

**COMPUTER APPLICATION TO CURRENCY
MANAGEMENT**

(A Case Study of Central Bank of Nigeria, Minna Branch)

By

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December 1999

CERTIFICATION

Having read through this Project carried out by Binta Aishatu Aliyu, I certify that this Project Work is originally written by the above named student and has met the standard of the requirement for the both department and the institution in general.

Prince Badamosi AbdulRasheed
(Project Supervisor)

Date

Dr. S. A. Reju
(Head of Department)

Date

External Examiner

Date

DEDICATION

*This Project Work is dedicated to
the God Almighty Allah
and my husband Alhaji Alhassan .A. Aliyu*

ACKNOWLEDGEMENT

The Project Work was successfully completed with the aid of contributions from individuals. The Support ranged from elaborates critiques to informal suggestions. The technical competencies as well as moral support are enormous and appreciative.

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ABSTRACT

Currency Management involves the issuances, distribution and redemption of legal tender currency notes and coins. This constitutes a vital part of the day-to-day management of the economy, without the regular supply of currency, economic activities would be much restricted.

The present day management, unlike that of the old relies not only on intuition, but on some living operational tools such as computer.

The application of computer to management especially currency management shall help to introduce meaningful improvement to the various activities of the currency section of the Central Bank Branch, Minna.

This project investigates the application/usage of computer to the management of the currency including mutilated notes processing, issue and receipts of currency.

The project will analyze the currency stock position at any given time necessary for management decision as to the nomination of currency to be issued into circulation at any given time.

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CHAPTER ONE

2.3 GENERAL INTRODUCTION

2.4 EVOLUTION OF CENTRAL BANK OF NIGERIA

The increased educational awareness coupled with intensification of the struggle for nation independence in the early 50's made Nigerians conclude that political independence alone was not sufficient. They therefore started the struggle for economic independence as well. Also the alarming bank failures in the early 1950's, which resulted system in the hands of the colonial financial secretary brought about the growing awareness of the need for a central Bank. As usual the colonial masters opposed the idea as they thought it was premature. As a result of this statement, three different studies were commissioned.

These include:- I) O.L Fisher's report which did not recommend the establishment of a Central Bank because he felt that the financial system of the time was inadequate. This report was not accepted by Nigerians but was supported by the World Bank Mission in 1995. (ii). The World Bank Mission Report did not recommend the establishment of a Central Bank for Nigerian because of their believe that Nigeria was not financially developed enough for the proper operation of central banking. They however recommended the establishment of a state Bank of Nigeria to take over the banking control functions from the financial secretary. (iii) Finally, J.B layers Report of 1957 culminated in the establishment of the central Bank of Nigeria on 17th March, 1958 through the Central Bank ordinance, 1958. However, the CBN did not start full operation until 1st July, 1959.

CBN had an authorized and paid-up capital of ₦3M which were subscribed and held by the Federal Government. There is no provision for state Government or private sector participation in the equity shareholding of the bank.

1.2 ROLES AND FUNCTIONS OF C B N

1. The major role of the CBN, are to issue legal tender currency in Nigeria, maintain the external value of the legal tender currency, promote monetary stability and a sound financial system as well as act as banker and financial adviser to the Federal Government and banker to the banks. To achieve these roles, particularly the promotion of monetary stability and a sound financial system the CBN. undertakes certain functions and activities, details of which are discussed below.

2. **Functions and Activities**

a) **Currency Issue and Distribution:-**

Economic transactions in the Nigerian economy are, to a large extent, cash oriented. Consequently, the bank's currency issue function which involves distribution and safe custody of stock, constitutes a vital part of the day-to-day management of the economy. Without the regular supply of currency, economic activities would be much restricted. The bank, by law, is the only bank of issue in the country, it started by issuing the Nigerian pound (in 1959) which was in circulation until January 1973 when decimalized currency, the Naira was introduced in four major denominations – 50k, #1, and #10. In February 1979, a higher denomination, #20 note, was introduced in response to the growth in monetary transactions. In 1991, a currency reform, called the D-metric system of currency management widely used in more than 70 countries, was introduced. The system assumes equal denominational structural range of 5 for both coins and notes. The reforms phased out the ½ kobo and 5 kobo coins, redesigned the 1k, 10k and 25k coins, coined the 50k and #1 notes and put into circulation the #50 note. The banks notes and coins are commissioned

for printing and minting by the Nigerian Security Printing and Minting Company (NSPMC) under conditions of top security and using highly technical devices and designs to make counterfeiting difficult.

b) Banker to other banks

The bank promotes confidence in the system through its activities as banker to other banks within and outside Nigeria.

The purpose is for the bank to promote and sustain reasonable banking services for the public and to ensure a high standard of conduct and professionalism in banking activities. The C. B. N as banker to other banks, issues directives on cash reserve and liquidity ratios, prudential requirements and on other activities of the banks. This is done through its Monetary Policy Circular which is issued at the beginning of each fiscal year.

The CBN may bar banks from engaging in certain activities and it is empowered to seek and obtain information from the banks. Stiff sanctions are usually imposed on banks for non-compliance with monetary guidelines.

c) Banking Supervision and Examination

The CBN, in seeking to promote a sound financial system, has to supervise and monitor the banks this is done through banking supervision both off-site (that is, through the statutory returns submitted by the banks to the CBN) and on-site, through visitations by CBN officials to the banks, to examine their books, record keeping and internal control systems. This process enables the CBN to identify distressed banks

early and to act in concert with the Nigerian deposit Insurance Corporation (NDIC) to take corrective actions.

e) **Cheque Clearing-** The C. B. N is mandated to facilitate the clearing of Cheques and credit instruments for banks in Nigeria. The Bank, therefore sets up clearing houses for this purpose and monitors the cheque clearing system to ensure efficient payments mechanism within the financial system.

f) **Lender of Last Resort -** The CBN is the lender of last resort to the banks and to discount houses under the new system of open market operations. It accommodates commercial and merchant banks in temporary need of liquidity. The bank's function as a lender of last resort enhances the banking orphan's ability to withstand economic strains and stresses. The bank in conjunction with the Nigerian Deposit Insurance Corporation, also took action to save the financial system from collapse in 1993 when the incidence of distress became generalized. In 1994, the CBN evolved a "Life Boat Scheme" to provide financial support to banks whose liquidity crisis was traceable to the collapse of the inter-bank money market.

g) **Banker to the Government**

The CBN as banker to the Federal Government undertakes most of the Federal Government undertakes most of the Federal Government's banking business within and outside Nigeria. The Bank also provides banking services to the state and local governments and it may act as banker to institutions, funds or corporations set up by the Federal, State and Local Government. The Federal Government, at its own discretion, may use the services of other banks or the state treasuries for its banking requirements.

