CONSOLIDATION OF BANK MONTHLY STATUTORY RETURNS

(A Case Study of Intercity Bank Plc Minna)

BY

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A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS/STATISTICS/COMPUTER SCIENCE IN PARTIAL FULFILLMENTOF THE REQUIREMENT FOR THE AWARD OF POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE

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CERTIFICATION

We hereby certify that this project is original work of Mr. Abdulwahid Kadir. Submitted for the award of Post-Graduate Diploma in Computer Science of the Federal University of Technology, Minna.

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Project Supervisor

Date

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External Examiner

Date

DEDICATION

This work is dedicated to my fabulous wife Jummy and our Children Bola, Lola, Baba and Kola.

CHAPTER ONE

1. INTRODUCTION

Commercial Banks in view of their retail banking services are expected to open branches in more than one place. The purpose of establishing bank branches in many places is to bring banking services to the people and also to top vast savings which have hitherto being kept in the house.

The branches thus opened by the banks are expected to render monthly returns to their respective Head Office stating the position of their asset and liabilities. The return also contains profit/loss of the branches. The Head Office will consolidate all the returns received from branches in order to prepare statutory returns to Central Bank of Nigeria. Computer, which is known for its high speed, automatic nature of computation and processing of data, large storage facilities, will therefore enhance the consolidation of bank returns, which are volumous.

Today, we are in the era of Information Technology, continuos existence of any organisation depends on the volume of information generated and processed. Most organisation whether government, business or social tend to be overwhelmed by paper work, for example in a Commercial outfit, where there are various transactions such as income, operating overheads, cost of materials, Asset and Liabilities and Other related costs are posted in various accounts in the general ledger. The totality of this reflects the total worth and profitability of the company.

This information needs to be analysed for the executives to take both long and short decision, which will affect the running of the company. This implies that for any organisation to continue to exist it must process the current generated information which will aid its operation and decision to achieve the set objectives; There is an unprecedented large volume of data being generated today in any business transaction. These data which are transformed to information need to be store for easy referencing purpose hence the need for electronic computer system.

1.2 BRIEF HISTORY OF BANKING IN NIGERIA

The development of commercial banking activities in Nigeria can be divided into five stages, the free Banking era, Pre Central Bank era, Era of Banking Legislation, Era of Indigenisation and the post Okigbo's era. The first Commercial bank started in Nigeria in 1872 with the establishment of the African Banking Corporation, which was saddled with the responsibility of distributing bank of England notes for British treasury.

The Bank failed in 1892 and was taken over by Bank of British West Africa. For quite a long time banking was the monopoly of foreign banks. Following discriminating practices by the foreign banks some notable Nigerians grouped themselves together with the aim of breaking the monopoly; this resulted to the first legislation in Nigeria, which was the Banking ordinance Act in 1952 and amended in 1958 and 1962. The second phase of banking development also witness the collapse of Indigenous banking boom. Due to several bank failures

and losses to depositors the Act was finally repealed and replaced with a new banking act in 1969 with some amendment in 1970, 1972 and 1979.

In 1991 the Federal Government published Banks and other Financial Institutions Decree No. 25 which repealed and replaced the Banking Act of 1969, and its four amendments. The decree 25 is a bold step taken by government to improve the operations of the Banking services in the country. The Decree is a clear response to the yearnings of Nigeria due largely to the deregulation of the natural economy and increasing sophistication in the industry. The Decree spelt out in detail rules and regulation as to the issuance of licence, revocation of licence and close monitoring or supervision by Central Bank.

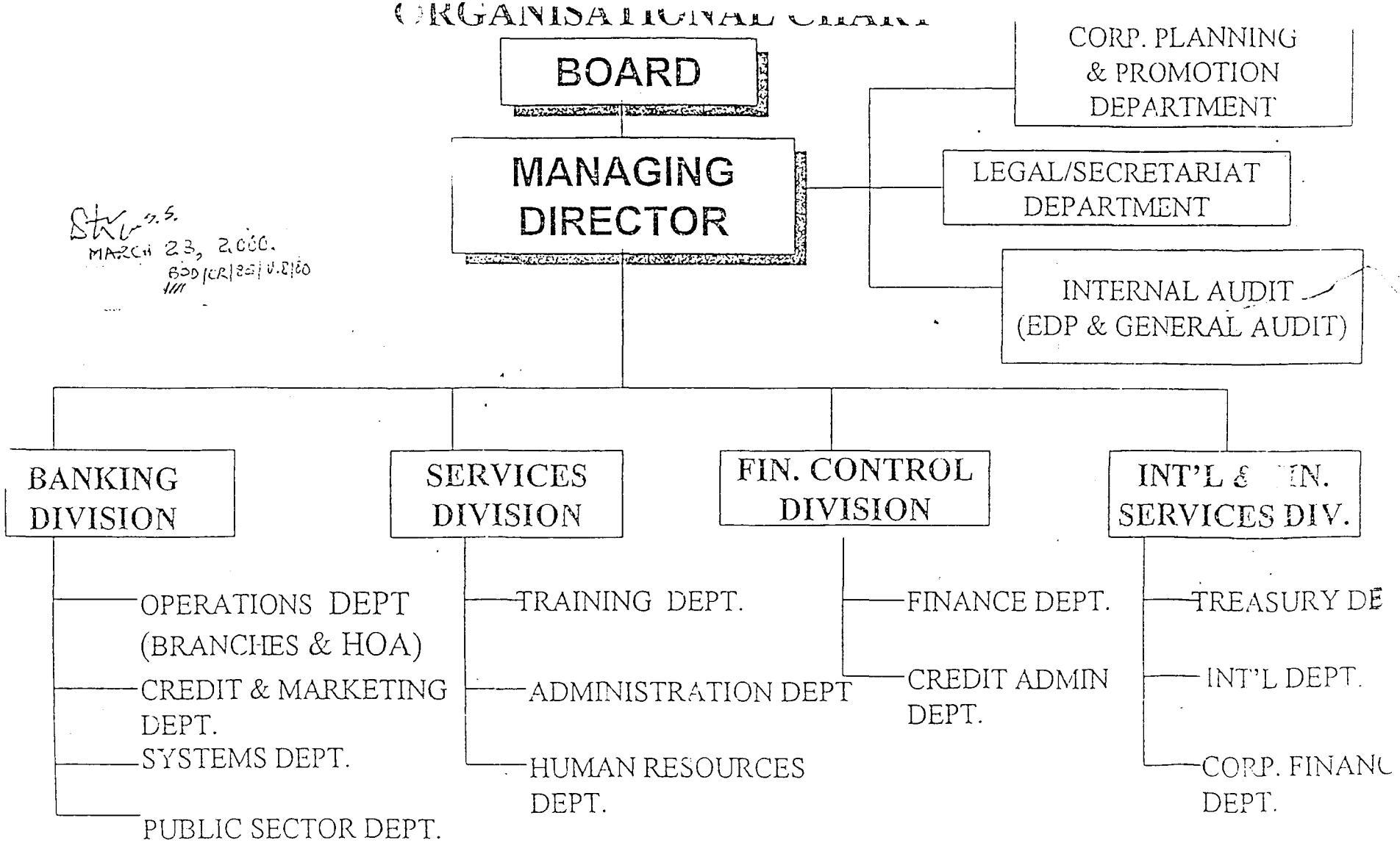
With the introduction of structural Adjustment programme, there was emergence of commercial banks due to liberation of the economy. Thus in 1987 Intercity Bank Limited was incorporated. The Bank obtained a banking licence on 28th October 1987 and commenced banking operations on 28th October 1988.

The bank signed Technical Management Agreement with first Bank of Nigeria, which was in place up till December 1990. The International Merchant Bank took over the functions of first Bank following the termination of the first agreement. The International Merchant Bank agreement subsequently expired on 3rd December 1995. The Bank at present has seven branches an agency and two Cash Centres.

1.3 ORGANOGRAM OF INTERCITY BANK PLC

See attached.

ORGANISATIONAL CHART



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1.4 OBJECTIVE OF STUDY

The purpose of this study is to explore means of computerisating the consolidation of branch returns. Returns are received from seven branches and three other departments. The objective is to use computer to:-

i) enhance the operations of the organisation

ii) to improve on the rate of performance hence rendering returns before the due dates

iii) to improve on processing procedure

iv) and to have accurate and quicker reconciliation of all transactions.

1.5 SCOPE OF THE STUDY

This study is intended to cover only the return rendition from the branches. The returns from branches are in two forms:-

i) The Balance Sheet

ii) Profit/Loss Account,

The Balance Sheet covers all aspect of assets and liabilities of the branch, which the profit/loss account, is a statement showing the income and expenditure of the branch as at the date of rendition.

All the items under both accounts have different accounts number, which shall be used, as the key field.

