsequent bills until after many months,
- Ledger cards are repetition of MIS subscribers ' statement of account (Accounts status) on current basis, apart from being updated manually,
- Alteration and falsification of figures by the staff to preferred subscribers,
- Manual operation of ledger cards is prone to fraud should there be dishonest staff,
- Preferred subscribers are favoured by staff, as they will be exempted from disconnection action,
- There is the possibility of wrong calculations, as subscribers account are updated manually,
- This will lead to rendition of inaccurate subscriber information to management,
- New subscribers are not introduced into the billing system until three months,
- Large facilities need to be provided as a result of large volume of paper work,
- This creates lack of responsiveness to customers' needs,

- ❖ Reliance on secondary source of information (MIS output),
- ❖ Paucity of trained credit control staff,
- ❖ There is incidence of unacceptable level of bad and doubtful debts.

3.7 ANALYSIS OF THE PROPOSED SYSTEM

Having probed the existing system, a preferred solution to the menu of problems is to develop a computerized credit control package for the Nigerian Telecommunications Limited, Minna.

This package is developed to bring about effective and efficient credit control system. A system and application package is designed called customer service control package (CSCPACK). The package provides continuity from the end of one billing cycle to the beginning of the next billing cycle. Output from the main billing system serves as input to the application package, and include:

- ❖ Bill details (national),
- ❖ International details transaction,
- ❖ Payments,
- ❖ Adjustments.

Output from this package goes as input to the main billing system as customers information update. By this, it is possible to respond to customers' request on bill matters outside the billing period with the use of the system supported by the last billing cycle database. With data

communication network in place, data flow is made possible between the package and the billing system.

The subscribers' transaction profile generated during bill production is updated with the daily transaction at the telephone exchange, using the package until the next bill production. With this updating, the package would have provided customer information for bill production, which will not only prevent manual falsification of figures in the ledger, but will fairly compare the balance of the computer and ledger cards.

3.8 INPUT DESIGN

INPUT MEDIUM	----------The keyboard
STORAGE MEDIUM	----------The floppy disk
SOURCE	---------- Input from keyboard
PURPOSE	---------- To create, capture and update data.

THE DESIGN OF THE INPUT LAYOUT.

T register. Dbf. This database file records for new subscribers.

TREGISTER. Dbf

NAME	TYPE	WIDTH	DECIMAL	INDEX
Name	Character	30		
Tellno	Character	12		Ascending
Add	Memo	4		
Occup	Character	25		
Open_ amt	Numeric	16	2	
Stype	Character	30		
Date	Date	8		
Code	Numeric	6	0	
Acctno	Character	12		Ascending
Bill _ref				

The structure below represents the structure of T process. Dbf. File, which holds records for capturing payment, transaction and report.

TPROCESS. Dbf

NAME	TYPE	WIDTH	DECIMAL	INDEX
Date	Date	8		
Code	Character	6		
Acctno	Character	12		Ascending

Terr	Character	15		
Location	Character	15		
Name	Character	25		
Add	Memo	4		
Open_amt	Numeric	15	2	
Access_char	Numeric	15	2	
Stype	Character	30		
Consup	Numeric	15	2	
Payment	Numeric	15	2	
Adjust	Character	10		
Int_call	Numeric	15	2	
Current	Numeric	15	2	
Credit	Numeric	15	2	
Debit	Numeric	15	2	
Vat	Numeric	15	2	
Tot_current_char	Numeric	15	2	
Amt_due	Numeric	15	2	
Tellno	Character	12		Ascending
Lines	Numeric	5	0	

3.9 OUTPUT DESIGN

OUTPUT MEDIUM .....Screen

STORAGE MEDIUM .....Hard disk

SOURCE .....Memory

PURPOSE .....To print report generated.

3.12 SUMMARY

In this chapter, billing production was thoroughly analysed. How analogue and digital meters are used to transit data in the production of the bill. Moreover, the roles of credit control in bill distribution include: sorting and collection of bills to there various categories, the dispatched bill using various methods. The bill settlement is normally through designed banks. Details of how billing data is to be input, using various designed data input forms are also discussed.

Various problems or limitations of the existing system (manual operation) are enumerated. The breakdown analysis of how the proposed system was designed. This includes the input design, where the database used was well analysed.

The programming language used specifically Visual Fox pro 6.0 together with its features.

CHAPTER FOUR

4.0 SYSTEM IMPLEMENTATION

4.1 INTRODUCTION:

This chapter concentrates on software implementation. This is the stage in the system life circle when people actually begin to use a system.

This discussion is based on bill production, choice of software package, programming and programs, operational manual and change over procedure.

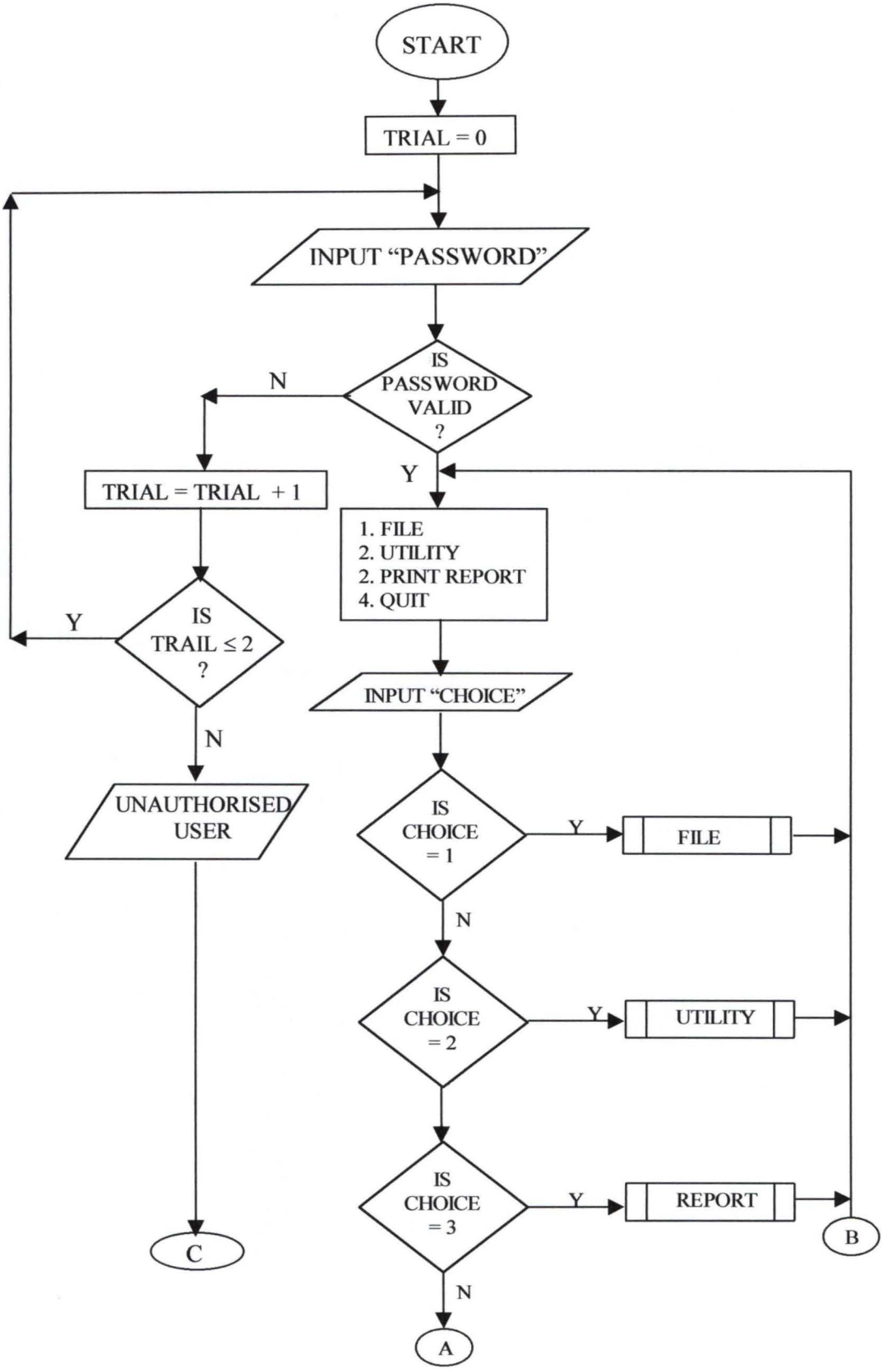
4.2 ALGORITHM OF THE PROGRAM

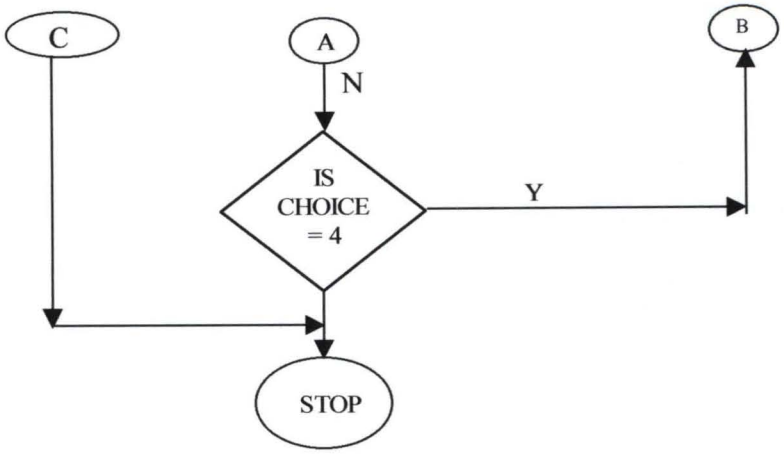
The next challenge is to translate the system design and specification into instructions that can be interpreted into programs and executed by the computer. This, of course, is the programming phase of the system development process; using the ideas formulated in the last chapter. An algorithm is a finite set of instructions or operation for carrying out a specific task or solving specific problem. In other words, it is a crude set of instructions, from which a program can be written (i.e an algorithm specifically expressed in a high level language, capable of execution by a computer) is developed.