The CBN mobilizes funds for the Federal Government through the issuance of short term and long term government securities. The short term securities are mainly treasuring bills and certificates, while the long term debt instruments are referred to as federal government development stocks. Treasury certificates were first issued in 1968. Treasury bills, being of shorter duration (90 days), tend to be more widely used than treasury certificates.

h) Debt Management

Not only does the CBN mobilize funds for the Federal Government, it also manages its domestic and external debt inconjunction with the Federal Ministry of Finance. The CBN. is empowered to issue debt instruments and manage Federal Government domestic debt on terms and conditions agreed upon by the government and the government and the Bank.

i) Promotion of Monetary Stability

The effectiveness of any Central Bank in executing its functions hinges crucially on its ability to promote monetary stability. Price stability is indispensable for money to perform its role of medium of exchange, store of value, and unit of account.

i) Foreign Exchange Management

Foreign exchange management involves the acquisition and deployment of foreign exchange resources in order to reduce destabilizing shot-term capital flows. The CBN monitors the use of scarce foreign exchange resources to ensure that foreign exchange disbursement and utilisation are in line with economic priorities.

j) Promotion of the Growth of financial Markets

One of the objects of the Bank as enumerated in the central Bank act is the promotion of sound financial structure in the economy. In essence, the bank is charged with the responsibility of developing the money and capital Markets in the country.

For the development of the money market, the bank issues and redeems treasury bills and treasury certificates, manages the Bankers Unit Fund (BUF) and processes applications from banks for the issuance of Negotiable Certificates of Deposit (NCD). As far as the capital market is concerned, the bank issues and redeems federal republic of Nigeria development stocks.

For the same purpose, the CBN helps in no small measure in the development of financial institutions such as the Nigerian stock exchange, the Nigerian Bank for Commerce and Industry, the mobilization of long-term capital for investment purposes.

k) Agricultural Productivity

In a bid to enhance agricultural productivity in the economy, the federal government set up the Agricultural Credit Guarantee Scheme, the management of which has been entrusted with the bank. Under this scheme, an initial fund of #00 million was created to enable it to guarantee up to maximum of 75%, whatever credit the commercial and Merchant banks extend to the farmers, co-operative societies as well as state government that engage in agriculture from this fund claims, in respect of loans which cannot be recovered are met by the bank.

It should be noted, however, that the essence of the whole exercise is to encourage the banks to extend credit to the agricultural sector however unpredictable it may appear to be.

1.3 AIMS AND OBJECTIVES

It is well known that the performance of a computer system depends on the characteristics of hardware and software. The aims and objectives of this project include:-

- i) Examining the suitable application programs to meet the need of the organisation.
- ii) Surveying of suitable application programs to meet the organisation.
- iii) Analysing the hardware requirements of the suitable software .
- iv) Final selection of the optimal computer system that meets the hardware requirement of the software.

1.4 METHODOLOGY.

The bedrock of any project work is the viability of data. The source of data collection include primary detail first hand information and secondary data which are data collected from magazines, journals, text book etc.

There are also measurement techniques available for researcher. These include the use of questionnaires, Interviews and observations.

The method used to gather information and obtain data for this project is basically the observation of the users at work, a study of relevant documents on the project and most importantly, by simply talking to the people involved in the present system. The choice of the above methods arose because of the following needs:-

- a. To establish and verify information by interviewing and to provide an opportunity to meet the users and overcome possible resistance to change.
- b. To search through previous records and documentation to highlight problems.

- c. To give a useful insight into the problems work conditions, bottlenecks and method of work.

1.5 SCOPE AND LIMITATION

The scope of this project is to cover the currency management of Central Bank of Nigeria.

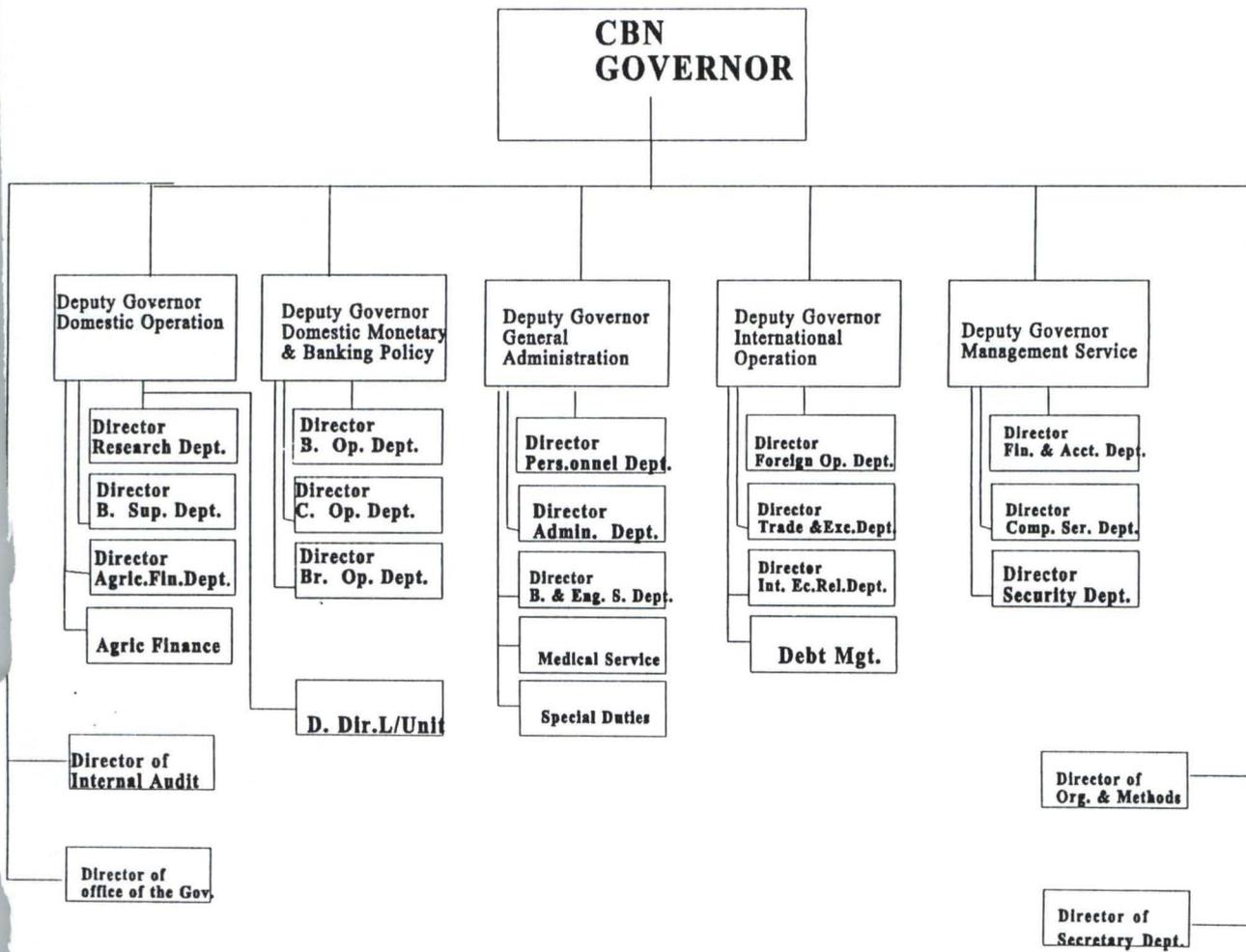
While the limitation of the study includes the followings :