1.6 LIMITATION OF STUDY

Certain limitations however, have been evident in the Process of computerization in the Banking Industry. These can be broadly identified at two levels. The first is that of volatility, of computer industry, which makes equipment easily, obsolete. The second is banking statutory limitations of scope of operations in the banking industry, which makes massive investment in technology both cost ineffective and unnecessary.

However, the study is limited to only the balance sheet and profit/loss accounts, which are the bases for consolidating returns to the regulatory authorities.

1.7 METHODOLOGY

The following fact finding techniques are used for the write-ups

a) **Interviewing**: This method involves a face to face discussions with the interviewee. During the interview facts about the operations of the existing system came to light together with the opinions of the interviewee regarding weakness in the system.

b) **Observation**: Personal observation was also used in conjunction to interviewing. Being an insider, I was able to use participatory observation to detect some of the strength and weakness of existing system.

c) **Record Inspection:**

The study of Banks chart of account and other accounting system really revealed much useful information about the procedures involved in the old system.

CHAPTER TWO

2.0 INFORMATION TECHNOLOGY IN BANKING INDUSTRY

Trends in banking technology, like the emergence of banks in recent years have a consequence of the vagaries of time. Being a service industry, information and Management of it have been very crucial to the banker just as the manufacture worries about his raw materials and machinery.

In the early times of banking, most banking business were done manually for two main reasons. The first is that the volume of transaction was low due to low banking awareness and relatively low income levels.

The second resulting from the first is that the technology was not there. However, the volume of business is more relevant because whole by the middle of this century machines had effective began to share office space with man in most of Europe and America technology in banking was not really visible in Nigeria until the late 1990.s.

The above background aside, major determinants of the trend in Nigeria banking technology have been statutory do's and don'ts loopholes and sanctions by the regulatory bodies. Hence the needs for computerization by banks were more broadly welcome to provide needed improved services to customers.

To implement this part of banks profits and reserves are re-invested to acquire the Hardware and software. Due to wide branch networks (especially of Commercial Banks) most of them have Local Area Network (LAN) facilities that electronically link their branches located around the headquarters while they use the Wide Area Network (WAN) for their branches outside Lagos. Some Software

devices like electronic fund transfer and automated teller machine for automatic cast withdrawals are linked to WAN and LAN facilities that electronically link their branches located around the headquarter.

Due to the massive cheque transactions, a consequence of the pattern of banking already identified Central Bank of Nigeria, in 1983 commissioned a feasibility study for the introduction of an automated cheque processing system. This resulted in the introduction in Nigeria of the Magnetic link character Recognition (MICR) System of Clearing in 1990.

2.1 RETURNS RENDITION AND REVIEWS OF EXISTING SYSTEM

2.2 PURPOSE OF RENDERING RETURNS

Branches being an important arm of banking industry are required to render monthly/mid-month returns to its Head Office unit. It is in this respect that Section 24 of the Banks and other financial Institutions Decree No.25 of 1991, was promulgated. This section requires all banks to maintain proper books of accounts in compliance with the accounting standard for banks.

Section 25(1) of the same Decree also require banks to render returns within 28 days after the month end, and submit to Central Bank of Nigeria who are empowered with the task of supervising the affairs of the licensed banks the following data:-

a. Statement of Assets and Liabilities of the Bank; and

b. The analysis of advances and other assets at its Head Office and Branches in and outside Nigeria, in such a form as the Central Bank of Nigeria may specify from time to time.

Also Section 25(2) states that every licensed bank shall submit Such other information, documents, statistics or returns, the Central Bank may deem necessary for the proper understanding of the statements supplied under section 25(1).

Thus Section 25(2) is designed to cover requests not specifically provided for in the Decree.

Timely and accurate returns by the branches will enable the Head Office to assemble or consolidate these primary data to a secondary data that form the bankwide total assets, liabilities, income and overheads for the given period.

The banks' performances are evaluated on the overall performances of the Branches, Area Offices and Head Office Units and Not on individual branch.

2.3 USERS OF THESE RETURNS

As specified above, after receiving the branch returns and consolidating same bankwide, the financial statement produced in a presentable form is used both internally and externally.

i) **Internal Use:**

a) Board of Directors:

This group of users is those who set the corporate objective of the organisation.

It is therefore very essential for them to make use of the financial statements in setting and achieving some of their corporate goals.

b) For example without an accurate and timely financial report, they may not have a clear cut base to approve any remuneration package, setting up of additional branch; and Capital Projects as may be recommended to them by the middle management.

c) Management: This group of management has a great task taking into account high level of performances or target expected of them. They are to implement all the policies set by the board in order to achieve the corporate goal.

They therefore need the financial statements on a monthly basis to enable them compare actual to estimated target and in taking decision and formulation policies for the day-to-day running of the bank.

ii) **External Users:**

a) Central Bank of Nigeria (CBN). This is the apex bank and the supervising body. It is required by law to submit to them on or before 28th day of each month the monthly statistical record of each bank's performance for the period.

The information supplied to Central of Nigeria by banks are further analysed by their supervision and research departments with a view to determining what new strategies to adopt to enhance future performances.

In the process of supervising the affairs of the banks, defaulters are detected. The major penalty on defaulters is fine.

In addition to enhancing future performances, these statistical data are scrutinized to ensure aggregate compliance with the monetary policy guidelines. The data collected forms part of the input used in formulating the monetary policy for the next fiscal year.

iii) **Nigeria Deposit Insurance Corporation:**

Licensed banks are required to submit a copy of their monthly statutory returns to Nigeria Deposit Insurance Corporation to enable them assess the performance of banks and to detect shoddy banks and do guide against incurring liabilities. The statistical data received by them are further scrutinized and analysed to produce quarterly reports, which are distributed to banks.

iv) **External Auditor and General Public**

External Auditor audits the consolidated statements in order to form an opinion as to compliance with accounting standard and internal Controls.

v) **Qualities of Good Returns:**

The Management does not only use the banks statistical data alone there are wide ranges of those that make use of the Bank's financial statement and what they use it for. It is therefore important that good quality returns are received from branches. So that when consolidated it gives a fair position of the bank.

Good quality returns must have the following attributes:-

1. It must be relevant to the person receiving the report.
2. It must be reliable and reasonably accurate.
3. Good quality returns must avoid inaccurate information as inaccurate information can lead to wrong decision being taken.
4. It must be timely.
5. The reporting system must be in line with the laid down rules and formats.

PROBLEMS ENCOUNTERED WITH BRANCHES RETURNS AT HEAD OFFICE

There are enormous problems being encountered in Head Office. These problems are:-

2.1 **Defective And Inaccurate Returns**

Some branch's returns are received with so much inaccurate and defective figures. The fall out of this is that it becomes practically difficult or impossible to reconcile the figures with those of other branches, which results to reporting inaccurate information to the end user.

2.2 **Non-Attachement Of Required Schedules**

This is the most problematic area of the branch returns do not attach the required schedule. These schedules range from commercial loans and advances discounted, reports on and advances, breakdown of miscellaneous assets and liabilities, quarterly report on loans and advances etc., this makes it impossible for Consolidating Unit to report a true and fair statement as regards to loans and advances, and unexplainable figures for miscellaneous assets and liabilities.

2.3 **Late And Untimely Returns**:

When returns are submitted lately it create more problems to the Head Office, hence resulting to mistakes and some inaccuracy in the reports in other to beat the Central Bank of Nigeria dateline.

5.0 PENALTY FOR FAILURE TO RENDER TIMELY/FALSE OR INACCURATE RETURNS TO CENTRAL BANK OF NIGERIA

Section 25(3) of the Bank and other Financial Institutions Decree N0.24 of 1991 imposes a penalty of N5,000 (Five Thousand Naira) only per day during the Continuance of offence i.e., for late submission of the Statutory Monthly Returns, and this should be reported to the Director and Shareholders.

The supply of false information attracts fines of N50,000.00 and above during the period of the offence. While other penalty included the ban of the offending bank from participating in cheques clearing operations and foreign exchange market. The decree has been amended in order to make the signatories to the account liable for false information.

6. WAYS TO IMPROVING BRANCH RETURNS

6.1 Supervision:

For branches to render authentic and timely returns, there is need for proper supervision of subordinates, juniors, proper scrutiny of the entries before they are passed. There is need for the Superior Officer to make sure that those assigned are doing the actual job assigned to them. This will actually reduce time in adjusting and balancing at the end of the month.

6.2 Setting Target:

If targets are set for branches, say branch returns to reach Head Office on or before the 7th day of the each month, the unit concern should therefore make advance preparation by making sure that their records are in order, and prompt returns are rendered accordingly.