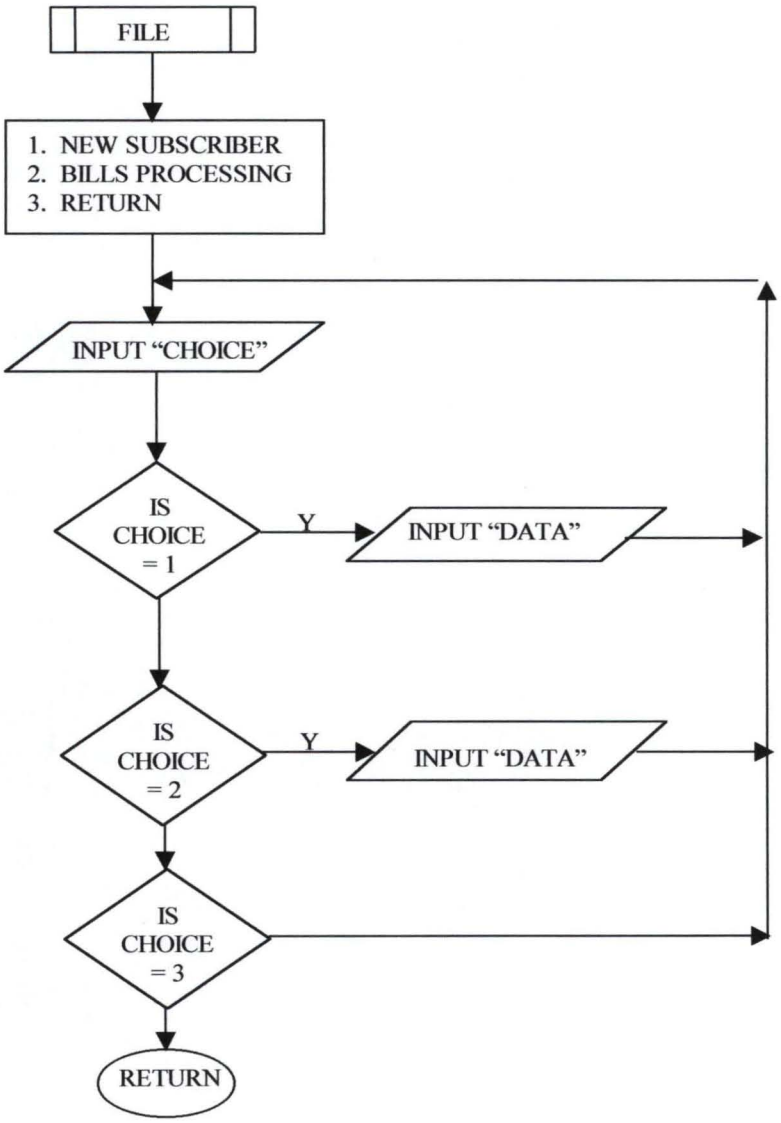
An algorithm is valid, if it possesses the following characteristics:

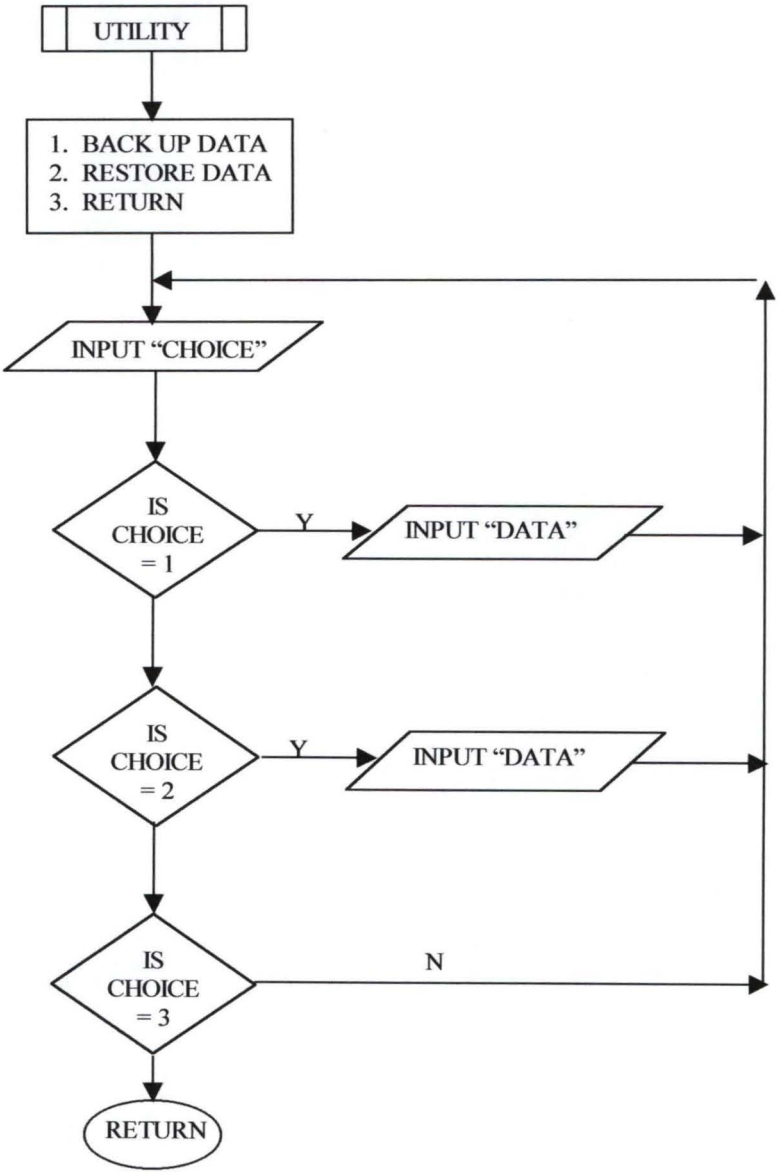
1) Finiteness of instructions - there must be finite number of steps of instructions in an algorithm.
2) Precision – steps or instructions must be void of obstruction or vagueness but rather explicit.
3) Effectiveness – execution of impossible tasks must be avoided in an algorithm.
4) Termination – there must be stopping criteria for terminating algorithm, especially in the case of instructions having repeated execution.
5) Experimentation – an algorithm should provide output of experimentation as required.