1. The study is limited to the Banking Hall of Central Bank of Nigeria.
2. Another major limitation of this study is the out of data documentation of the present manual system. The present job description lacks the necessary detail and is inflexible.
3. The security requirement of the currency and the project in general is very demanding, records of past failures of computerization in the banks created some apathy to the acceptance of the study by the management of the bank, more so that such failures was encouraged by huge expenditure.

CHAPTER TWO

2.0 THE COMPUTER AND CURRENCY MANAGEMENT

2.1 CENTRAL BANK OF NIGERIA ORGANOGRAM



2.2 FUNCTIONS OF THE ORGANOGRAM

THE BOARD OF DIRECTORS COMPRISES :

- 2 The Governor (Who is also the Chairman)
- 3 The five Deputy Governors and
- 4 Five part-time Directors as members.

The Board of Directors meets every other month or when there is an urgent need. The board of Directors is responsible for the Policy and general administration of the affairs and business of the Bank.

(B). THE COMMITTEE OF GOVERNORS CONSIST OF :

- 2.3 The Governor and
- 2.4 The five Deputy Governors.

The Committee meets monthly during which its discusses major policy and operational issues concerning the Bank national and international assets and liabilities. A relevant Departmental Directors may be invited to attend a meeting of this committee.

(C). THE GOVERNOR'S CONSULTATIVE COMMITTEE

The Governor's consultative Committee consist of the following as members:

1. The Governor (also the Chairman)
2. The five Deputy Governors and
3. All the Departmental Directors.

This committee meets fortnightly to discuss matters relating to major policy and operational issues in addition to being a forum for feeding top management with views of members of staff.

The secretary to the Board attends as well as record the proceeding of this committee meetings.

(D). **THE INVESTMENT COMMITTEE**

- 2 The Governor (Chairman)
- 3 The five Deputy Governor's
- 4 Directors of Research
- 5 Director of International Economic Relation and
- 6 The Director of Foreign Operation.

The purpose of this committee is to take decisions on investments and borrowings within the limits set by the committee of Governors.

(E). **THE COMMITTEE OF DIRECTORS**

The Committee of Directors meets monthly while all Departmental Directors have daily meetings with their Deputies, Assistant Directors and Managers.

In order to ensure effective day to day administration, the various departments are broken up into divisions (i.e group of offices) each headed by a Deputy Director and Assisted by Assistant Directors, Senior Managers, Assistant Managers etc.

The foregoing is a brief account of the historical development and organizational structure of the Central Bank of Nigeria reflecting in the process, the increasing role of the Bank in the management of the nation's economy.

3 CURRENCY MANAGEMENT TECHNIQUES AND CONTROL

Currency management techniques and control refers to the combination of measures designed to regulate the value, supply and cost of money in an economy. An excessive supply and cost of money in an excess demand for goods and service which would cause rising prices. On the other hand, an inadequate supply of money could induce stagnation in the economy thereby retarding growth and development.

The discretionary control of the money stock by the monetary authority involves the expansion or contraction of money, influencing interest rates to make money cheaper or more expensive depending on the prevailing economic conditions and thrust of policy.

The techniques by which the monetary authority tries to achieve the above objectives include the direct or portfolio control and indirect or market approach.

Under a system of direct monetary control, the monetary authority uses some criteria to determine monetary and credit targets and interest rates to attempt to achieve to the ultimate objectives of policy.

The indirect method, used mainly in developed financial systems relies on the power of the monetary authority as a dealer in the financial markets to influence the availability and the rate of return on financial assets, thus affecting both the desire of the public to hold money balances and the willingness of financial agents to accept deposit and lend them to users. Exchange of such instruments are discount rate and Open Market Operations. (OMO).

An important aspect of currency management and control is liquidity management. This seeks to ensure the attainment of the short-term objectives of monetary policy, ie maintaining desired monetary aggregates- a money stock target and or desired interest rate. Banks create money everyday, but when the money created is incompatible with the absorptive capacity of the economy, macro-economic instability, much reliance is placed on liquidity management.

Liquidity management by the central Bank of Nigeria includes the provision of the short-run reserve needs of the banking system for purposes of meeting short-term liquidity obligations. Before the introduction of open market operations on 30th June 1993, the CBN employed the direct techniques of liquidity management which involved the setting of credit ceilings, discount rates, liquidity and cash ratios. As a supplement to cash and liquidity ratios, the bank also occasionally called for special

deposits from the banking system as well as issued stabilization securities. Since June 1993, open market operations have become the dominant instrument of liquidity management while the use of stabilization securities excites only as the heed arises. The use of credit ceilings is being phased out while the application of the discount rate, liquidity and cash ratios is still in force as the main adjustment instruments.