7. **LIST OF ITEMS REQUIRED FROM BRANCHES/AREA OFFICE**

- Computer Printout
- Schedule of Deposits showing Maturity and breakdown.
- List of Uncleared Effects
- Schedule of Miscellaneous Asset/Liabilities
- List of Sundry Creditors if any
- Quarterly Report on non Performing Credit
- Schedule of CP/BA
- Investment/Investors
- Balance Sheet
- Monthly Profit and Loss
- Trial Balance
- General Ledger
- Monthly breakdown of Loans and Advances.
- Commercial Bank Loans, Advances Discounted.
- Reports on Loans and Advances.
- Schedule of Rent & Rate
- Schedule of Placement (Due to/Due from Domestic Banks).
- Schedule of Foreign Bank Balance.

CHAPTER THREE

SYSTEM DESIGN AND DEVELOPMENT

3.1 INTRODUCTION

Computerisation requires that one looks at an organisation in a new way. Rather than concentrating on customers or services and products, the emphasis is on data, forms, information flows, procedures and so on. This approach is necessary because computers are subordinate parts of an Information System. The effect is usually productive because a better Information System, that is an automated system normally improves the organisational results.

System analysis examines what the current system is, what it does and what is wrong with it and possible solutions or remedies to correct the situation. A system is an organised method for accomplishing a business function.

The systems analysts are the specialists responsible for analysing current procedures and designing the most efficient and economical systems or procedures that will better accomplish given tasks within an organisation.

Testing Project Feasibility

The proposed project needs to be tested in order to confirm its workability. Hence in testing project feasibility we need to take into consideration the following at Operational, Technical and Economic feasibility:

a) **Operational Feasibility**

This relates or is concerned with the workability of the proposed information system when developed and installed.

The proposed consolidation of returns operational workability has been tested and would serve the purpose meant for when installed.

b) **Technical Feasibility**

This test seek to clarify if the proposed can be done with current equipment, existing software technology and available personnel with the introduction of proposed project the existing equipment and software will be used while the unable personnel will be trained as operators.

c) **Economical Feasibility**

The test for financial feasibility is undertaken to assess cost of implementing a proposed project Visa - avis the benefit derived in implementing the project. The proposed system of consolidating the project. The proposed system of consolidating bank returns shall not cost the bank any additional expenses because all existing facilities shall be use to achieve a better result.

The amount and period of training for this system will depend upon its complexity and the available skills on the ground presently.

The proposed system will be users-friendly. However, it is necessary to have an adequate and well exposed in-house training for the various personnel in the organization.

The training will cover areas like Basic computing and operation guidelines for the transfer section. This may however include other clerks and senior staff from other sections as the bank might deem fit.

This training should not exceed five weeks of rigorous practical and demonstration in the usage of the designed packages.

3.2 EXISTING SYSTEM OF CONSOLIDATING BRANCHES RETURNS

Branches returns are presently being consolidated using the spreadsheet.

When computer print out are received from the branches, the balance on each accounts of Balance Sheet and Profit/Loss are entered into the system which will add up and give a consolidate figure for each branch which will in-turn add up and give a final bank wide figure.

The existing system is workable now because the bank has few numbers of branches.

Problems Associated with Existing System

The existing system is cumbersome, and could easily give a wrong impression of an account sub-head. Posting into the Spreadsheet is done based on

account titled and in some instances wrong figures have been posted into account with similar sub-head. At the end of the posting the Balance Sheet will agree but on individual sub-head it will give wrong information.

During posting it is difficult to ascertain if for instance you want to determine if posting into the Asset side of the Balance Sheet is correct until computation of the friability side when if it does not balance it will at the end show a difference. This is because the debit and credit of all sub-head are posted separately. Although the returns sent from the branches are okay, human factor during posting has led to so may errors, which the spreadsheet will not point out

during the posting until when it is finally consolidated, a difference may be highlighted in case of wrong posting.

In view of the above, it could be seen that when a wrong figure is entered into an account Sub-head, the balance sheet will balance but a true and fair picture of the account in general is not given. This will certain lead to submitting wrong statement to Central Bank of Nigeria which could also lead to the bank been penalised.

THE NEW SYSTEM

The proposed new consolidation of bank returns will be an interactive on-line and user-friendly system that will address purely consolidation of returns. It will input, process the inputs, and produce result to user understandable form. It

shall be easy to work with, simple to operate and provide opportunity for later development like comparing budget with actual.

The proposed system will be menu-driven. It can be installed in a single user Microcomputer. The system will be user-oriented system rather than computer staff oriented system.

Trends in banking technology, like the emergence of banks in recent years have a consequence of the vagaries of time. Being a service Industry, Information and Management of it have been very crucial to the banker just as the manufacture worries about his raw materials and machinery.

In the early times of banking, most banking business were done manually for two main reasons. The first is that the volume of transaction was low-income level. The second resulting from the first is that the technology was not there. However, the volume of business is more relevant because whole by the middle of this century, machines had effectively began to share office space with man in most of Europe and America technology in banking was not really visible in Nigeria until the late 1990s.

The above background aside, major determinants of the trend in Nigeria's banking technology have been statutory do's and don'ts loopholes and sanctions by the regulatory bodies. Hence the needs for computerization by banks were more broadly welcome to provide needed improved services.

3.3 OPERATIONS OF THE PROPOSAL SYSTEM OF CONSOLIDATION

The system is designed without any restrictions hence there would be no need for password before using the system. The system will set up the necessary tables when the filename has been keyed in. The following is the order of set up.

- Data Input
- Modify Record
- Report
- Quit

When the set up is displayed you new use the arrow key to choose which of the option displayed you intend to work with.

3.2.1 DATA INPUT

This is the option which allows users to input data for consolidation. The system is designed in such a manner that consolidation is done on months that are keyed in. When data input option is chosen the first thing the computer will demand is the current processing month. This you will be required to type in the month you are working with e.g. June. When JUNE is typed in, it will now display the following information.

a) Current processing period. In the case of Intercity Bank Plc that runs a financial year of July – June, current processing period shall be 12 because June is the end of the financial year. If for instance you are processing financial returns for a Bank that user January – December as financial year June will therefore be 6.

b) The computer shall also display the calendar year in which you are processing the returns. i.e. current processing year.

c) Location Code - The Branches of the Bank have been given location code. Since the program attempts to consolidate all returns from

d) Branches, each time you are using the program you shall be required to input location code which is between 001 – 011

When location code is inputted the program will take you to anther program where you will be expected to input the account number. Before you input account number, the computer at this stage shall display on the screen Branch, period and month you are presently working on. All account title has been given number. When you key in for instance account number 101001 is keyed in. The computer shall display the title of the account and also gives you the opportunity of punching the amount where the cursor shall be blinking. Immediately the amount is punched, the user will press enter, the cursor will then move to where you will indicate if the amount is debit or credit. This you shall choose enter D.

The computer shall display instantly on line Balances both for all entries made for the account and the balance as per the branch you are processing. The program allows you to okay the data input. In this case you can choose Y if okay or N if a wrong amount has been entered.

The program shall also display the group balances. The Group balances represent the consolidation. The balance indicated on Group balance has added all posting that has been made on that amount.

At the end of all posting the program shall display the total credit for location and total debit and will also determine if difference exist and the amount of difference if any. By pressing ESC the after the location total credit/debit

program, the computer shall display the Groups Credit/debit program, the computer shall display the Groups credit/debit in order to determine if any difference exits.

MODIFICATION OF EXISTING RECORD

To modify an existing record press Y from the input point. The program will take you to the option menu where you will use the arrow key to more the cursor to Modify – Record. This will take you place to the same processing when inputting Data.

The current shall require you to indicate the month, location and account number for which modification is required. After the modification the program shall return to option menu where you can go ahead with your normal posting.

REPORT - The report menu provide the following report

- Balance Sheet
- Profit and Loss
- General

When a report is to be printed, you chose report from the option menu. This will further display all types of account from which you will choose the one to put.

Under report as earlier mentioned we have balance sheet, profit and loss and general. When you highlight Balance sheet for instance, the computer will want you to choose between the group or location. If you choose group it will

produce a consolidated amount for you; showing the total credit and total debit posted into a particular amount number you want to print. The same procedure shall be repeated if location balances are to be printed.

3.3 INPUT AND OUTPUT DESIGN

Input:

The inputs to the program are impersonal account number, which are mainly system generated.

The impersonal accounts are classified as follows.

i.	Asset Accounts	-	101001 - 110000
ii.	Liabilities Accounts	-	201001 - 211100
iii.	Interest Income & Others	-	401001 - 411000
iv.	Expenditure (Overhead)	-	501001 - 511000

Posting to the Accounts

Posting to the asset or other accounts can only be made using the appropriate code for each of the account. for example, when making posting to the assets account, which consists of various accounts, these accounts would only be debited or credited provided the appropriate code is used.

The screen layout of an empty form for creating an account for posting is as follows:

Account Number:

When you key in the account number the screen layout will be.

Period Month Year

Branch

Account Number
Amount
Trans Indicator D = Debit / C = Credit

On line Balances Data

Output

The output is the display of the result on the Screen or prints out. The end result include:-

- Actual report (Group Account)
- Actual report Location

This report shall display all the credit and debit and the corresponding balance.