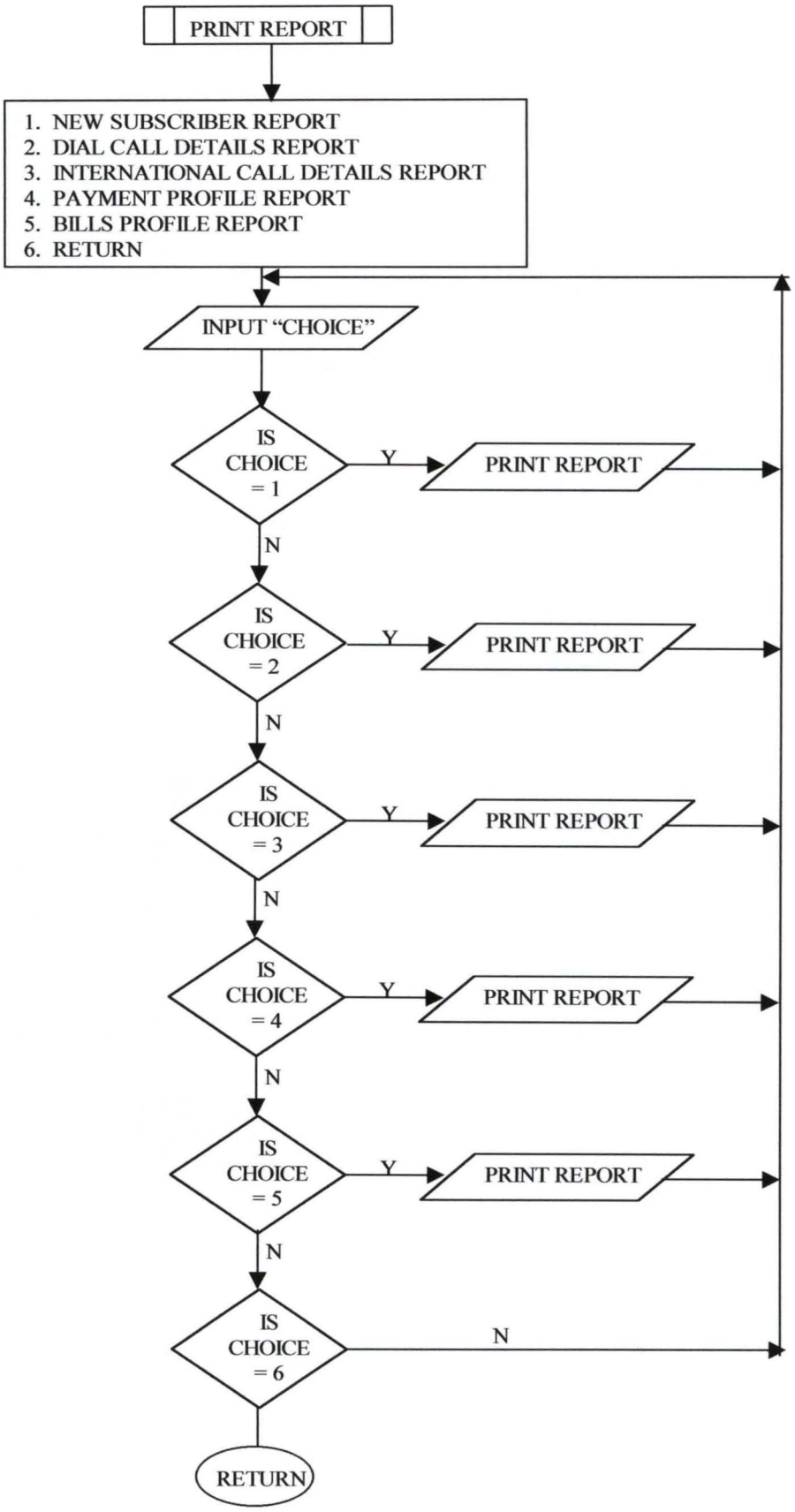
Algorithm used for this system is shown below:


START
TRIAL = 0
INPUT "PASSWORD"
IS PASSWORD VALID ?
N
Y
TRIAL = TRIAL + 1
1. FILE
2. UTILITY
2. PRINT REPORT
4. QUIT
IS TRAIL ≤ 2 ?
Y
N
INPUT "CHOICE"
UNAUTHORISED USER
IS CHOICE = 1
Y
FILE
N
IS CHOICE = 2
Y
UTILITY
IS CHOICE = 3
Y
REPORT
N
C
B
A


C
A
N
B
IS
CHOICE
= 4
Y
STOP


FILE
1. NEW SUBSCRIBER
2. BILLS PROCESSING
3. RETURN
INPUT "CHOICE"
IS
CHOICE
= 1
Y
INPUT "DATA"
IS
CHOICE
= 2
Y
INPUT "DATA"
IS
CHOICE
= 3
RETURN


UTILITY
1. BACK UP DATA
2. RESTORE DATA
3. RETURN
INPUT "CHOICE"
IS CHOICE = 1
Y
INPUT "DATA"
IS CHOICE = 2
Y
INPUT "DATA"
IS CHOICE = 3
N
RETURN


PRINT REPORT
1. NEW SUBSCRIBER REPORT
2. DIAL CALL DETAILS REPORT
3. INTERNATIONAL CALL DETAILS REPORT
4. PAYMENT PROFILE REPORT
5. BILLS PROFILE REPORT
6. RETURN
INPUT "CHOICE"
IS CHOICE = 1
Y
PRINT REPORT
N
IS CHOICE = 2
Y
PRINT REPORT
N
IS CHOICE = 3
Y
PRINT REPORT
N
IS CHOICE = 4
Y
PRINT REPORT
N
IS CHOICE = 5
Y
PRINT REPORT
N
IS CHOICE = 6
N
RETURN

4.3 PROGRAM LISTING

Once the algorithm or flow chart of the programs has been completed, the text stage is to code, test and debug the programs.

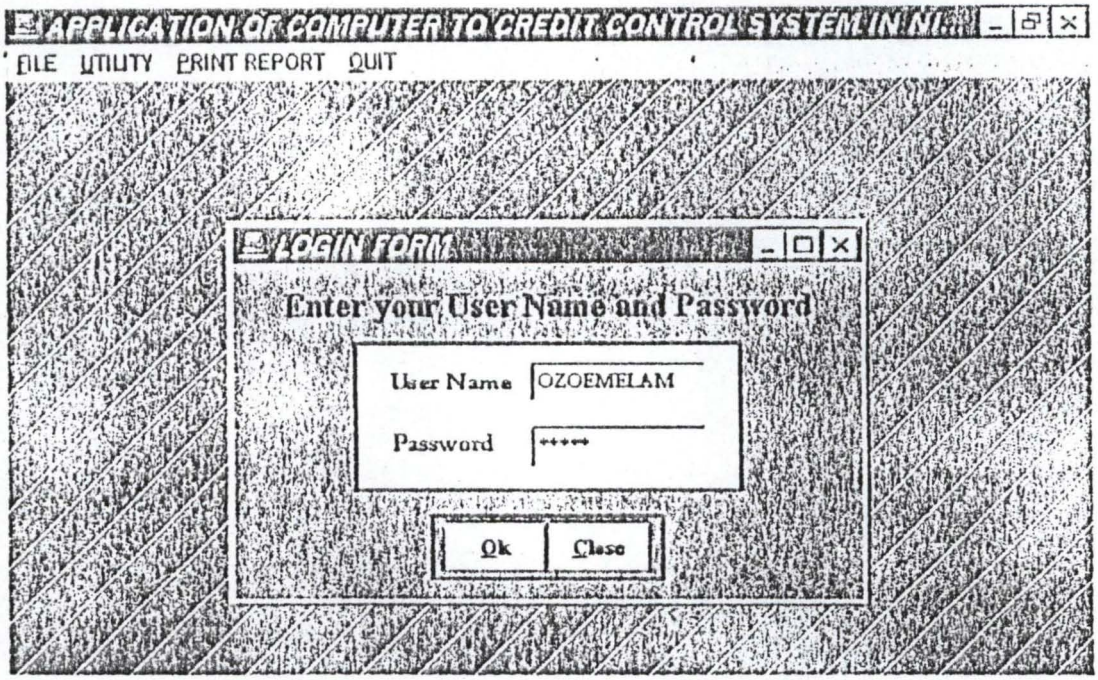
Coding – the narrative (algorithm) design were translated into machine – readable instructions or program to be precise.

This process was straightforward because the design logic is sound and the documentation of the program is thorough. The argument is backed up by the program algorithm provided. This can be seen in Appendix A.