2.4 THE FUNCTIONS OF CURRENCY OFFICE

This office is responsible for the custody of unissued notes and coins, security documents such as title deeds, stock certificates, treasuring bills, treasuring certificates and safe custody of items deposited by customers.

It also takes charge of the safe-keeping of the Gold bullion. In conjunction with the Branch controllers, representatives, the currency office receives notes and coins from the commercial banks and issues notes and coins to them.

It is responsible for keeping the record of the currency in the vault according to their various denominations the figures will have to agree with treasury at the close of business everyday.

Each of the vaults is under dual control and is opened and locked daily by the treasury manager and the Branch controllers representatives.

The office also receives from the public, institutions, etc. lodgements of mutilated currency notes.

These notes are replaced in cheque and in cash. Below #200, it pays cash and above it pays cheque.

Each case is treated and fully deposed of within 48 hours of lodgement. Doubtful cases are sent to

the mint for determination. E.g those charred or damp. Those adjudged unfit for replacement are not given value and are never paid.

2.5 THE USE OF COMPUTER IN AN ORGANISATION

Computers are now part and parcel of humanity. It is only better imagined what life would have been without them.

The accuracy of computer cannot be over-emphasized and it conforms with the objective of using the computer. A cashier in a departmental store would definitely find life boring if all calculations, issuance of receipts and giving of change would be done manually for each customer after each transaction. But with the aid of an adding machine, the job is done accurately and he feels relieved. Going from the adding machine to the computer itself, the ability of the computer to perform repetitive tasks makes things easier. Once the computer is programmed, using the adequate, the whole job is done with ease.

The need for computer in our banking system cannot be under-rated because of the huge amount of transactions and the accuracy desired. Customers will notice how fast they can obtain the balance of their money in their accounts, if their bank of choice is computerized. With a computer terminal in front of the cashier, the request is processed in a matter of seconds. And if the computers in the branches of the bank are linked together through the telecommunications network, it doesn't matter in which of the branches an account is maintained-the information about you can be distrained from each and everyone, even in different towns.

In a developing economy like ours, the speed of the computer is again one of the distinguishing factors that makes it inevitable. From the saying that "Time is Money", speed is equally synonymous

to time, and since computers work at a phenomenal speed coupled with its ability to access records or information directly from remote locations, efforts should be directed towards introducing computer in any organisation.

2.6 COMPUTER APPLICATION TO MANAGEMENT

Many organisation have been introduced to computer and data processing through single purpose accounting computer applications. The change manual operations to computerized operations entails systematically analysing input and output processes, structuring file contents, and layouts, and developing computer programs to process data, update files and prepare action documents.

Each year, managers spend months preparing their departmental budgets for the coming fiscal year. To help in this task, the budget system provides each manager with information on past line-item expenditures (Salaries, office equipment, and office supplies etc.). Based on this information and projected budget requirements; each manager can make requests for the next fiscal year. The budget system matches these requests against projected revenues and generates an exception report showing those line items that exceed projected funding levels. The budget items are reviewed and the process is repeated until the coming year's budget is established.

This application is obviously of importance to the various tiers of government in the country that has the goal of transparency and efficient management of financial transactions.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

3.1 INTRODUCTION

It is obvious today that the computer is surrounded by an intricate web of software, hence the procedure for computerizing a problem is made More complex by a large area of computing, which is called Para computing, and of which systems analysis and design form the major part.

Therefore, one of the main function of system Analysis and design is to convert an existing manual system into a computrised system.

3.3 PROBLEMS IDENTIFICATIONS AND DEFINITION

This can be defined as the process of determining the nature and scope of a problem at hand. If the problem is Incorrectly or Incompletely define, the entire study could address the wrong issues. On the other hand, it can also be known as fact finding which is the process of carrying out detailed study of an existing system to completely identify the problems and information requirement of the existing system.

However, in order to carry out an In-depth analysis of the problems identification and (define,) the following methods/techniques where employed. They includes:-

(a) QUESTIONNAIRE

This is a method of getting fact in which questions are structured in logical order and send to the respondent who are expected to respond by writing down their opinion regarding the various questions asked.

(b) **INTERVIEWING**

Interview is a technique in which questions are directed to respondent for Immediate feed back it can be carried out in the form of face-to-face conversation, telephone conversation, radio messages conversation, or through any other communication means, but it is better carried out in the form of face- to - face conversation. However, Interview is always the best method of problems identification and definitions.

(c) **OBSERVATION**

This technique Involve having direct access to the old procedure for close and personal Examination aimed at identifying irregularities.

3.3 FEASIBILITY STUDY

This is the broad study of a system to identify reasons which justifies the development of the new system or favours non-execution of the project.

However, the essence of a feasibility study is to determine whether a solution to the problem is feasible. This is to prevent wasting many months of effort and many thousand Naira if the project is too large, too uncontrollable, or simply impossible to carry out. The feasibility study is a miniature systems analysis and design effort that entails an exploration of alternatives design options and an analysis of the costs and benefits of each alternative, if several alternatives seem to be realistic in their potential costs and benefits, the project proceeds to the next phase, system analysis.

DEFINITION OF SYSTEM ANALYSIS .

system analysis is the term used to described the process of collecting and analysing facts in respect of existing operations, procedures and systems in order to obtain a full appreciation of the situation

prevailing so that an effective computerized system may be designed and implemented if proved feasible.

3.4 TESTING THE PROJECT FEASIBILITY

In order to test for project feasibility, the following hence to be undertaken:-

(a) **OPERATIONAL FEASIBILITY**

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

(b) **TECHNICAL FEASIBILITY**

This test seeks to clarify if the proposed project can be done with current equipment, existing software technology and available personnel.

(c) **ECONOMICAL FEASIBILITY**

The test for financial feasibility is undertaken to assess lost of implementing a prosed project Vis-a-Vis the benefit derived in implementing the project.

(d) **COST IMPLICATION**

This tend to look at the financial requirement for successful completion of the project; cutting down all unnecessary expenditure.