General description of Program.

The program is written on Dbase IV. The program will replace the manual system of consolidation of account as highlighted in chapter two. The entries program is menu driven.

To Run the Program

The computer will be on Dbase IV before running the program, at the control centre of Dbase or Dot prompt change default to A drive.

Type modify command – KAD PGD

Then type Do KAD. PRG

Wait for few seconds the program will be loaded and present you with the option menu.

COST AND BENEFIT ANALYSIS

1. **Development cost**

a)	Systems analysis and design for 4 wks	N 60,000.00
b)	Software development	N 25,000.00
c)	LaseJet 1100A Printer (3)	N150,000.00
d)	1 Line Printer	N 45,000.00
e)	1 Personal Computer	N100,000.00
f)	Installations	N 50,000.00
g)	Miscellaneous Expenses	N 50,000.00
		N480,000.00

2. **Development cost**

Equipment Maintenance (3 months)	N 30,000.00
Program Maintenance	N 25,000.00
Labour Cost (2 Operators)	N 10,000.00
Utilities	N 25,000.00
	N 80,000.00

3. **Consumable requirements**

a)	20 packets of 1.44MB HD 3.5" Disks	N 20,000.00
b)	Disk Bank	N 25,000.00
c)	25 cartons of 11" x 14" Flowline paper	N 30,000.00
d)	25 cartons of 11" x 9.5" Flowline paper	N 20,000.00
e)	20 realms of A4 papers	N 10,000.00
		N105,000.00

4. **Benefits of the Proposed System**

a) Reduction in the use of paper (stationery)

b) Increase the productivity of staff handling the transfer operations

c) Increase speed of operations. Generating information is always with quick dispatch with computerisation

d) Elimination of many repetitive work of transfers service

e) Automatic updating of records and maintenance.

CHAPTER FOUR

4.0 PROGRAM DEVELOPMENT

4.1 INTRODUCTION

A computer operator under the control of instructions selected from its basic instruction set in order to perform a specific task. The list of instructions is known as a computer program. A program could therefore be defined as a list of instructions that enable the computer in which these instructions have been fed into to perform a specific task. A program is fed, via the key board into the CPU and its control unit, and then into the internal storage of the computer. The program is started off usually (but not always by a human operator and its continues automatically), Instruction by instruction until it finishes. At that point the program can either be executed again using perhaps a different set of data or can be replaced by another program and the sequence respected.

A computer program development involves some stages and these are discussed briefly hereunder.

i.) **Program Planning:** It is virtually impossible to write a computer program without first identifying and clearing understanding the problem.

The planning stage is concerned with the formulation of the requirement, identifying input data, the required output and the formula needed.

ii.) **Program Design:** The design stage is the most important stage and it outlines the set of rules required for the solution to the problem. It involves the listing and ordering of successive steps and activities to be undertaken to achieve the desired goals.

iii.) **Coding:** Once the steps of the solution has been observed and outlined. The next stage in the transformation of these steps into the form understandable by the computer.

iv.) **Debugging:** As you begin to code and compile your program you may discover that one or more bugs (errors) have occurred which have to be removed as they are detected. There are two kinds of errors that may occur in program logic errors and syntax errors.

v.) **Testing:** This is also referred to as program validation and the essence is to determine whether any error still remain in the program.

It is therefore the process of running the computer program and evaluating the program results in order to determine if any error exist. The testing is done by running the program with various sets of input values so as to be sure that the expected result is gotten.

vi.) **Implementation:** Once the program has been tested and found working as required the next stage is implementation. i.e applying the program to solve the problem it is meant to solve.

vii.) **Documentation:** This is the description of the program in the proper form for users and to enhance maintainability. It describes the workings of a program and how expected problem could be solved. This stage aids the user to understand the program and maintenance of such program.

4.3 DATABASE MANAGEMENT SYSTEM

The proposed system is to be operated on a **DATABASE** environment.

Data Base is a collection of pertinent data about a company with minimum duplication, serving as pool of information for many users.

The term database on its own refers to the software manages. The database, the data is governed by rules, which define its structure and determine how it can be assessed.

- Data Independence - Data could be independently achieved by insulation of application programs from the physical or logical storage of data.

  This objective seeks to allow for changes in the content and organisation of physical data without re-programming of applications and to allow modification to application program without re-organising the physical data.

- Date are Centrally Controlled – In database environments, data and operations on data are centrally controlled and this can lead to better management of data by enforcing standards for all the data base users on how information would be released.

  Specifically, it allows for proper security of data since there is only one source of data in the organisation and such standards would easily be enforced for control purposes.

Relational Approach

The relational structure of Data Base Management Systems makes it to be the most popular because of its conceptually simple and understandability by information system professionals and many other users.

A database may be designed on the basis of what is referred to as relations, which are two-dimensional table of data consisting of columns and rows. A relationship is also known as an entity or record. The columns, which must be uniquely identified by field name, are generally known as data elements, etc.

Data Modeling/Normalization

This is the process of separating items, which are independent of one another into groups for recording in different files. It is necessary to ensure that each file has a key, which uniquely identifies the object the data describes.

The relationship between field must be established, i.e relationship between fields and the other fields of an object. In some instances, a record relating to an entity may have two or more distinct group of data which should be segregated into separate stores of fields/or files.

It is based on the above database facilities that this software is developed. The detailed menu and mode of operation including other features of the system developed with database has been fully discussed in chapter three.

Hardware Requirements

i) Pentium 166 MHz

ii) Minimum 16MB Main memory

iii) 2.5 GB Hard Disk Drive

iv) 3½ floppy Disk Drive

v) 14" SVGA colour monitor

Printer

Laser Jet Printer 1100A

1. APC 600 VA Ups

2. Stavol Stabilizer 3KVA

4.4 SYSTEM IMPLEMENTATION

Implementation involves the coordination of all actives that take place in the user department to get the new system into operation. System may be entirely new, replacing an existing manval, automated or completed automated or completed automated system or a modification of the existing system.

Proper implementation is very important in order to have a reliable system that will meet the organisation's needs. To implement a new system, it is necessary to take the following factors into consideration.

4.5 CHANGE OVER PROCEDURE

This is the process of changing from the old system to the new system. This is best handled in the following ways:

1. **Paralleled System** - Here both systems is run concurrently using the same inputs and outputs compared which reasons for difference in output resolved. The output of the old system continues in circulation until the new system in place is working satisfactorily. This conversion method is the safest it gives guarantee, if there is any problem. The old system can be referred to immediately without waste of time.

   However, this method has the following disadvantages.

   a. It involves double costs because of the two systems involve

   b. User who know that they can full back to the old system especially if they preferred the old system to the new one may not give room for testing and time to mature.

2. **Direct cut over or One To One Change**

This is the direct and abrupt charge from the old to the new system, which becomes operational immediately, the change over which may be over a weekend or overnight. Lack of having a system to fall back becomes a serious disadvantage. If problem arises and this may head to stoppage of operation in the orgnisation.

3. **Pilot Scheme**

This approach is when an organisation wants to introduce an action saying a department. For example a bank may start its computerisation from one branch to another, this is the n handled by a specialized team who engage on the implementation process. If is considered completed and accurate then they move to another location. The advantage with this method is that it is considered correct before trying if on others.

4. **Phase-in-Method**

This method is used when installation of a new system is not fecible within an organisation at any one time. File conversion, training of personnel or piecemeal arrivals of equipment are the possible factors which delays the implementation of the new system in good time.

From the above highlighted change over procedure, the parallel system shall be recommended for implementation. This is due to inheriting advantage of comparing the output of the new system with the old using the same data. Errors can easily be detected and where necessary correction made before phasing out the old system.

4.6 POST IMPLEMENTATION AND SYSTEM REVIEW

Post Implementation is referred to as the renew of any system or project that has been fully implemented. It is the X-ray of the system to ascertain whether it has conformed to the kind down implementation procedures. An analyst and those who use it usually do review of a

system. The review give room for determining how will the system is working, its acceptability and to see where modification is required. Also it enables the management to know how the system will be maintained since depreciation is bound to take place.

The main focus of Post Implementation is to ascertain whether the set objectives for which it was designed have been achieved. The Analyst may ask certain questions in order to obtain or gather correct information about the system being received. These questions assist the analyst to determine the success of the system and what necessary steps to be taken in the case of lapses. The acceptability of a system by users is quite good for its success, this give confidence to the operations and they do all their best to maintain the system.

Reviews/Analyst should try to find out why a system is not acceptable and necessary corrective measure taken.

A system simple to use and yet produces good results is generally more acceptable to users than one that brings poor result.

4.7 SYSTEM EVALUATION AND MAINTENANCE

A number of approaches were used for collecting data about the new system. This interview, observation and review of existing procedure and

records. The system to be installed was surveyed and performances know through the following questions.