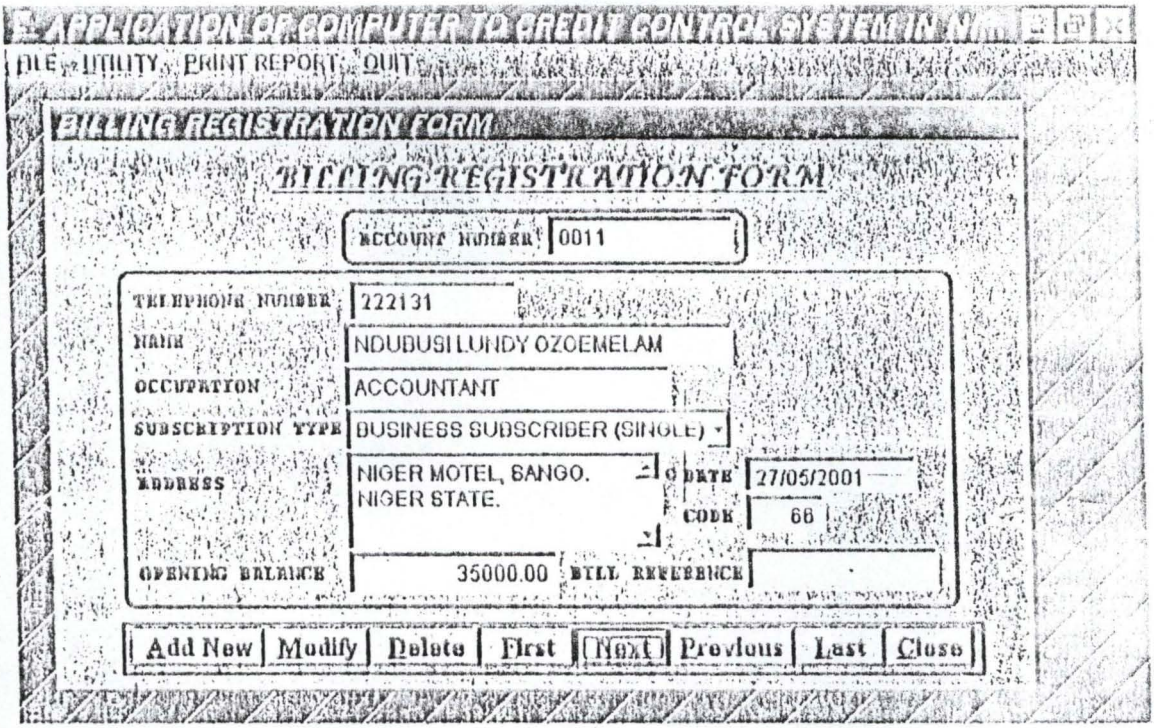
4.4 PROGRAM INTERFACE / IMPLEMENTATION

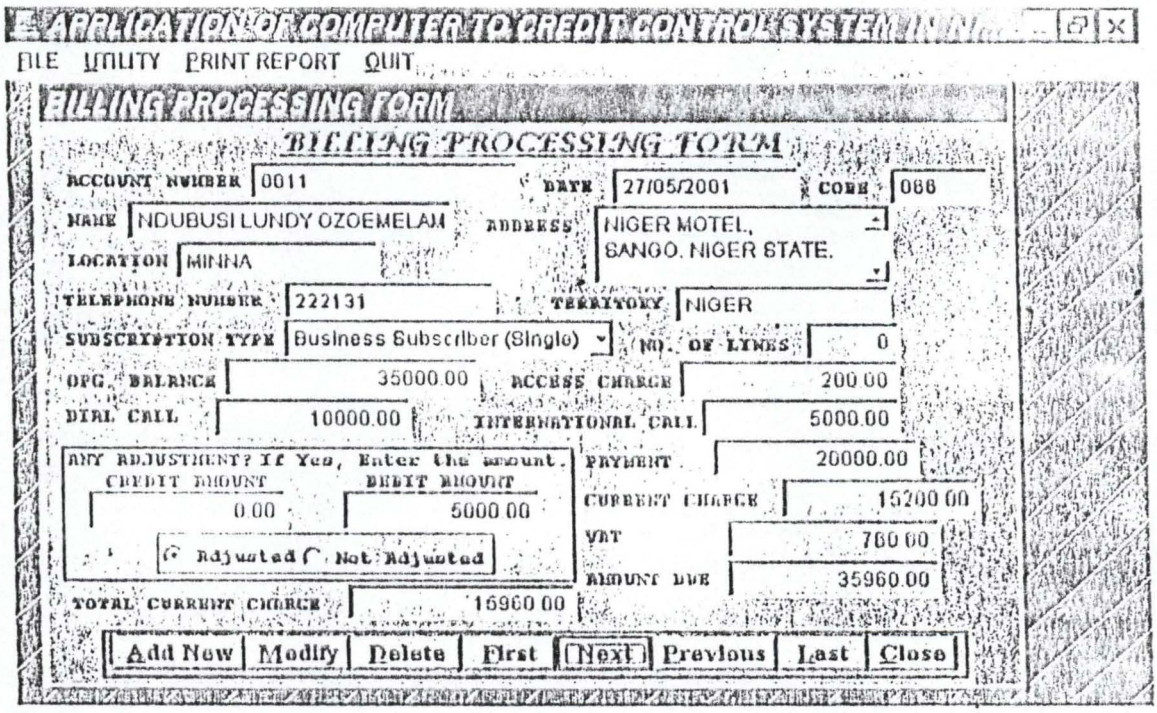
The package is designed of options from with a user can choose that which to work with. An option chosen may lead to a sub – menu. Also, an option to exit the menu will exit. An option clicked with mouse or keyboard will prompt the user to supply his / her password, while the system will allow two trials only to access the option, otherwise it returns to the prompt.

The system menu design is as shown below


APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NI...
FILE UTILITY PRINT REPORT QUIT
LOGIN FORM
Enter your User Name and Password
User Name
OZOEMELAM
Password
Ok
Close


APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NI...
FILE UTILITY PRINT REPORT QUIT
APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM ...
Welcome to
APPLICATION OF COMPUTER TO
CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.
A project developed by:
OZOEMELAM, LUNDY NDUBUISI
PGD/MCS/99/2000/960
MATHS/COMPUTERS DEPARTMENT
FEDERAL UNIVERSITY OF TECHNOLOGY BOSSO, MINNA
IN PARTIAL FULFILMENT FOR THE REQUIREMENT FOR THE AWARD OF
POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE.


APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN N...
FILE UTILITY PRINT REPORT QUIT
BILLING REGISTRATION FORM
BILLING REGISTRATION FORM
ACCOUNT NUMBER 0011
TELEPHONE NUMBER 222131
NAME NDUBUSI LUNDY OZOEMELAM
OCCUPATION ACCOUNTANT
SUBSCRIPTION TYPE BUSINESS SUBSCRIBER (SINGLE)
ADDRESS NIGER MOTEL, SANGO. NIGER STATE.
DATE 27/05/2001
CODE 66
OPENING BALANCE 35000.00
BILL REFERENCE
Add New Modify Delete First Next Previous Last Close


APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN N...
FILE UTILITY PRINT REPORT QUIT
BILLING PROCESSING FORM
BILLING PROCESSING FORM
ACCOUNT NUMBER 0011
DATE 27/05/2001
CODE 066
NAME NDUBUSI LUNDY OZOEMELAM
ADDRESS NIGER MOTEL, SANGO. NIGER STATE.
LOCATION MINNA
TELEPHONE NUMBER 222131
TERRITORY NIGER
SUBSCRIPTION TYPE Business Subscriber (Single)
NO. OF LINES 0
OPG. BALANCE 35000.00
ACCESS CHARGE 200.00
DIRL CALL 10000.00
INTERNATIONAL CALL 5000.00
ANY ADJUSTMENT? If Yes, Enter the amount.
CREDIT AMOUNT 0.00
DEBIT AMOUNT 5000.00
Adjusted Not Adjusted
TOTAL CURRENT CHARGE 16960.00
PAYMENT 20000.00
CURRENT CHARGE 15200.00
VAT 760.00
AMOUNT DUE 35960.00
Add New Modify Delete First Next Previous Last Close

4.5 THE OUTPUT / REPORT GENERATED BY THE SYSTEM INCLUDES:

(a) International call details report

(b) Dial (consumption) Detail report

(c) Payment received details report

(d) Registration report

(e) Bills processing details report

These reports are show below

APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

DIAL (CONSUMPTION) DETAIL REPORT

05/27/01

CODE: 066

DATE	NAME	ACCOUNT NUMBER	TELEPHONE NUMBER	SUBSCRIPTION TYPE	No. OF LINES	ACCESS CHARGE	DIAL CALL
05/22/01	ADEBAYO JOHNSON	0001	222111	Private Subscriber	0	100.00	15000.00
05/23/01	JEREMIAH STONE	0002	222112	Private Subscriber	0	100.00	10000.00
05/24/01	CHUKUDIMA EMEKA	0003	222113	Private Subscriber	0	100.00	10000.00
05/25/01	AUGUSTINE COUSON	0004	222114	Private Subscriber	0	100.00	15000.00
05/26/01	AGBI BAMIDELE	0005	222115	Private Subscriber	0	100.00	2500.00
05/27/01	NDUBUSI LUNDY OZOEMELAM	0011	222131	Business Subscriber (Single)	0	200.00	10000.00
05/22/01	ADEBAYO TOMPSON	0012	222132	Business Subscriber (Single)	0	200.00	10000.00
05/22/01	LAWSON MATTHEW	0013	222133	Business Subscriber (Single)	0	200.00	1500.00
05/23/01	JEJELOYE MAKANJUOLA	0014	222134	Business Subscriber (Single)	0	200.00	10000.00
05/24/01	HENRY STONE	0015	222135	Business Subscriber (Single)	0	200.00	10000.00
05/22/01	TOMPSON JERRY	0021	222341	Business Subscriber (Group)	4	800.00	10000.00
05/23/01	JOHN LUKKY K.	0022	222342	Business Subscriber (Group)	3	600.00	15000.00
05/25/01	LUNDY EMEKA	0023	222343	Business Subscriber (Group)	4	800.00	15000.00
05/25/01	MATTHEW JONA	0024	222344	Business Subscriber (Group)	3	600.00	10000.00
05/26/01	OZOEMELAM N. L	0025	222345	Business Subscriber (Group)	4	800.00	15000.00

APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

INTERNATIONAL CALL DETAILS REPORT

05/27/01

CODE: 066

DATE	NAME	ACCOUNT NUMBER	TELEPHONE NUMBER	LOCATION	ACCESS CHARGE	SUBSCRIPTION TYPE	INTERNATIONAL CALL
05/22/01	ADEBAYO JOHNSON	0001	222111	MINNA	100.00	Private Subscriber	500.00
05/23/01	JEREMIAH STONE	0002	222112	MINNA	100.00	Private Subscriber	500.00
05/24/01	CHUKUDIMA EMEKA	0003	222113	MINNA	100.00	Private Subscriber	0.00
05/25/01	AUGUSTINE COUSON	0004	222114	MINNA	100.00	Private Subscriber	5000.00
05/26/01	AGBI BAMIDELE	0005	222115	MINNA	100.00	Private Subscriber	0.00
05/27/01	NDUBUSI LUNDY	0011	222131	MINNA	200.00	Business Subscriber (Single)	5000.00
05/22/01	ADEBAYO TOMPSON	0012	222132	MINNA	200.00	Business Subscriber (Single)	0.00
05/22/01	LAWSON MATTHEW	0013	222133	MINNA	200.00	Business Subscriber (Single)	0.00
05/23/01	JEJELOYE MAKANJUOLA	0014	222134	MINNA	200.00	Business Subscriber (Single)	0.00
05/24/01	HENRY STONE	0015	222135	MINNA	200.00	Business Subscriber (Single)	500.00
05/22/01	TOMPSON JERRY	0021	222341	MINNA	800.00	Business Subscriber (Group)	0.00
05/23/01	JOHN LUKKY K.	0022	222342	MINNA	600.00	Business Subscriber (Group)	0.00
05/25/01	LUNDY EMEKA	0023	222343	MINNA	800.00	Business Subscriber (Group)	500.00
05/25/01	MATTHEW JONA	0024	222344	MINNA	600.00	Business Subscriber (Group)	0.00
05/26/01	OZOEMELAM N. L	0025	222345	MINNA	800.00	Business Subscriber (Group)	500.00

APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

BILLS PROCESSING DETAILS REPORT

05/27/01

DATE	ACCOUNT NUMBER	OPEN AMOUNT	SUBSCRIPTION TYPE	No. OF LINES	ACCESS CHARGE	DIAL CALL	INTERNATIONAL CALL	CREDIT	DEBIT	ADJUSTMENT	PAYMENT	CURRENT CHARGE
05/22/01	0001	50000.00	Private Subscriber	0	100.00	15000.00	500.00	15000.00	0.00	Adjusted	10000.00	15600.00
05/23/01	0002	30000.00	Private Subscriber	0	100.00	10000.00	500.00	0.00	2000.00	Adjusted	2500.00	10600.00
05/24/01	0003	35000.00	Private Subscriber	0	100.00	10000.00	0.00	1000.00	0.00	Not Adjust	2000.00	10100.00
05/25/01	0004	25000.00	Private Subscriber	0	100.00	15000.00	5000.00	0.00	2500.00	Adjusted	2500.00	20100.00
05/26/01	0005	30000.00	Private Subscriber	0	100.00	2500.00	0.00	1000.00	0.00	Adjusted	2500.00	2600.00
05/27/01	0011	35000.00	Business Subscriber (Single)	0	200.00	10000.00	5000.00	0.00	5000.00	Adjusted	20000.00	15200.00
05/22/01	0012	25000.00	Business Subscriber (Single)	0	200.00	10000.00	0.00	10000.00	0.00	Adjusted	10000.00	10200.00
05/22/01	0013	15000.00	Business Subscriber (Single)	0	200.00	1500.00	0.00	0.00	2500.00	Not Adjust	1500.00	1700.00
05/23/01	0014	12000.00	Business Subscriber (Single)	0	200.00	10000.00	0.00	1000.00	0.00	Adjusted	1000.00	10200.00
05/24/01	0015	25000.00	Business Subscriber (Single)	0	200.00	10000.00	500.00	0.00	5000.00	Not Adjust	4500.00	10700.00
05/22/01	0021	25000.00	Business Subscriber (Group)	4	800.00	10000.00	0.00	15000.00	0.00	Not Adjust	1000.00	10800.00
05/23/01	0022	30000.00	Business Subscriber (Group)	3	600.00	15000.00	0.00	0.00	1000.00	Not Adjust	1500.00	15600.00
05/25/01	0023	25000.00	Business Subscriber (Group)	4	800.00	15000.00	500.00	0.00	1500.00	Adjusted	1000.00	16300.00
05/25/01	0024	25000.00	Business Subscriber (Group)	3	600.00	10000.00	0.00	1500.00	0.00	Not Adjust	1000.00	10600.00
05/26/01	0025	25000.00	Business Subscriber (Group)	4	800.00	15000.00	500.00	1000.00	0.00	Adjusted	1000.00	16300.00

APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

PAYMENT RECEIVED DETAILS REPORT

05/27/01

DATE	ACCOUNT NUMBER	NAME	DEBIT	CREDIT	ADJUSTMENT	PAYMENT
05/22/01	0001	ADEBAYO JOHNSON	0.00	15000.00	Adjusted	10000.00
05/23/01	0002	JEREMIAH STONE	2000.00	0.00	Adjusted	2500.00
05/24/01	0003	CHUKUDIMA EMEKA	0.00	1000.00	Not Adjust	2000.00
05/25/01	0004	AUGUSTINE COUSON	2500.00	0.00	Adjusted	2500.00
05/26/01	0005	AGBI BAMIDELE	0.00	1000.00	Adjusted	2500.00
05/27/01	0011	NDUBUSI LUNDY OZOEMELAM	5000.00	0.00	Adjusted	20000.00
05/22/01	0012	ADEBAYO TOMPSON	0.00	10000.00	Adjusted	10000.00
05/22/01	0013	LAWSON MATTHEW	2500.00	0.00	Not Adjust	1500.00
05/23/01	0014	JEJELOYE MAKANJUOLA	0.00	1000.00	Adjusted	1000.00
05/24/01	0015	HENRY STONE	5000.00	0.00	Not Adjust	4500.00
05/22/01	0021	TOMPSON JERRY	0.00	15000.00	Not Adjust	1000.00
05/23/01	0022	JOHN LUKKY K.	1000.00	0.00	Not Adjust	1500.00
05/25/01	0023	LUNDY EMEKA	1500.00	0.00	Adjusted	1000.00
05/25/01	0024	MATTHEW JONA	0.00	1500.00	Not Adjust	1000.00
05/26/01	0025	OZOEMELAM N. L	0.00	1000.00	Adjusted	1000.00

APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

REGISTRATION REPORT

27/05/2001

CODE: 66

DATE	NAME	ADDRESS	OCCUPATION	TELEPHONE NUMBER	ACCOUNT NUMBER	OPENING BALANCE	SUBSCRIPTION TYPE	BILL REFERENCE
22/05/2001	ADEBAYO JOHNSON	SHIRORO ROAD, TUNGA.	TRADING	222111	0001	50000.00	Private Subscriber	A0002
23/05/2001	JEREMIAH STONE	KOLAWOLE STRT. OFF	TEACHING	222112	0002	30000.00	Private Subscriber	A0003
23/05/2001	CHUKUDIMA EMEKA	EBITU UKWUWE ROAD,	ELECTRICIAN	222113	0003	35000.00	Private Subscriber	A0004
25/05/2001	AUGUSTINE COUSON	OPP. F.U.T BOSSO,	TRADING	222114	0004	25000.00	Private Subscriber	A0005
26/05/2001	AGBI BAMIDELE	KOLAPO ROAD,MINNA.	SURVEYOR	222115	0005	30000.00	Private Subscriber	A0006
27/05/2001	NDUBUSI LUNDY	NIGER MOTEL, SANGO.	ACCOUNTANT	222131	0011	35000.00	Business Subscriber (Single)	A0007
22/05/2001	ADEBAYO TOMPSON	KOLAWOLE STRT,MINNA	TEACHING	222132	0012	25000.00	Business Subscriber (Single)	A0008
22/05/2001	LAWSON MATTHEW	AHMADU BAHAGO,	LAWYER	222133	0013	15000.00	Business Subscriber (Single)	A0001
23/05/2001	JEJELOYE MAKANJUOLA	MYPA JUNCTION, BOSSO.	CIVIL SERVANT	222134	0014	12000.00	Business Subscriber (Single)	A0009
24/05/2001	HENRY STONE	PAIKO ROAD, MINNA.	TRADING	222135	0015	25000.00	Business Subscriber (Single)	B0001
22/05/2001	TOMPSON JERRY	TOP MEDICAL ROAD,	DRIVING	222341	0021	25000.00	Business Subscriber (Group)	B0002
23/05/2001	JOHN LUKKY K.	EBI UKWIWE ROAD,	TRADING	222342	0022	30000.00	Business Subscriber (Group)	B0003
24/05/2001	LUNDY EMEKA	LAGOS STRT. MINNA.	LAWYER	222343	0023	25000.00	Business Subscriber (Group)	B0004
25/05/2001	MATTHEW IONA	OFF BAY CLINIC, TUNGA	TRADING	222344	0024	25000.00	Business Subscriber (Group)	B0005
26/05/2001	OZOEMELAM N. L	QUEENS PALACE,	LAWYER	222345	0025	25000.00	Business Subscriber (Group)	B0006

4.6 INSTALLATION STEPS

This is the process of transferring the developed software from the floppy disk to a permanent storage device called the hard disk. Developed software from the floppy disk to a permanent storage device called the Hard disk.