3.5 ANALYSIS OF THE CURRENT SYSTEM

Analysis of a system is the procedural study of its operations with an attempt to discover what the basic problems are. At this stage, it is the duty of the analyst to examine all the facts he has gathered in order to make a proper assessment of the current system. The analysis must resist the temptation to include ideas in the new system which have not been fully worked out.

However, the current system at central Bank of Nigeria is completely manual, which implies that no computerised system is in used. This method of keeping currency record is not efficient and productive hence it slow down the activities of currency processing department and the Banking Hall of the apex Bank.

Therefore, the current system of currency processing was fully examined. This examination include the identification of the obvious and non-obvious problems of inefficiencies in information flow, storage, duplication of records, information dissemination, staff discontent and that of Inaccuracy of operational data where fully noticed and documented for the later designation of the input and output specification of the CURRENCY SOFTWARE.

3.6 REQUIREMENT SPECIFICATION FOR THE NEW SYSTEM

An important aim of the analysis of an existing/current system is to produce a Required specification.

A requirement specification are those specification which the new system to be designed and developed must achieved.

For example, a system Analyst, with sound business knowledge will discuss the requirement specification with the user of the system and at the end of these discussions, the requirement specification should be in an accepted form, estimates for alternatives designs should be prepared, and the decisions to proceeds with a particular design can be made.

However, after a thorough analysis and interaction with the users of the system, the following requirement specification where highlighted. They includes:

(1) SECURITY

The data on the new system should only be accessible to those officers who have authority

of access to it. This is necessary in that the possibility of non-personnel staff gaining access to the files can be used to stop unauthorised access to currency records.

(2) **COST IMPLICATION**

Another important factor of the Requirement specification is the cost implications. The new system to developed must be economical and cost effective. Hence, the efficiency, benefit, and reliability of the new system must be commensurate or be higher than the cost of developing the new system.

(3) **FLOW OF DATA**

This implies the ease with which data or information flow during the data processing procedures. This can be easily be identify from the menu structure of the system. Hence for proper flow of data the following must be achieved:-

- (1) the system must be user friendly.
- (2) the system must be menu driven
- (3) can only be accessed by authorised user only.

(4) **HELPFULNESS**

This is the amount of support given to assist users in performing required tasks.

(5) **REPORT GENERATION**

The Currency Software must ensure a timely and accurate production of currency processing reports that will enable the management to take proper decision as regards distribution and handling of bank notes.

3.7. INPUT SPECIFICATION

The input specification is an interactive avenue where the Computer and end-users Communicate via the use of the popular input device called the keyboard.

Hence, having considered the output that needs to be generated by the proposed system, there is need to design the input, which will bring about the output.

Input refers to the mode of entering data in to a system. The consideration for input design is very important because it series as the point of most contact for the users with the system and it is prone to errors. Based on this, the input design should be made to attain the following objectives:

- To achieve the highest level of accuracy.
- To ensure that the input is acceptable and understood by the users.
- To produce a cost effective method of input.

3.8 OUTPUT SPECIFICATION

Output refers to the result and information that are generated by a system. The output from a computer system is required primarily to communicate the result of processing to users or other systems or more importantly, to provide a permanent (Hard) copy of these result from consultation and for management decision making.

However, the output specification is a determinant for the input specification. The design process of the output begins by the identification of the output the system must produce. It is as a result of this that in designing output for the CURRENCY Software that the needs of the end-users were fully considered.

Specifically, the following reports are expected to be generated from the output specification.

They include:

1. Currency in store for the weekend.
2. Summary of deposits and withdrawals.
3. Stock position (daily).

3.9 COST BENEFIT

The Cost Benefit Analysis, the analysis of the total cost (expenses) that is needed in order to put the CURRENCY Software into actual implementation irrespective of environment, people and other constraint that may deter the implementation.

However, it is quite important to note that, cost benefit analysis at time is difficult to quantify at best, but must be done in order to estimate the financial and operational impact it will have on the organisation concerned.

Below is the cost benefit analysis of implementing the CURRENCY Software.

S/NO	DESCRIPTION	UNIT	RATE	AMOUNT
(A). OPERATIONAL COST				
1.	Complete Computer System	1	250,000	250,000.00
2.	HP Laser Jet 6L Printer	1	65,000	65,000.00
3.	Epson LQ 2170 Printer	1	100,000	100,000.00
4.	Stabilizer (AVR)	1	55,000	55,000.00
5.	UPS (Un-Interrupted Power Supply)	1	65,000	65,000.00
6.	Equipment Maintenance	Lot	70,000	70,000.00
7.	Miscellaneous Expenses	Lot	20,000	20,000.00
TOTAL ON ITEM (A)				625,000.00
(B) DEVELOPMENTAL COST				
1.	System Analysis & Design, Program	Lot	100,000	100,000.00
2.	Development	Lot	50,000	50,000.00
3.	CURRENCY Software Implementation	staff	10,000	10,000.00
4.	Personnel Training for One Month	Lot	30,000	30,000.00
CURRENCY Installation				
TOTAL ON ITEM (B)				230,000.00
GRAND TOTAL ON ITEM (A) & (B)				855,000.00

A total of Eight Hundred and Fifty Five Thousand Naira (N855,000.00) will be needed to actually implement the CURRENCY Software.

CHAPTER FOUR

4.0 PROGRAMMING DEVELOPMENT / IMPLEMENTATION

4.1 INTRODUCTION

This chapter deals with the transformation of information gathered in the system Analysis stage into logical and physical designs of the new system in terms of output, input, files and procedures.

4.2 CHOICE OF PROGRAMMING LANGUAGE \$ ITS FEATURES

The choice of programming language for the proposed system is an important factor in any program development. From the previous analysis, it is pertinent to say that the proposed system is going to be used to stored large number of data / information, and time to time retrieval of record. Due to this fact, the choice of the programming language chosen for the development of the system is Database Management system (DBMS) Package with special preference for Dbase IV and Clipper 5.0.