- What is the general feeling about the System?
- What are the possible effects of charge over?
- What is the quality of work
- How acceptable is the new system.

The answer to these questions will help to determine the importance and acceptability of the system.

TRAINING OF PERSONNEL

The success or failure of any system designed depends on its user. The type of training received by various of personnel assist or prevent the successful implementation of any system.

The operators of the system details of that roles and have the skills on how to operate the system. Training is quite good for the operators and the user. The training system for operators must ensure that, they are able to handle possible operations as and when required.

In a situation where the installations of machines are required such as a new computer, terminals etc, the training should take into consideration the handling of the machine and how to use electrical terminal. The operator should know likely areas of problem and where to seek assistance.

The training should be comprehensive enough to provide a good understanding of all the operational techniques of the system.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Computerisation in any organization is carried out with the hope of eliminating or reducing to certain minimum level the application or use of manual method in carrying out its activities.

It is also done with the sole aim of improving the speed, accuracy and efficiency in collection, manipulation, storage, reporting and dissemination of data.

Total computerization of the entire bank services should be vigorously pursued and achieved at the shortest time possible. Indeed, with automation reports can be generated in good time, thus enabling the bank staff, particularly the management, to take quick decision over its financial obligations.

RECOMMENDATION

Based on this fact, a fully computerized design for the bank's services particularly in the focus area of this project work is highly recommended. The benefits to be accrued from such venture and investments include:

a) Avoiding to a greater extent the problems associated with the existing system.

b) Increase in the processing speed of all transfers services.

c) Generation of useful reports will be enhanced and at a reasonable time.

d) High integrity of data and information generated.

e) Confidence, security is maintained over customer and bank data and information.

f) Time spent on processing request is reduced.

In conclusion, a well-planned approach to system maintenance and follow-up is essential to the continued effectiveness of an Information System.