However, due to vast improvement in recent operating systems, the installation of the software is a very simple operation.

The procedure as follows:

STEPS	PROCEDURE	RESULT
1. Go to start	Click	Start popup menu is displayed.
2. Run submenu	Click	Run dialog box displayed.
3. Insert NITEL SOFTWARE diskette into A:\	-	-
4. Type the source drive (A:\)	Browse	Content of A:\ displayed.
5. Select set-up	Double – click	Installation begins.
6. Follow the instruction that follows.	Click	Installation in progress.
7. Destination.	-	Software installed C:\ successfully.

BRINGING THE SOFTWARE FROM C:\ TO WINDOW PROGRAM SUBMENU

STEPS	PROCEDURE	RESULT
1. Go to start	Click	Start popup menu displayed
2.Setting submenu	Click	-
3. Choose taskbar and start menu	Click	Taskbar dialog box displayed
4. Select start menu program	Click	-
5. Browse to select NITEL software	Double click	-
6. Select folder (program)	Click	
7. Destination	Click	NITEL software copied into program submenu.

4.7 SYSTEM CONVERSION

System conversion is a vital activity and it requires careful handling of data, one of the means of system conversion is changeover.

Conversion, involves conversion of old data files into the form required by the new system. The changeover from the old to the new system may take place when:

1. The system has been to the satisfaction of the system analyst and other implementation activities have been completed.
2. Users, Manager are satisfied with the results of the system test, staff training and reference manuals.
3. The target data for changeover is due. The changeover may be in a number of ways. The most common methods are, direct, parallel running and staged changeover.

1. **PARALLEL OPERATION METHOD**: Here the new system is used along with old one, which is gradually phased out.
2. **DIRECT CHANGE OVER**: This is the total replacement of an old system by the new one at once.
3. **PILOT APPROACH**: A working version of the system is implemented in one part of the organization, changes are made based on feedback and the new system is then installed in the rest part of the organization.
4. **PHASE - IN METHOD**: This is a gradual process of changing from old to new. The new system is used in a section of the organization in parallel with the old, until it becomes effective on its own. Then the same thing is done in another section. This is repeated in all the sections until the entire organization is covered.

The parallel running method is most appropriate for the system developed for bill production and credit control.

PARRALLEL RUNNING

This means processing current data by both the old and the new system to check the results. The main advantage lies in the fact that, it allows for the old system to be kept alive and operational until the new system has been proved for at least one system cycle, using full live data in the real operational environment by place, people, equipment and time. It allows the result of the new system to be compared with the old system before acceptance by the user, thereby promoting user confidence.

However, have the disadvantages of extra cost, difficulty and (sometimes) the impracticability of user staff, having to carry out the different clerical operations for two systems (old and new) on the time available for one.

Meanwhile, parallel running (changeover) procedure is recommended for the new system.

4.8 SUMMARY

Chapter four discussed about the implementation of software. This involves diagrammatic representation and sequence of instructions. This is written using a specific language specifically Visual FoxPro. 6. The program interface was

Captured which includes: billing registration input form and billing processing input form.

The output/ results produced were also included in this chapter. These include:

- International call details report,
- Dial (consumption) details report,
- Payment received details report,
- Registration/new subscriber report,
- Bill processing details report.

Meanwhile, the steps taken in installing or transferring the software from the source diskettes into the hard disk, where it will be used, hence the source diskette becomes backup, which is fully explained.

The changeover procedure is suitable for the organization to be used specifically, parallel running recommended and fully explained.

In conclusion, this chapter as a whole concentrates on the software implementation.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY / CONCLUSION

An attempt to study, investigate and apply computer to credit control system in NITEL (Nigerian Telecommunications Limited), Minna, cannot be complete without first introducing the credit control, and a briefing of the history, Organisational structure, services offered, relevance, scope and all limitations.

NITEL (Nigerian Telecommunications Limited) is a service parastatal that operates credit system of sales, that is, services are rendered prior to receipt of cash. The parastatal operates a –six tier zonal and 39 territorial administration that offers more than 23 telecommunication services.

The general objective of this project is to develop a better method of keeping and managing credit system in NITEL, by using computer.
The result of the feasibility study clearly shows that the authority can accept the new system. It is also indicated that there are a lot of benefits to be derived from the new system.

Among these benefits are:

1. Effective and efficient record keeping and the production of reports to the management,
2. Reduction in the fraudulent practices,
3. Fast and accurate means of processing credit data; and

4. Easy update of records.

Accounts receivable or credit sales are extremely important investment of a business. They therefore, require careful analysis and effective control, through the use of suitable computer software program, which affords precise production of customer bills, distribution and control of accounts balances within approved limits. This can only be possible and meaningful through the generation of relevant reports which aid management decision.

In chapter three, bill production was thoroughly analysed. Analogue and digital meters are used to transmit data in the production of the bill. Moreover, the roles of credit control in bill distribution includes:

1. Sorting and collection of bills to their various categories,
2. To dispatch bill, using various methods,
3. The bill settlement is normally through designated banks.

A breakdown showing analysis of how the proposed system is designed, include the input design, which is the database used.

Chapter four discussed the implementation of software, which involves diagrammatic representation and sequence of instructions. This is written, using a specific language, Visual Fox pro 6.0. The program interface captured, include billing registration input form and billing processing input form.

The output/results produced were also included in this chapter. These include:

- International call details report,
- Dial (consumption) details report,
- Payment received details report,
- Registration/new subscriber report,
- Bill processing details report.

Meanwhile, the steps taken in installing or transferring the software from the source diskettes into the hard disk go a long way in facilitating installation of program. The changeover procedure, using parallel running, vis-vis its advantages over other methods is the high point of this work.

Finally, although the design and testing of new system were done on Casper personal computer, while the programming environment is FOXPRO 6.0 FOR WINDOWS, the usher's program developed for new system will work in any other Database Management System- Programming environment.

The result of the feasibility clearly shows that the new system can be accepted by the authority. It also indicated that there are a lot of benefits to be desired from the new system.

Among these benefits are:

1. Effective and efficient record keeping and production of reports to the management,
2. Reduction in the fraudulent practices,
3. Fast and accurate means of processing of credit data,
4. Easy update of records.

5.2 RECOMMENDATIONS

Considering the numerous advantages that will be desired from the computerization of credit control system in NITEL (Nigerian Telecommunication Limited) Minna, the following suggestions are hereby recommended.

1 Computer Scientist should head the section.

2. Encourage staff of the department to undergo training in computer, particularly those that might be directly concerned with the management of credit control system.

3. That the NITEL (Nigerian Telecommunications Limited) Minna should endeavour to setup a computer section within the credit control department, that will take care of bill documents and any other job which can be performed.

REFERENCES

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2. Douglas A. Potter; (1978) Automated Accounting System and procedures Handbook.
3 Welsch and short; (`1988) fundamentals of financial Accounting.
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5. Olusoji O. Ogun, (1997) "Credit Control System" Operation Guideline and procedure Of Nitel, Vol. 18.
6. Osezua G.I. (1994) "Nitel Customer Service Centre" Manual Prepared For Nitel, Staff.
7. Roberth H. Ellissner, (1993/94) "Introducing Computer Concepts, System And Application" Edward Arnord, London.