4.3 FEATURES OF LANGUAGE CHOSEN

The features of the programming language chosen includes:-

- It is user friendly.
- It is easy to write an active user Interface program and also simple to understand.
- Individual database file can be designed to meet specific requirement of particular functional Unit of an organization
- It reduces data redundancy.
- Data integrity can be maintained
- Provide easy and greater access to information

■ The clipper 5.0 allows the source program to be compile to an executable file thereby allowing the program to be run independently of the application software that is used coding the program (i.e. Dbase IV and Clipper 5.0)

4.4 WORKSTATION REQUIREMENTS

Workstation requirement are those requirement needed to be put in place in order to make maximum utilization of developed system, certain hardware and software needs to be installed, they include

HARDWARE REQUIREMENT

This comprises of all the physical component of the computer system and its accessories. Therefore the choice of the computer requirement is done to suit both the current and the future needs of the organization with respect to the volume and types of data to be processed. In summary, a computer system with the following minimum requirement is required.

A. COMPLETE COMPUTER SYSTEM

PENTIUM 333MHZ CELERON INTEL

2.1 GB HDD

32MB RAM

36X CD-ROM DRIVE+SOUND CARD+2No. OF SPEAKERS

14"SVGA MONITOR

1.44MB FDD

MICROSOFT MOUSE

WINDOWS KEYBOARD

B. OTHER COMPONENTS

UN-INTERRUPTED POWER SUPPLY (UPS)

AUTOMATIC VOLTAGE REGULATOR (STABILIZER)

EPSON LQ2070 PRINTER

HP LASER JET 6L PRINTER

1 PACKET OF 3.5" DISKETTE

SOFTWARE REQUIREMENTS

Software requirements are the basic and other relevant application software that is needed to be installed on the computer system in order to make maximum utilization of the computer system and the developed CURRENCY Software. It is because of this fact that the following software must be installed on the system. The software includes:

A. **OPERATING SYSTEM SOFTWARE**

WINDOWS '95 OR '98
MS-DOS 6.22 OR HIGHER

B. **CURRENCY SOFTWARE**

C. **OTHER APPLICATION SOFTWARE**

COMPLETE OFFICE '97

- a. MS-WORD
- b. MS-EXCEL
- c. MS-POWER POINT
- d. MS-ACCESS
- e. MS-PUBLISHER etc.

WORD PERFECT 6.1 FOR WINDOWS

COREL DRAW 5.0 & ABOVE

DBASE IV

CLIPPER 5.0

VISUAL BASIC

However, other application software apart from the one's mention above may be installed as may be required by the staff and organization concerned.

4.5 CHANGE OVER PROCEDURE/SYSTEM CONVERSION

This is the last stage of implementation. This stage involve changing from the old system (manual-based method) to the newly designed (CURRENCY software)

However, in changing from the old method to the newly designed system, four methods were looked into, these methods include the following:-

- 1 Pilot change over procedure
- 2 Staged change over procedure
- 3 Direct change over procedure
- 4 Parallel change over procedure

(1) **PILOT CHANGE OVER PROCEDURE**

Most programmers and organizations do not commonly observe this method of changeover. It involves a clear directive (Pilot), that is how the system should be changed. At times, the Pilot changeover combines both the staged and parallel changeover.

(2) **STAGED CHANGEOVER PROCEDURE**

This method of changeover procedure involves stage by stage. This is based on the computer procedural program (Modules). Here, a module of the program must be completed, tested and found to be efficient before proceeding to the next stage of the program involving and changing over as well. In no circumstances will the next stage be reached without accomplishing and ensuring that the first stage is absolutely okay.

(3) **DIRECT CHANGEOVER PROCEDURE**

This process involves changing from the old system to the newly designed system directly. Thus, it is expected that the system must have been tested and found efficient before the direct changeover can take place.

(4) **PARALLEL CHANGEOVER PROCEDURE**

This process involve parallel running of the two (2) system, that is both the manual method and the new system all together by comparing the result of the old and new system until the new system prove efficient and excellent before the running of the old system is terminated.

Going by the above analysis, Parallel Change over procedure was used in order to actualized the aims and objectives CURRENCY Software. This method was implemented and at a point when the CURRENCY software proved to be accurate and efficient, with increase in speed of processing, the old system was then phased out and the CURRENCY Software becomes fully operational.

4.5 PHYSICAL AND LOGICAL DESIGN OF THE SYSTEM

The physical and logical design of the system dealt with the physical construction of the logical design of the proposed system. It has to do with program specification for output, input file and processing into computer software. The designation of the computer software is important to ensure that the actual program produce performed all the tasks intended and to allow for the future modification to be performed in an efficient manner and with minimum destruction to the design of the system. Therefore , documentation of the program specification are attach in the appendix .

4.6 STARTING THE SYSTEM

After the successful installation of the CURRENCY Software, starting the new system is very easy.

All the user need to do is to change to the directory name called <CURRENCY>

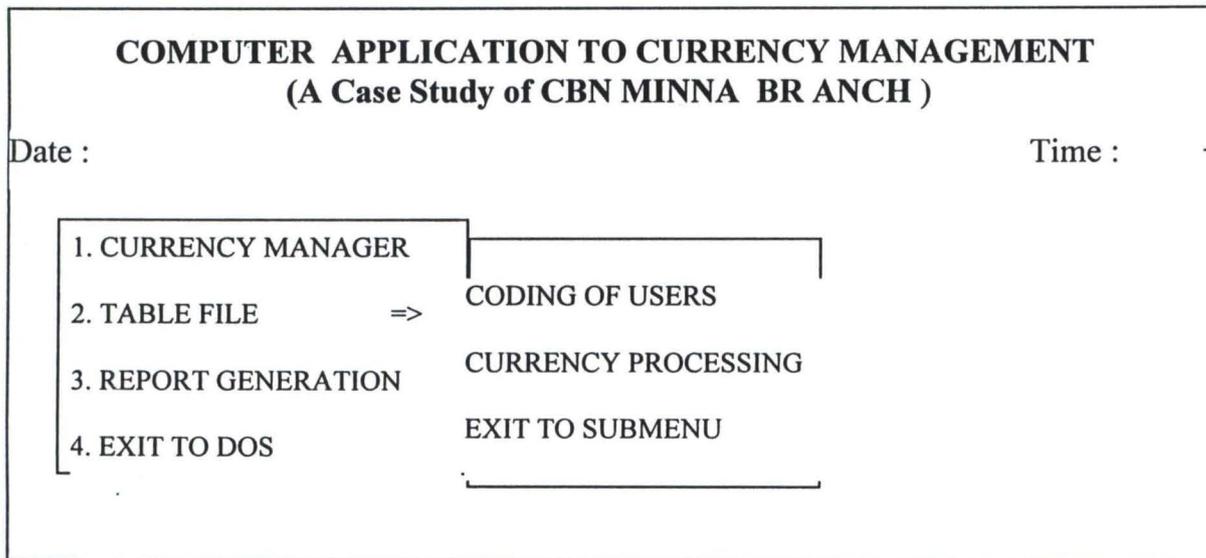
i.e. C:\>CD CURRENCY (PRESS ENTER KEY)

and while the default directory is CURRENCY, type CURRENCY to commence running of the program.