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10:19:46 am

CONSOLIDATION ENRTIES(ACTUAL BALANCE)-ADD

CURRENT PROCESSING MONTH : MARCH

CURRENT PROCESSING PERIOD: 9

CURRENT PROCESSING YEAR 2000

LOCATION CODE : 02

10:22:40 am

CONSOLIDATION ENRTIES(ACTUAL BALANCE)-ADD

CURRENT PROCESSING MONTH : MARCH

CURRENT PROCESSING PERIOD: 9

CURRENT PROCESSING YEAR 2000

LOCATION CODE : 02

ACTUAL REPORT -BALANCE(LOCATION) 10:33:33 am

ANCH NAME: HEAD OFFICE OPERATIONS, MINNA

ANCH CODE: 001

BITS: -2000.00

EDITS: 1000.00

LANCE: -1000.00

S ANY KEY TO CONYINUE

ACTUAL REPORT -PROFIT/LOSS ACCOUNTS(LOCATION10:34:21 a

BRANCH NAME: HEAD OFFICE OPERATIONS, MINNA

BRANCH CODE: 001

INCOME: 1000.00

EXPENDITURE: 1000.00

BALANCE: 0.00

PRESS ANY KEY TO CONYINUE

```
*THE MAIN PROGRAM
SET STATUS OFF
SET ESCAPE OFF
SET TALK OFF
SET SCOREBOARD OFF
SET ECHO OFF
SET BELL  OFF
SET DATE TO BRIT
CLOSE ALL
DO INTRO
CLEAR
DO WHILE .T.
        SET ESCAPE ON
        DO HEADER
     DO CH
ENDDO

PROCEDURE CH
SET ESCAPE ON
DEFINE MENU CHOICES;
 MESSAGE "CHOOSE A OPTION;
 Press Esc to return to main menu"
DEFINE PAD INPUTPAD OF CHOICES;
 PROMPT "===DATA INPUT===" AT 10,30
DEFINE PAD MODIFYPAD OF CHOICES;
 PROMPT "===MODIFY RECORD===" AT 14,30
DEFINE PAD REPORTPAD OF CHOICES;
 PROMPT "===REPORT===" AT 18,30
DEFINE PAD EXIT OF CHOICES;
 PROMPT "===QUIT===" AT 22,30

ON SELECTION PAD INPUTPAD OF CHOICES;
  DO ADDREC
ON SELECTION PAD MODIFYPAD OF CHOICES;
  DO MODIFYREC
ON SELECTION PAD REPORTPAD OF CHOICES;
  ACTIVATE POPUP REPORTPOP
ON SELECTION PAD EXIT OF CHOICES;
  DO CLEANUP

DEFINE POPUP REPORTPOP FROM 18,40
DEFINE BAR 1 OF REPORTPOP PROMPT "BALANCE SHEET"
DEFINE BAR 2 OF REPORTPOP PROMPT "PROFIT & LOSS "
DEFINE BAR 3 OF REPORTPOP PROMPT "GENERAL"
ON SELECTION POPUP REPORTPOP DO PROCEED

*ON SELECTION POPUP ALL DO PROCEED
ACTIVATE MENU CHOICES
RETURN

*PROCEDURE PROCEED
PROCEDURE PROCEED
DO CASE
     CASE POPUP() = "REPORTPOP"
     IF BAR() = 1
          REPORT1
```

```
      IF BAR()= 3
        DO GENERAL
      ENDIF
  ENDCASE
RETURN

*PROCEDURE DATA INPUT
PROCEDURE ADDREC
CLEAR
SELECT 1
USE BRANCH
SELECT 2
USE CAL
SELECT 1
DO WHILE .T.
 *STORE SPACE(20) TO T_DATE
 STORE SPACE(3) TO MBR_CODE
 STORE SPACE(30) TO MBR_ACC
 @3,15 TO 5,65 PANEL
 @4,20 SAY 'CONSOLIDATION ENRTIES(ACTUAL BALANCE)-ADD'
 @6,10 TO 21,70
 SELECT 2
 STORE SPACE(15) TO MCPM
 STORE 0 TO MCPP
 @8,15 SAY 'CURRENT PROCESSING MONTH  :' GET MCPM
 READ
do case
 case  MCPM = 'JANUARY '.OR. MCPM = 'january'
   MCPP = '7'
 case MCPM = 'FEBUARY '.OR. MCPM = 'febuary'
   MCPP = '8'
case MCPM = 'MARCH ' .OR. MCPM = 'march '
   MCPP = '9'
 case MCPM = 'APRIL' .OR. MCPM = 'april'
   MCPP = '10'
 case MCPM = 'MAY' .OR. MCPM = 'may'
   MCPP = '11'
 case MCPM = 'JUNE' .OR. MCPM = 'june'
   MCPP = '12'
 case MCPM = 'JULY ' .OR. MCPM = 'july'
   MCPP = '1'
 case MCPM = 'AUGUST' .OR. MCPM = 'august'
  MCPP = '2'
 case MCPM = 'SEPTEMBER' .OR. MCPM = 'september'
   MCPP = '3'
 case MCPM = 'OCTOBER ' .OR. MCPM = 'october'
   MCPP = '4'
case MCPM =  'NOVEMBER ' .OR. MCPM = 'november '
   MCPP = '5'
case MCPM = 'DECEMBER ' .OR. MCPM = 'december'
    MCPP = '6'
otherwise
    @23,10 clear
    @23,10 say 'invalid month '
    @24,10 say  'Press any key to continue '
```

```
 *REPLACE T_DATE WITH STR(MCPP,2)+UPPER(MCPM)+STR(YEAR(DATE()),4)
 @12,15 SAY 'CURRENT PROCESSING PERIOD: '
 @12,42 SAY MCPP
 @16,15 SAY 'CURRENT PROCESSING YEAR  :'
 @16,40 SAY  YEAR(DATE())
 SELECT 1
 @20,15 SAY 'LOCATION CODE          :' GET MBR_CODE
 READ
 LOCATE ALL FOR BR_CODE = MBR_CODE
 IF EOF()
  @22,0 SAY 'NO LOCATION WITH THIS CODE PLEASE...'
  WAIT ' '
  @22,0 CLEAR
  LOOP
 ENDIF
 STORE BR_NAME TO MBR_NAME
 EXIT
ENDDO
DO WHILE .T.
SELECT 2
STORE SPACE(1) TO MACC_TYPE
STORE SPACE(30) TO MACC_DES
STORE SPACE(1) TO MTRAN_ID
STORE SPACE(1) TO MSTATUS
STORE 0 TO MACC_NUM
STORE 0 TO MAMOUNT
STORE 0.00 TO MLOC_AM
STORE 0.00 TO MGR_AM
*STORE 0.00 TO
DEBITB,CREDITB,NETB,VALUEB,DEBITG,CREDITG,NETG,NETG_T,VALUEG
@6,10 CLEAR TO 21,70
@7,2 SAY 'PERIOD:'
@7,10 SAY MCPP
@7,22 SAY 'MONTH:' +UPPER(MCPM)
@7,42 SAY 'YEAR:'
@7,48 SAY YEAR(DATE())
@8,2 SAY 'BRANCH: ' +UPPER(MBR_CODE) + ' - ' + UPPER(MBR_NAME)
@9,1 TO 20,78 DOUBLE
@11,2 SAY 'ACCOUNT NUMBER:'
@11,25 GET MACC_NUM
READ
LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF EOF()
    @22,0 SAY 'ACCOUNT DOES NOT EXIST...'
    WAIT ' '
    @22,0 CLEAR
    LOOP
  ENDIF
  IF STATUS = 'D'
    @22,0 SAY 'ACCOUNT NOT ACTIVE'
    WAIT ' '
    @22,0 CLEAR
    LOOP
  ENDIF
@11,45 SAY ACC_DES
@21,35 SAY 'ON-LINE BALANCES'
@22,5 SAY 'LOCATION:-                    GROUP:-'
SEI ! ' ' 1
LO
```

```
@22,15 SAY LOC_AM PICT '999,999,999,999.99'
ENDIF
SELECT 2
LOCATE ALL FOR MACC_NUM = ACC_NUM
IF FOUND()
@22,52 SAY GR_AM  PICT '999,999,999,999.99'
ENDIF
@13,2 SAY 'AMOUNT :'
@14,2 SAY 'TRANS. INDICATOR:'
@14,55 SAY 'D = DEBIT / C = CREDIT'
@13,25 GET MAMOUNT PICT '999,999,999,999.99'
@14,25 GET MTRAN_ID PICT '!'
READ
IF MTRAN_ID = 'D'
  SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
        REPLACE GR_AM  WITH (GR_AM - MAMOUNT)
  ENDIF
 SELECT 1
 LOCATE ALL FOR BR_CODE = MBR_CODE
 IF FOUND()
  REPLACE DEBITB WITH (DEBITB - MAMOUNT)
 ENDIF
  SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
 IF FOUND()
        REPLACE DEBITG WITH (DEBITG - MAMOUNT)
  ENDIF
 SELECT 1
 LOCATE ALL FOR BR_CODE = MBR_CODE
 IF FOUND()
  REPLACE LOC_AM WITH  (LOC_AM - MAMOUNT)
 ENDIF
ENDIF
IF MTRAN_ID = 'C'
  SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
        REPLACE GR_AM  WITH (GR_AM + MAMOUNT)
  ENDIF
  SELECT 1
  LOCATE ALL FOR BR_CODE = MBR_CODE
  IF FOUND()
   REPLACE CREDITB WITH (CREDITB + MAMOUNT)
  ENDIF
  SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
   REPLACE CREDITG WITH (CREDITG + MAMOUNT)
  ENDIF
  SELECT 1
  LOCATE ALL FOR BR_CODE = MBR_CODE
   IF FOUND()
    REPLACE LOC_AM WITH  (LOC_AM + MAMOUNT)
   ENDIF
ENDIF
```

```
DATAOK =' '
@22,0 CLEAR
@22,50 SAY 'DATA OK / (Y/N) :' GET DATAOK PICT '!'
READ
@22,0 CLEAR
IF DATAOK = 'Y'
  EXIT
ENDIF
ENDDO
**internal computation***
SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
     IF (MACC_NUM >= 101001).AND.(MACC_NUM < 201001)
          AG_SUM = AG_SUM + MAMOUNT
        ENDIF
     IF (MACC_NUM >= 201001).AND.(MACC_NUM < 301001)
        LG_SUM = LG_SUM + MAMOUNT
     ENDIF
     IF (MACC_NUM >= 401001).AND.(MACC_NUM < 501001)
       IG_SUM = IG_SUM + MAMOUNT
     ENDIF
    IF (MACC_NUM >= 501001).AND.(MACC_NUM < 510021)
        EG_SUM = EG_SUM + MAMOUNT
     ENDIF
     DIFF3 = IG_SUM - ABS(EG_SUM)
     REPLACE AG_SUM WITH (AG_SUM + MAMOUNT)
     REPLACE LG_SUM WITH (LG_SUM + MAMOUNT)
     REPLACE IG_SUM WITH (IG_SUM + MAMOUNT)