APPENDIX A

```
**********************
*Menu Section
**********************
SET DEVICE TO SCREEN
SET SYSMENU OFF
CLOSE ALL
SET SAFETY OFF
SET EXCLUSIVE ON
SET DATE TO brit
SET CENTURY ON
SET STATUS OFF
SET TALK OFF
SET PATH TO \sule
*publ xtran,mdate,yr
*store 0 to xtran,mdate,yr
do form frmlogin

_SCREEN.ICON = "pc04.ico"
_SCREEN.CAPTION = "APPLICATION OF COMPUTER TO CREDIT CONTROL
SYSTEM IN NITEL LIMITED, MINNA."
_SCREEN.PICTURE = "wizflax.bmp"

sele 1
use tprocess exclusive again

sele 2
use tregister exclusive again

m = 0
do form ffirst

sele 1
do mainmenu.mpr
read events
return

**************************************************
*-- Form:        form1 (c:\nitel\fprocess.scx)
*-- ParentClass:  form
*-- BaseClass:    form
*
DEFINE CLASS form1 AS form


        Top = -2
        Left = 15
```

```
Height = 343
Width = 547
DoCreate = .T.
Caption = "BILLING PROCESSING FORM"
ControlBox = .F.
WindowState = 0
BackColor = RGB(172,199,202)
Name = "Form1"


ADD OBJECT shape1 AS shape WITH ;
        Top = 197, ;
        Left = 9, ;
        Height = 80, ;
        Width = 289, ;
        Name = "Shape1"

ADD OBJECT txtdate AS textbox WITH ;
        Comment = "", ;
        ControlSource = "m.date", ;
        Format = "E", ;
        Height = 23, ;
        Left = 324, ;
        TabIndex = 2, ;
        Top = 27, ;
        Width = 105, ;
        Name = "txtDate"

ADD OBJECT lbldate AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "DATE", ;
        Left = 285, ;
        Top = 31, ;
        Width = 28, ;
        TabIndex = 30, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblDate"


ADD OBJECT txtcode AS textbox WITH ;
        Comment = "", ;
```

```
        Value = "", ;
        ControlSource = "m.code", ;
        Format = "!", ;
        Height = 23, ;
        InputMask = "", ;
        Left = 480, ;
        TabIndex = 3, ;
        Top = 27, ;
        Width = 55, ;
        Name = "txtCode"


ADD OBJECT lblcurrent_char AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "CURRENT CHARGE", ;
        Height = 16, ;
        Left = 304, ;
        Top = 221, ;
        Width = 98, ;
        TabIndex = 48, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblCurrent_char"


ADD OBJECT txtcredit AS textbox WITH ;
        Comment = "", ;
        Alignment = 3, ;
        Value = 0, ;
        ControlSource = "m.credit", ;
        Format = "9,999,999,999.99", ;
        Height = 23, ;
        HideSelection = .F., ;
        InputMask = "", ;
        Left = 24, ;
        TabIndex = 15, ;
        Top = 223, ;
        Width = 111, ;
        Name = "txtCredit"


ADD OBJECT lblcredit AS label WITH ;
```

```
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "CREDIT AMOUNT", ;
        Height = 16, ;
        Left = 34, ;
        Top = 210, ;
        Width = 91, ;
        TabIndex = 49, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblCredit"


ADD OBJECT txtdebit AS textbox WITH ;
        Comment = "", ;
        Alignment = 3, ;
        Value = 0, ;
        ControlSource = "m.debit", ;
        Format = "9,999,999,999.99", ;
        Height = 23, ;
        InputMask = "", ;
        Left = 168, ;
        TabIndex = 16, ;
        Top = 223, ;
        Width = 111, ;
        Name = "txtDebit"


ADD OBJECT lbldebit AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "DEBIT AMOUNT", ;
        Height = 16, ;
        Left = 181, ;
        Top = 210, ;
        Width = 84, ;
        TabIndex = 50, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblDebit"
```

```
ADD OBJECT txtvat AS textbox WITH ;
        Comment = "", ;
        Alignment = 3, ;
        Value = 0, ;
        ControlSource = "m.vat", ;
        Enabled = .F., ;
        Format = "9,999,999,999.99", ;
        Height = 23, ;
        InputMask = "", ;
        Left = 384, ;
        TabIndex = 19, ;
        Top = 240, ;
        Width = 119, ;
        Name = "txtVat"


ADD OBJECT lblvat AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "VAT", ;
        Left = 304, ;
        Top = 242, ;
        Width = 21, ;
        TabIndex = 52, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblVat"


ADD OBJECT txttot_current_char AS textbox WITH ;
        Comment = "", ;
        Alignment = 3, ;
        Value = 0, ;
        ControlSource = "m.tot_current_char", ;
        Enabled = .F., ;
        Format = "9,999,999,999.99", ;
        Height = 23, ;
        InputMask = "", ;
        Left = 170, ;
        TabIndex = 20, ;
        Top = 279, ;
```

```
        Width = 128, ;
        Name = "txtTot_current_char"


    ADD OBJECT lbltot_current_char AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "TOTAL CURRENT CHARGE", ;
        Height = 16, ;
        Left = 14, ;
        Top = 284, ;
        Width = 140, ;
        TabIndex = 53, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblTot_current_char"


]ADD OBJECT txtamt_due AS textbox WITH ;
        Comment = "", ;
        Alignment = 3, ;
        Value = 0, ;
        ControlSource = "m.amt_due", ;
        Enabled = .F., ;
        Format = "9,999,999,999.99", ;
        Height = 23, ;
        InputMask = "", ;
        Left = 384, ;
        TabIndex = 21, ;
        Top = 264, ;
        Width = 119, ;
        Name = "txtAmt_due"


ADD OBJECT lblamt_due AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "AMOUNT DUE", ;
        Height = 16, ;
```

```
        Left = 304, ;
        Top = 268, ;
        Width = 70, ;
        TabIndex = 54, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblAmt_due"


ADD OBJECT txttellno AS textbox WITH ;
        Comment = "", ;
        ControlSource = "m.tellno", ;
        Format = "!", ;
        Height = 23, ;
        Left = 137, ;
        MaxLength = 12, ;
        TabIndex = 7, ;
        Top = 97, ;
        Width = 119, ;
        Name = "txtTellno"


ADD OBJECT lbltellno AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "TELEPHONE NUMBER", ;
        Height = 16, ;
        Left = 12, ;
        Top = 101, ;
        Width = 112, ;
        TabIndex = 55, ;
        ForeColor = RGB(128,0,64), ;
        Name = "lblTellno"


ADD OBJECT label1 AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "ANY ADJUSTMENT?", ;
```

```
        Height = 16, ;
        Left = 12, ;
        Top = 197, ;
        Width = 105, ;
        TabIndex = 44, ;
        ForeColor = RGB(128,0,64), ;
        Name = "Label1"


ADD OBJECT label2 AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "If Yes, Enter the amount.", ;
        Height = 16, ;
        Left = 121, ;
        Top = 197, ;
        Width = 175, ;
        TabIndex = 45, ;
        ForeColor = RGB(128,0,64), ;
        Name = "Label2"


ADD OBJECT container2 AS container WITH ;
        Top = 309, ;
        Left = 30, ;
        Width = 487, ;
        Height = 30, ;
        TabIndex = 51, ;
        ForeColor = RGB(134,134,121), ;
        BackColor = RGB(196,156,142), ;
        Name = "Container2"


ADD OBJECT cmdfirst AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 234, ;
        Height = 21, ;
        Width = 52, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
```

```
        ENDIF
        IF !BOF()
                GO TOP
                SCATTER MEMVAR MEMO
                THIS.ENABLED = .F.
        ELSE
                MESSAGEBOX("This is the First Record", "Warning")
        ENDIF
                THISFORM.REFRESH
                THISFORM.cmdlast.ENABLED = .T.
ENDPROC


PROCEDURE cmdclose.Click
        THISFORM.RELEASE
ENDPROC


PROCEDURE cmdprevious.Click
        IF USED("tprocess")
                SELE tprocess
        ELSE
                SELE 0
                USE tprocess
        ENDIF
        IF NOT BOF()
                SKIP -1
                SCATTER MEMVAR MEMO
                THISFORM.REFRESH
                ThisForm.cmdlast.ENABLED = .T.
        ELSE
                ThisForm.cmdfirst.ENABLED = .F.
                MESSAGEBOX("This is the First Record",0 + 64, "Warning")
                THIS.ENABLED = .F.
        ENDIF
        THISFORM.cmdnext.ENABLED = .T.
ENDPROC


PROCEDURE cmdlast.Click
        IF USED("tprocess")
                SELE tprocess
        ELSE
                SELE 0
                USE tprocess
        ENDIF
```

```
        Caption = "NO. OF LINES", ;
        Height = 16, ;
        Left = 337, ;
        Top = 128, ;
        Width = 84, ;
        TabIndex = 41, ;
        ForeColor = RGB(128,0,64), ;
        Name = "Label3"


    ADD OBJECT label5 AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Lucida Calligraphy", ;
        FontSize = 12, ;
        FontUnderline = .T., ;
        WordWrap = .T., ;
        BackStyle = 0, ;
        Caption = "BILLING PROCESSING FORM", ;
        Height = 25, ;
        Left = 136, ;
        Top = 1, ;
        Width = 284, ;
        TabIndex = 33, ;