4.7 MENU STRUCTURE

The main menu structure of the proposed system contain a pop up menu as shown below in Fig 1.0

The general format of the Table is as shown below in Fig . 1.0



4.8 EXIT SUBMENU/QUIT

This is the last option of the main menu. On pressing Enter on it, it first closes all activated data base file, clear the system screen a return to Dos Prompt.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Managing the currency in the banking industries is one aspect that is relatively tedious in these days. But since the advent of the computer based Electronics/Mechanical machine like ISS 300PS and De-La-Rue counting machine, sorting and segregation of currency to different denominations have proved to be easier and much more faster.

However, currency management does not end at sorting and segregation of currency, it also involves the regulation of value, supply and cost of money in an economy. This implies that an excessive supply and cost of money in an excessive demand for goods and services would cause a rise in prices of goods.

The ISS 300 PS Project Machine which is notable for its timeliness and accuracy in processing currency with high speed does not possess the capability of storing the result of its processing in its memory for a long period of time and lacks facilities for further subsequent retrieval of information regarding the currency processed.

It is in view of this, that a customized software was suggested and undertaken to enable the users/operators of the machine to store and retrieve their daily currency processing result on the system. This method of computerization will completely reduce if not eradicate the burden of the manual method of storing the currency processing result.

5.2 CONCLUSION

Without any hesitations, the computer technology has created an overwhelming awareness for itself. This awareness commences in the late forties with a very small initial investment, and has been increasing both in strength and importance. When one looks back with an analytical mind, one can conclude that computer technology keeps on advancing with a remarkable increase in speed, accuracy and reliability. It is because of these important

Features of the computer system that the project was undertaken to further promote the computer awareness and the design of indigenous software.

5.3 RECOMMENDATIONS

Looking at computer operation from the application programs and customized software perspective, it does substantially appear that no meaningful computerization or computer operation can take place without data being manipulated in one way or the other.

That a computer is a powerful and wonderful machine is based on its ability to process data fast and accurately. It is also because of this fact that the following were recommended:

- The Currency Office or Department should forward a proposal to the CBN Management for the actual implementation of the CURRENCY software.
- It is also recommended that with time, the department should be networked in order to decentralize the data entry of the currency.
- Lastly, it is recommended that the CURRENCY Software should be implemented in other branches of the Central Bank of Nigeria.

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Systems

***** main Menu*****

set color to 'w/b'

clear

close all

Bchoice =0

do while .t.

set color to 'gr/w'

@10,26 clear to 15,48

@10,26 to 15,48

@11,27 prompt "Transactions"

@12,27 prompt "Weekly Closure"

@13,27 prompt "Reports Section"

@14,27 prompt "Exit program"

save screen to mk

menu to Bchoice

do case

case Bchoice ==1

do cbn

case Bchoice ==2

do wkstatus

case Bchoice ==3

do reports

case Bchoice ==4

clear

return

Endcase

exit

Enddo

procedure reports

cbchoice =0

do while .t.

set color to 'gr/w'

@13,48 clear to 18,70

@13,48 to 18,70

@14,49 prompt "Stock Position"

@15,49 prompt "Weekly Update"

@16,49 prompt "Deposits/withdrawals"

@17,49 prompt "Exit program"

```
menu to CBchoice
save screen to mk2
do case
  case cBchoice ==1
    do status
  case cBchoice ==2
    do reptdw1
  case cBchoice ==3
    do reptdw
  case cBchoice ==4
    clear
    rest screen from mk
    return
  Endcase
exit
Enddo
```

```
*****
```

```
** This program accept deposite into the transaction file**
```

```
*****
```

```
save screen to mk1
set talk off
set safety off
set color to 'w/b'
clear
close all
sele a
use val_note
index on code to val_note
sele b
use stock
store "Y" to ans
do while ans = "Y"
store space(1) to mresp
store space(3) to mnote
store space(1) to mtype
clear
@9,22 to 15,62 double color 'r+/b'
@10,23 say "Please Specify the Type of Transaction"
```

```

@12,23 say "[ D ] ...Depodite [ W ] ....Withdrawal"
@12,25 say "D" color 'r+/b'
@12,44 say "W" color 'r+/b'
@14,38 get mtype pict "!" valid mtype $ "DW"
read
mch =0
do while .t.
  set color to 'gr/w'
  @16,32 clear to 20,50
  @16,32 to 20,50
  @17,33 prompt "Commercial Banks"
  @18,33 prompt "Banking Office"
  @19,33 Prompt "Exit to main Menu"
  @21,23 say "Use arrow keys to select your choice" color 'w/b'
  menu to mch
  do case
    case mch ==1
      mT_type ="Commercial Banks"
    case mch ==2
      mT_type ="Banking Office"
    case mch ==3
      set color to 'w/b'
      clear
      rest screen from mk1
      return
  Endcase
exit
Enddo
set color to 'w/b'
clear
@10,25 say " Transaction on"
@11,28 to 15,38 doub color "r+/b"
@12,29 say "1. Notes"
@14,29 say "2. Coins"
@16,20 say "Please select your Choice [1-2]" get mresp pict "!" valid mresp $
"12"
read
if lastkey() =27
  clear
  return