     REPLACE EG_SUM WITH (EG_SUM + MAMOUNT)
     REPLACE DIFF3 WITH IG_SUM - ABS(EG_SUM)
 ENDIF
SELECT 1
  LOCATE ALL FOR MBR_CODE = BR_CODE
 IF FOUND()
     IF (MACC_NUM >= 101001).AND.(MACC_NUM < 201001)
          AL_SUM = AL_SUM + MAMOUNT
        ENDIF
     IF (MACC_NUM >= 201001).AND.(MACC_NUM < 301001)
        LL_SUM = LL_SUM + MAMOUNT
     ENDIF
     IF (MACC_NUM >= 401001).AND.(MACC_NUM < 501001)
       IL_SUM = IL_SUM + MAMOUNT
     ENDIF
     IF (MACC_NUM >= 501001).AND.(MACC_NUM < 510021)
        EL_SUM = EL_SUM + MAMOUNT
     ENDIF
     DIFF4 = IL_SUM -ABS(EL_SUM)
     REPLACE AL_SUM WITH (AL_SUM + MAMOUNT)
     REPLACE LL_SUM WITH (LL_SUM + MAMOUNT)
     REPLACE IL_SUM WITH (IL_SUM + MAMOUNT)
     REPLACE EL_SUM WITH (EL_SUM + MAMOUNT)
     REPLACE DIFF4 WITH IL_SUM - ABS(EL_SUM)
 ENDIF
SELECT 1
LOCATE ALL FOR MBR_CODE = BR_CODE
IF FOUND()
```

```
SELECT 2
REPLACE NETG_T WITH NETG_T + NETG
LOCATE ALL FOR MACC_NUM = ACC_NUM
    IF FOUND()
        REPLACE VALUEG WITH  ABS(DEBITG)
        REPLACE NETG WITH  (CREDITG - VALUEG)
        REPLACE NETG_T WITH NETG_T + NETG
       ENDIF
SELECT 1
LOCATE ALL FOR MBR_CODE = BR_CODE
IF FOUND()
        @9,1 CLEAR TO 20,78
        @22,0 CLEAR
        @11,5 SAY 'Total Credits for Location ==>'
        @11,40 SAY creditb PICT '999,999,999,999.99'
        @12,5 SAY 'Total debits for Location ==>'
        @12,40 SAY debitb PICT '999,999,999,999.99'
        @14,5 SAY 'Difference            ==>'
        @14,40 SAY netb  PICT '999,999,999,999.99'
        @22,0 CLEAR
        IF NETB <> 0.00
         @22,0 SAY "Location's Credits not equal Debits"
     ENDIF
ENDIF
WAIT ' '
SELECT 2
LOCATE ALL FOR MACC_NUM = ACC_NUM
IF FOUND()
 @9,1 CLEAR TO 20,78
 @22,0 CLEAR
 @11,5 SAY 'Total Credits for Group ==>'
 @11,40 SAY creditg PICT '999,999,999,999.99'
 @12,5 SAY 'Total debits for Group ==>'
 @12,40 SAY debitg PICT '999,999,999,999.99'
 @14,5 SAY 'Difference            ==>'
 @14,40 SAY netg  PICT '999,999,999,999.99'
 @22,0 CLEAR
 IF NETG <> 0.00
  @22,0 SAY "Group's Credits not equal Debits"
 ENDIF
ENDIF
WAIT ' '
CLEAR
DO HEADER
RETURN

*PROCEDURE TO MODIFY ENTRY
PROCEDURE MODIFYREC
CLEAR
SELECT 1
USE BRANCH
SELECT 2
USE CAL
SELECT 1
DO WHILE .T.
 STORE SPACE(3) TO MBR_CODE
 STORE SPACE(30) TO MBR_ACC
 @3,15 TO 5,65 PANEL
 @4,20 SAY 'CONSOLIDATION ENTRIES ACTIVITY'
```

```
 SELECT 2
 STORE SPACE(15) TO MCPM
 STORE 0 TO MCPP
 @8,15 SAY 'CURRENT PROCESSING MONTH  :' GET MCPM
 READ
do case
 case  MCPM = 'JANUARY '.OR. MCPM = 'january'
   MCPP = '7'
 case MCPM = 'FEBUARY '.OR. MCPM = 'febuary'
   MCPP = '8'
 case MCPM = 'MARCH ' .OR. MCPM = 'march '
   MCPP = '9'
 case MCPM = 'APRIL' .OR. MCPM = 'april'
   MCPP = '10'
 case MCPM = 'MAY' .OR. MCPM = 'may'
   MCPP = '11'
 case MCPM = 'JUNE' .OR. MCPM = 'june'
   MCPP = '12'
 case MCPM = 'JULY ' .OR. MCPM = 'july'
   MCPP = '1'
 case MCPM = 'AUGUST' .OR. MCPM = 'august'
  MCPP = '2'
 case MCPM = 'SEPTEMBER' .OR. MCPM = 'september'
   MCPP = '3'
 case MCPM = 'OCTOBER ' .OR. MCPM = 'october'
   MCPP = '4'
case MCPM =  'NOVEMBER ' .OR. MCPM = 'november '
   MCPP = '5'
case MCPM = 'DECEMBER ' .OR. MCPM = 'december'
    MCPP = '6'
otherwise
    @23,10 clear
    @23,10 say 'invalid month '
    @24,10 say  'Press any key to continue '
    wait ' '
    clear
    return
 endcase
 @12,15 SAY 'CURRENT PROCESSING PERIOD: '
 @12,42 SAY MCPP
 @16,15 SAY 'CURRENT PROCESSING YEAR  :'
 @16,40 SAY  YEAR(DATE())
 SELECT 1
 @20,15 SAY 'LOCATION CODE          :' GET MBR_CODE
 READ
 LOCATE ALL FOR BR_CODE = MBR_CODE
 IF EOF()
   @22,0 SAY 'NO LOCATION WITH THIS CODE PLEASE...'
   WAIT ' '
   @22,0 CLEAR
   LOOP
 ENDIF
 STORE BR_NAME TO MBR_NAME
 EXIT
ENDDO
DO WHILE .T.
SELECT 2
STORE SPACE(1) TO MTRAN_ID
```

```
STORE 0.00 TO MLOC_AM
STORE 0.00 TO MGR_AM
*STORE 0.00 TO
DEBITB,CREDITB,NETB,VALUEB,DEBITG,CREDITG,NETG,NETG_T,VALUEG
@6,10 CLEAR TO 21,70
@7,2 SAY 'PERIOD:'
@7,10 SAY MCPP
@7,22 SAY 'MONTH:' +UPPER(MCPM)
@7,42 SAY 'YEAR:'
@7,48 SAY YEAR(DATE())
@8,2 SAY 'BRANCH: ' +UPPER(MBR_CODE) + ' - ' + UPPER(MBR_NAME)
@9,1 TO 20,78 DOUBLE
@11,2 SAY 'ACCOUNT NUMBER:'
@11,25 GET MACC_NUM
READ
LOCATE ALL FOR MACC_NUM = ACC_NUM
 IF EOF()
  @22,0 SAY 'ACCOUNT DOES NOT EXIST...'
  WAIT ' '
  @22,0 CLEAR
  LOOP
 ENDIF
 IF STATUS = 'D'
  @22,0 SAY 'ACCOUNT NOT ACTIVE'
  WAIT ' '
  @22,0 CLEAR
  LOOP
  NDIF
   1,45 SAY ACC_DES
   1,35 SAY 'ON-LINE BALANCES'
   2,5 SAY 'LOCATION:-                    GROUP:-'
   ECT 1
   ATE ALL FOR BR_CODE = MBR_CODE
   OUND()
   ?,15 SAY LOC_AM PICT '999,999,999,999.99'
   IF
   ECT 2
   ATE ALL FOR MACC_NUM = ACC_NUM
   OUND()
   ,52 SAY GR_AM  PICT '999,999,999,999.99'
   IF
   ,2 SAY 'AMOUNT :'
   2 SAY 'TRANS. INDICATOR:'
   55 SAY 'D = DEBIT / C = CREDIT'
   25 GET MAMOUNT PICT '999,999,999,999.99'
   25 GET MTRAN_ID PICT '!'
   )
   TRAN_ID = 'D'
   ECT 2
   ATE ALL FOR MACC_NUM = ACC_NUM
   OUND()
     REPLACE GR_AM  WITH (GR_AM - MAMOUNT)
   IF
   CT 1
   TE ALL FOR BR_CODE = MBR_CODE
   UND()
   LACE DEBITB WITH (DEBITB
```

```
  IF FOUND()
        REPLACE DEBITG WITH (DEBITG - MAMOUNT)
  ENDIF
  SELECT 1
  LOCATE ALL FOR BR_CODE = MBR_CODE
  IF FOUND()
   REPLACE LOC_AM WITH  (LOC_AM +MAMOUNT)
   *REPLACE AMOUNT WITH MAMOUNT
  ENDIF
ENDIF
IF MTRAN_ID = 'C'
  SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
        REPLACE GR_AM  WITH (GR_AM + MAMOUNT)
  ENDIF
  SELECT 1
  LOCATE ALL FOR BR_CODE = MBR_CODE
  IF FOUND()
   REPLACE CREDITB WITH (CREDITB + MAMOUNT)
  ENDIF
  SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
   REPLACE CREDITG WITH (CREDITG + MAMOUNT)
  ENDIF
  SELECT 1
  LOCATE ALL FOR BR_CODE = MBR_CODE
   IF FOUND()
    REPLACE LOC_AM WITH  (LOC_AM + MAMOUNT)
   ENDIF
ENDIF
SELECT 2
@19,15 SAY MAMOUNT PICT '999,999,999,999.99'
@19,52 SAY GR_AM PICT '999,999,999,999.99'
DATAOK =' '
@22,0 CLEAR
@22,50 SAY 'DATA OK / (Y/N) :' GET DATAOK PICT '!'
READ
@22,0 CLEAR
IF DATAOK = 'Y'
  EXIT
ENDIF
ENDDO
**internal computation***
SELECT 2
  LOCATE ALL FOR MACC_NUM = ACC_NUM
  IF FOUND()
     IF (MACC_NUM >= 101001).AND.(MACC_NUM < 201001)
         AG_SUM = AG_SUM + MAMOUNT
        ENDIF
     IF (MACC_NUM >= 201001).AND.(MACC_NUM < 301001)
       LG_SUM = LG_SUM + MAMOUNT
     ENDIF
    IF (MACC_NUM >= 401001).AND.(MACC_NUM < 501001)
      IG_SUM = IG_SUM + MAMOUNT
```

```
      DIFF3 = IG_SUM - ABS(EG_SUM)
      REPLACE AG_SUM WITH (AG_SUM + MAMOUNT)
      REPLACE LG_SUM WITH (LG_SUM + MAMOUNT)
      REPLACE IG_SUM WITH (IG_SUM + MAMOUNT)
      REPLACE EG_SUM WITH (EG_SUM + MAMOUNT)
      REPLACE DIFF3 WITH IG_SUM - ABS(EG_SUM)
 ENDIF
SELECT 1
  LOCATE ALL FOR MBR_CODE = BR_CODE
  IF FOUND()
      IF (MACC_NUM >= 101001).AND.(MACC_NUM < 201001)