        ForeColor = RGB(0,0,160), ;
        Name = "Label5"


    PROCEDURE txtpayment.LostFocus
        thisform.txtCurrent_char.value = thisform.txtAccess_char.value +
thisform.txtConsup.value + thisform.txtInt_call.value
        thisform.txtvat.value = thisform.txtcurrent_char.value * 0.05
        thisform.txtTot_current_char.value = thisform.txtcurrent_char.value +
thisform.txtvat.value
        thisform.txtAmt_due.value = thisform.txtOpen_amt.value +
thisform.txtTot_current_char.value - thisform.txtCredit.value + thisform.txtDebit.value -
This.value
    ENDPROC


    PROCEDURE cmdfirst.Click
        IF USED("tprocess")
            SELE tprocess
        ELSE
            SELE 0
            ,USE tprocess
```

```
        Top = 122, ;
        Width = 52, ;
        Name = "txtLines"


ADD OBJECT opgadjust AS optiongroup WITH ;
        ButtonCount = 2, ;
        Comment = "", ;
        Value = 1, ;
        ControlSource = "m.adjust", ;
        Height = 26, ;
        Left = 62, ;
        Top = 248, ;
        Width = 192, ;
        TabIndex = 56, ;
        Name = "opgAdjust", ;
        Option1.FontBold = .T., ;
        Option1.FontName = "Courier New", ;
        Option1.FontSize = 8, ;
        Option1.Caption = "Adjusted", ;
        Option1.Value = 1, ;
        Option1.Height = 17, ;
        Option1.Left = 2, ;
        Option1.Top = 5, ;
        Option1.Width = 77, ;
        Option1.ForeColor = RGB(128,0,64), ;
        Option1.Name = "Option1", ;
        Option2.FontBold = .T., ;
        Option2.FontName = "Courier New", ;
        Option2.FontSize = 8, ;
        Option2.Caption = "Not Adjusted", ;
        Option2.Height = 21, ;
        Option2.Left = 81, ;
        Option2.Top = 4, ;
        Option2.Width = 106, ;
        Option2.ForeColor = RGB(128,0,64), ;
        Option2.Name = "Option2"


ADD OBJECT label3 AS label WITH ;
        AutoSize = .T., ;
        FontBold = .T., ;
        FontName = "Courier New", ;
        FontSize = 8, ;
        WordWrap = .T., ;
        BackStyle = 0, ;
```

```
ADD OBJECT txtcurrent_char AS textbox WITH ;
        Comment = "", ;
        Alignment = 3, ;
        Value = 0, ;
        ControlSource = "m.current_char", ;
        Enabled = .F., ;
        Format = "9,999,999,999.99", ;
        Height = 23, ;
        HideSelection = .F., ;
        InputMask = "", ;
        Left = 415, ;
        TabIndex = 18, ;
        Top = 216, ;
        Width = 111, ;
        Name = "txtCurrent_char"


ADD OBJECT cbostype AS combobox WITH ;
        Comment = "", ;
        ColumnCount = 0, ;
        ColumnWidths = "", ;
        RowSourceType = 1, ;
        RowSource = "Private Subscriber,Business Subscriber (Single),Business
Subscriber (Group)", ;
        ControlSource = "m.stype", ;
        FirstElement = 1, ;
        Height = 24, ;
        Left = 136, ;
        NumberOfElements = 0, ;
        TabIndex = 9, ;
        Top = 120, ;
        Width = 188, ;
        Format = "", ;
        Name = "cboStype"


ADD OBJECT txtlines AS textbox WITH ;
        Comment = "", ;
        ControlSource = "M.lines", ;
        Enabled = .F., ;
        Format = "9999", ;
        Height = 23, ;
        Left = 431, ;
        TabIndex = 10, ;
```

```
        FontBold = .T., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        Caption = "\<Add New", ;
        TabIndex = 22, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdaddnew"


ADD OBJECT cmddelete AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 171, ;
        Height = 21, ;
        Width = 62, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        FontUnderline = .F., ;
        Caption = "\<Delete", ;
        TabIndex = 24, ;
        SpecialEffect = 0, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmddelete"


ADD OBJECT cmdmodify AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 111, ;
        Height = 21, ;
        Width = 59, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        FontUnderline = .F., ;
        Caption = "\<Modify", ;
        TabIndex = 23, ;
        SpecialEffect = 0, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdmodify"
```

```
ADD OBJECT cmdlast AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 411, ;
        Height = 21, ;
        Width = 50, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        FontUnderline = .F., ;
        Caption = "\<Last", ;
        TabIndex = 28, ;
        SpecialEffect = 0, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdlast"


ADD OBJECT cmdnext AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 287, ;
        Height = 21, ;
        Width = 53, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        FontUnderline = .F., ;
        Caption = "\<Next", ;
        TabIndex = 26, ;
        SpecialEffect = 0, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdnext"


ADD OBJECT cmdaddnew AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 36, ;
        Height = 21, ;
        Width = 74, ;
```

```
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdfirst"


ADD OBJECT cmdclose AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 462, ;
        Height = 21, ;
        Width = 49, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        FontUnderline = .F., ;
        Caption = "\<Close", ;
        TabIndex = 29, ;
        SpecialEffect = 0, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdclose"


ADD OBJECT cmdprevious AS commandbutton WITH ;
        AutoSize = .F., ;
        Top = 313, ;
        Left = 341, ;
        Height = 21, ;
        Width = 69, ;
        FontBold = .T., ;
        FontItalic = .F., ;
        FontName = "Times New Roman", ;
        FontSize = 11, ;
        FontUnderline = .F., ;
        Caption = "\<Previous", ;
        TabIndex = 27, ;
        SpecialEffect = 0, ;
        ForeColor = RGB(0,0,160), ;
        DisabledForeColor = RGB(128,128,128), ;
        Name = "cmdprevious"
```

```
                THIS.ENABLED = .T.
                THISFORM.cmdclose.ENABLED = .T.
                THISFORM.REFRESH
                THIS.CAPTION = "\<Save"
        ELSE
                THISFORM.SETALL("Readonly",.T.,"Textbox")
                THISFORM.SETALL("Readonly",.T.,"combobox")
                THISFORM.SETALL("Readonly",.T.,"editbox")
                THISFORM.SETALL("enabled",.T.,"commandbutton")

                IF USED("tprocess")
                        SELE tprocess
                ELSE
                        SELE 0
                        USE tprocess
                ENDIF

                GO TOP
                LOCATE FOR acctno = m.acctno
                IF FOUND()
                        MESSAGEBOX("This Record Already Exists!",
"Warning.")
                        THISFORM.REFRESH
                ELSE
                        INSERT INTO tprocess FROM MEMVAR
                        THISFORM.REFRESH
                ENDIF
                THIS.CAPTION = "\<Add New"
        ENDIF
ENDPROC


PROCEDURE cmddelete.Click
        *IF USED("tprocess")
        *       SELE tprocess
        *ELSE
                *SELE 1
                USE tprocess EXCLUSIVE
        *ENDIF
        store 0 to ans
```

```
            IF !EOF()
                SKIP
            ELSE
                SKIP -1
            ENDIF
        ENDIF
        THISFORM.REFRESH
ENDPROC


PROCEDURE cmdmodify.Click
        THISFORM.SETALL("Readonly",.F.,"Textbox")
        THISFORM.SETALL("Readonly",.F.,"combobox")
        THISFORM.SETALL("Readonly",.F.,"EDITbox")


        IF USED("tprocess")
            SELE tprocess
        ELSE
            SELE 0
            USE tprocess
        ENDIF
        IF THIS.CAPTION = "\<Modify"
            THIS.CAPTION = "\<Save"
            THISFORM.SETALL("Readonly",.F.,"Textbox")
            THISFORM.SETALL("enabled",.F.,"commandbutton")
            THIS.ENABLED = .T.
            THISFORM.cmdclose.ENABLED = .T.
        ELSE
            GATHER MEMVAR MEMO
            THIS.CAPTION = "\<Modify"
            THISFORM.SETALL("Readonly",.T.,"combobox")
            THISFORM.SETALL("Readonly",.T.,"EDITbox")
            THISFORM.SETALL("Readonly",.T.,"Textbox")
            THISFORM.SETALL("enabled",.T.,"commandbutton")
            THISFORM.REFRESH
        ENDIF
ENDPROC


PROCEDURE cbostype.Valid
```

```
                CASE m.stype = "Business Subscriber (Group)"
                        THISFORM.txtlines.ENABLED = .T.
        ENDCASE
        THISFORM.REFRESH
ENDPROC


PROCEDURE txtlines.LostFocus
        *M.txtaccess_char.value = 200 * m.txtlines.value
        ThisForm.txtAccess_char.value = 200 * This.value
ENDPROC


ENDDEFINE
```

APPLICATION OF COMPUTER TO CREDIT CONTROL SYSTEM IN NITEL LIMITED, MINNA.

BY

NDUBUISI LUNDY OZOEMELAM

PGD/MCS/99/2000/960

POST GRADUATE DIPLOMA

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SEPTEMBER, 2001