           AL_SUM = AL_SUM + MAMOUNT
          ENDIF
      IF (MACC_NUM >= 201001).AND.(MACC_NUM < 301001)
        LL_SUM = LL_SUM + MAMOUNT
      ENDIF
      IF (MACC_NUM >= 401001).AND.(MACC_NUM < 501001)
       IL_SUM = IL_SUM + MAMOUNT
      ENDIF
      IF (MACC_NUM >= 501001).AND.(MACC_NUM < 510021)
        EL_SUM = EL_SUM + MAMOUNT
      ENDIF
      DIFF4 = IL_SUM -ABS(EL_SUM)
      REPLACE AL_SUM WITH (AL_SUM + MAMOUNT)
      REPLACE LL_SUM WITH (LL_SUM + MAMOUNT)
      REPLACE IL_SUM WITH (IL_SUM + MAMOUNT)
      REPLACE EL_SUM WITH (EL_SUM + MAMOUNT)
      REPLACE DIFF4 WITH IL_SUM - ABS(EL_SUM)
 ENDIF
SELECT 1
LOCATE ALL FOR MBR_CODE = BR_CODE
IF FOUND()
         REPLACE VALUEB WITH  ABS(DEBITB)
         REPLACE NETB WITH  (CREDITB - VALUEB)
ENDIF
SELECT 2
REPLACE NETG_T WITH NETG_T + NETG
LOCATE ALL FOR MACC_NUM = ACC_NUM
      IF FOUND()
           REPLACE VALUEG WITH ABS(DEBITG )
           REPLACE NETG WITH  (CREDITG - VALUEG)
           REPLACE NETG_T WITH NETG_T + NETG
          ENDIF
CLEAR
DO HEADER
ETURN

**generate report on balance sheet
PROCEDURE REPORT1
DEFINE POPUP REP1 FROM 18,56
DEFINE BAR 1 OF REP1 PROMPT "GROUP"
DEFINE BAR 2 OF REP1 PROMPT "LOCATION"
ON SELECTION POPUP REP1 DO B_SHEET
ACTIVATE POPUP REP1

PROCEDURE B_SHEET
DO CASE
  CASE BAR()=1
    DO B_SHEETG
```

```
   DO B_SHEETS
  ENDCASE
CLEAR
RETURN

**generate report on profit/loss
PROCEDURE REPORT2
DEFINE POPUP REP2 FROM 18,56
DEFINE BAR 1 OF REP2 PROMPT "GROUP"
DEFINE BAR 2 OF REP2 PROMPT "LOCATION"
ON SELECTION POPUP REP2 DO pl
ACTIVATE POPUP REP2

PROCEDURE PL
DO CASE
 CASE BAR()=1
   DO PLG
 CASE BAR()=2
   DO PLS
  ENDCASE
CLEAR
RETURN

PROCEDURE PLG
CLEAR
STORE 'Y' TO REPLY
*SET DEVICE TO PRINTER
*SET PRINTER ON
DO WHILE REPLY = 'Y'.OR. REPLY = 'y'
CLEAR
USE CAL
MACC_NUM = 0
@4,5 SAY 'ACTUAL REPORT -PROFIT/LOSS ACCOUNTS(GROUP ACCOUNT)'
@5,1 TO 20,70
@7,2 SAY 'ENTER ACCOUNT NUMBER:'
@7,24 GET MACC_NUM
READ
GO TOP
CLEAR
LOCATE ALL FOR MACC_NUM=ACC_NUM
IF FOUND()
 IF ((MACC_NUM => 501001).AND.(MACC_NUM < 510021)).OR.((MACC_NUM
=>401001).AND.(MACC_NUM <501001))
        ?SPACE(20),'ACTUAL REPORT -PROFIT/LOSS ACCOUNTS(GROUP ACCOUNT)'
        ?SPACE(20),'═══════════════════════════════════════════'
        ?
        ?SPACE(5),'ACCOUNT NUMBER:',ACC_NUM
        ?
        ?SPACE(5),'ACCOUNT DESCRIPTION:',ACC_DES
        ?
        ?SPACE(5),'INCOME:',STR(IG_SUM,15,2)
        ?
        ?SPACE(5),'EXPENDITURE:',STR(EG_SUM,15,2)
        ?
        ?SPACE(13),'═══════════════════════════'
        ?SPACE(5),'BALANCE:',STR(DIFF3,15,2)
        ?SPACE(13),'═══════════════════════════'
        @23,5 CLEAR
```

```
        @23,5 CLEAR
 ELSE
        @23,5 CLEAR
        @23,5 SAY 'IS NOT INCOME/EXPENDITURE ACCOUNT(S) '
        @24,5 SAY 'PLEASE PRESS ANY KEY TO CONTINUE..'
        WAIT ' '
        @23,5 CLEAR
        @24,5 CLEAR
 ENDIF
LSE
     @23,5 CLEAR
        @23,5 SAY 'ACCOUNT NUMBER DOES NOT EXIST '
        @24,5 SAY 'PLEASE PRESS ANY KEY TO CONTINUE..'
        WAIT ' '
        @23,5 CLEAR
        @24,5 CLEAR
ENDIF
     @23,5 CLEAR
        @24,5 CLEAR
        @23,5 SAY 'MORE REPORT TO GENERATE (Y OR ANY KEY TO EXIT)' GET REPLY
        READ
        @23,5 CLEAR
ENDDO
CLOSE DATABASES
*SET PRINTER OFF
CLEAR
RETURN

PROCEDURE PLS
CLEAR
STORE 'Y' TO REPLY
USE BRANCH
*SET DEVICE TO PRINTER
*SET PRINTER ON
DO WHILE REPLY = 'Y'.OR. REPLY = 'y'
CLEAR
USE BRANCH
STORE SPACE(3) TO MBR_CODE
@4,5 SAY 'ACTUAL REPORT -PROFIT/LOSS ACCOUNTS(LOCATION)'
@5,1 TO 20,70
@7,2 SAY 'ENTER BRANCH CODE:'
@7,20 GET MBR_CODE
READ
GO TOP
LOCATE ALL FOR MBR_CODE=BR_COI
IF FOUND()
CLEAR
?SPACE(20),'ACTUAL REPORT -PROFIT/LOSS ACCOUNTS(LOCATION)'
?SPACE(20),'=============================================='
?
?SPACE(5),'BRANCH NAME:',BR_NAME
?
?SPACE( ),'BRANCH CODE:',BR_CODE
?
?SPACE(5),'INCOME:',STR(IL_SUM,15,2)
?
?SPACE(5),'EXPENDITURE:',STR(EL_SUM,15,2)
?
?SPACE(13),'======================'
?SPACE(5),'BALANCE:',STR(DIFF,15,2)
```

```
?SPACE(13),'=========================='
@23,5 CLEAR
@23,5 SAY 'PRESS ANY KEY TO CONYINUE'
WAIT ' '
ELSE
     @23,5 CLEAR
          @23,5 SAY 'ACCOUNT NUMBER DOES NOT EXIST /INCOME/EXPENDITURE '
          @24,5 CLEAR
          @24,5 SAY 'PLEASE PRESS ANY KEY TO CONTINUE..'
          WAIT ' '
          @23,5 CLEAR
          @24,5 CLEAR
ENDIF
          @23,5 CLEAR
          @24,5 CLEAR
          @23,5 SAY 'MORE REPORT TO GENERATE (Y OR ANY KEY TO EXIT' GET REPLY
          READ
 ENDDO
CLOSE DATABASES
*SET PRINTER OFF
CLEAR
RETURN

PROCEDURE B_SHEETG
CLEAR
STORE 'Y' TO REPLY
*SET DEVICE TO PRINTER
*SET PRINTER ON
DO WHILE REPLY = 'Y'.OR. REPLY = 'y'
CLEAR
USE CAL
MACC_NUM = 0
@4,5 SAY 'ACTUAL REPORT -BALANCE(GROUP ACCOUNT)'
@5,1 TO 20,70
@7,2 SAY 'ENTER ACCOUNT NUMBER:'
@7,24 GET MACC_NUM
READ
GO TOP
CLEAR
LOCATE ALL FOR MACC_NUM=ACC_NUM
IF FOUND()
          ?SPACE(20),'ACTUAL REPORT -BALANCE(GROUP ACCOUNT)'
          ?SPACE(20),'=========================================='
          ?
          ?SPACE(5),'ACCOUNT NUMBER:',ACC_NUM
          ?
          ?SPACE(5),'ACCOUNT DESCRIPTION:',ACC_DES
          ?
          ?SPACE(5),'DEBITS:',STR(DEBITG,15,2)
          ?
          ?SPACE(5),'CREDIT:',STR(CREDITG,15,2)
          ?
          ?SPACE(13),'=============================='
          ?SPACE(5),'BALANCE:',STR(NETG,15,2)
          ?SPACE(13),'=========================='
          @23,5 CLEAR
          @23,5 SAY 'PLEASE PRESS ANY KEY TO CONTINUE....'
          WAIT ' '
```

```
      @23,5 CLEAR
         @23,5 SAY 'ACCOUNT NUMBER DOES NOT EXIST  '
         @24,5 SAY 'PLEASE PRESS ANY KEY TO CONTINUE..'
         WAIT ' '
         @23,5 CLEAR
         @24,5 CLEAR
ENDIF
      @23,5 CLEAR
         @24,5 CLEAR
         @23,5 SAY 'MORE REPORT TO GENERATE (Y OR ANY KEY TO EXIT)' GET REPLY
         READ
         @23,5 CLEAR
ENDDO
CLOSE DATABASES
*SET PRINTER OFF
CLEAR
RETURN

PROCEDURE B_SHEETS
CLEAR
STORE 'Y' TO REPLY
USE BRANCH
*SET DEVICE TO PRINTER
*SET PRINTER ON
DO WHILE REPLY = 'Y'.OR. REPLY = 'y'
CLEAR
USE BRANCH
STORE SPACE(3) TO MBR_CODE
@4,5 SAY 'ACTUAL REPORT -BALANCE SHEET(LOCATION)'
@5,1 TO 20,70
@7,2 SAY 'ENTER BRANCH CODE:'
@7,20 GET MBR_CODE
READ
GO TOP
LOCATE ALL FOR MBR_CODE=BR_CODE
IF FOUND()
CLEAR
?SPACE(20),'ACTUAL REPORT -BALANCE(LOCATION)'
?SPACE(20),'================================='
?
?SPACE(5),'BRANCH NAME:',BR_NAME
?
?SPACE(5),'BRANCH CODE:',BR_CODE
?
?SPACE(5),'DEBITS:',STR(DEBITB,15,2)
?
?SPACE(5),'CREDITS:',STR(CREDITB,15,2)
?
?SPACE(13),'========================'
?SPACE(5),'BALANCE:',STR(NETB,15,2)
?SPACE(13),'========================'
@23,5 CLEAR
@  AY 'PRESS ANY KEY TO CONYINUE'
```

```
@23,25 SAY 'Press any key to continue'
Wait ' '
RETURN
```