```

```
endif
if mresp ="1"
  store "Notes" to mdenomin
Endif
if mresp ="2"
  store "Coin" to mdenomin
Endif
clear
@8,20 say "Select type of currency with arrow keys " && please use chr(?)
mchoice =0
do while .t.
  set color to 'gr/w'
  @10,26 clear to 15,48
  @10,26 to 15,48
  @11,27 prompt "Mint"
  @12,27 prompt "Counted & Audited"
  @13,27 prompt "Awaiting Examination"
  @14,27 prompt "Time Expired Mint"
  menu to mchoice
  do case
  case mchoice ==1
    mcurrency ="Mint"
    do count
  case mchoice ==2
    mcurrency ="Counted & Audited"
    do count
  case mchoice ==3
    mcurrency ="Awaiting Examination"
    do count
  case mchoice ==4
    mcurrency ="Time Expired"
    do count
  Endcase
exit
Enddo
set color to 'w/b'
clear
@9,24 to 11,51 color 'r+/b'
@10,25 say "More Transaction [Y/N] " get ans pict "!" valid ans $ "YN"
read
```

```
Enddo
rest screen from mk1
return
```

```
procedure count
set color to 'w/b'
clear
@12,21 to 16,48 doub color 'gr+/b'
if mresp ="1"
    @13,22 say "Enter value of Note" get mnote pict "99"
    read
Endif
if mresp ="2"
    @13,22 say "Enter value of Coin" get mnote pict "99"
    read
    mmnote =rtrim(mnote)+"k"
    store mmnote to mnote
Endif
mnum =space(3)
@15,22 say "Enter Number of Boxes" get mnum
read
sele a
go top
locate for code =mnote .and. curr_type =mcurrency
*seek (mnote .and. (curr_type =mcurrency))
if found()
    store value to mvalue
    store (mvalue*val(mnum)) to mface_val
    if mtype ="D"
        store NumOfBox to mnumBox
        store(mNumBox+val(mnum)) to mNumOfBox
        store FaceValue to mFace
        store(mFace+mFace_val) to mFaceValue
        repl NumOfBox with mNumOfBox
        repl FaceValue with mFaceValue
    endif
    if mtype ="W"
        store NumOfBox to mnumBox
        store(mNumBox-val(mnum)) to mNumOfBox
        store FaceValue to mFace
```

```
store(mFace-mFace_val) to mFaceValue
repl NumOfBox with mNumOfBox
repl FaceValue with mFaceValue
endif
sele b
append blank
repl Currency with mcurrency
repl Denomin with mdenomin
repl Note with Mnote
repl Face_valu with mface_val
repl Date with date()
repl Num with mnum
repl T_type with mT_type
if mtype ="D"
    repl tran_type with "Deposit"
endif
if mtype ="W"
    repl tran_type with "Withdrawal"
endif
else
clear
@10,20 say "The Value of Note/Coin Entered does not exist"
wait +space(20)+"press any key to try again"
endif
rest screen from mk1
return
```

* Report Section

```
set talk off
set safety off
close all
clear
use val_note
n =5
m =8
t ='stock.rpt'
set printer to &t
set device to print
*set device to file 'stock.txt'
```

```

@1,27 say "CENTRAL BANK OF NIGERIAL, MINNA"
@2,29 say "STRONGROOM STOCK POSITION"
@3,27 SAY "=====
@n,00 say "Denominations"
@n,14 say "Mint"
@n,20 say "Counted &"
@n,31 say "Awaiting"
@n,45 say "Time"
@n,55 say "Total"
@n,69 say "Face"
@n+1,03 say "Notes"
@n+1,20 say "Audited"
@n+1,31 say "Examination"
@n+1,44 say "Expired"
@n+1,55 say "Boxes"
@n+1,69 say "Value"
@n+2,00 say replicate("=",80)
sele c
use control
sele a
use val_note
sele b
use Temp
zap
sele c
Do while .not. eof()
    store code to mcode
    store rem to mrem
    sele a
    go top
    locate for code =mcode .and. Curr_type ="Mint"
    store NumofBox to mBox1
    store FaceValue to Face1
    go top
    locate for code =mcode .and. Curr_type ="Counted & Audited"
    store NumofBox to mBox2
    store FaceValue to Face2
    go top
    locate for code =mcode .and. Curr_type ="Awaiting Examination"
    store NumofBox to mBox3

```

```

store FaceValue to Face3
go top
locate for code =mcode .and. Curr_type ="Time Expired"
store NumofBox to mBox4
store FaceValue to Face4
faceval =face1+face2+face3+face4
mTbox =mbox1+mbox2+mbox3+mbox4
do val_repl
  sele c
  skip
Enddo
close all
store 0.00 to mMint, mCounted,mAwaiting,mTime,mTbox,mfaceva
store 0.00 to nMint, nCounted,nAwaiting,nTime,nTbox,nfaceva
use temp
Do while .not. eof()
  if Rem ="Note"
    @m,05 say "N"+ltrim(Denomin)
    @m,12 say Mint
    @m,20 say Counted
    @m,31 say Awaiting
    @m,45 say Time
    @m,52 say Tbox
    @m,59 say faceValue
    mMint =mMint+Mint
    mCounted =mCounted+Counted
    mAwaiting =mAwaiting+Awaiting
    mTime =mTime +Time
    mTbox = mTbox+Tbox
    mfaceva =mfaceva+faceValue
    skip
    m =m+2
  else
    skip
  Endif
Enddo
@m,00 say replicate("-",80)
@m+1,00 say "Sub-Total"
@m+1,13 say mMint pict '9999'
@m+1,21 say mCounted pict '9999'

```

```

@m+1,32 say mAwaiting pict '9999'
@m+1,46 say mTime pict '9999'
@m+1,54 say mTbox pict '9999'
@m+1,61 say mfaceva pict '999,999,999,999.99'
@m+2,03 say "Coins"
m = m +4
go top
Do while .not. eof()
  if Rem ="Coin"
    @m,05 say Denomin
    @m,12 say Mint
    @m,20 say Counted
    @m,31 say Awaiting
    @m,45 say Time
    @m,52 say Tbox
    @m,59 say faceValue
    nMint =nMint+Mint
    nCounted =nCounted+Counted
    nAwaiting =nAwaiting+Awaiting
    nTime =nTime +Time
    nTbox = nTbox+Tbox
    nfaceva =nfaceva+faceValue
    skip
    m =m+2
  else
    skip
  Endif
Enddo
@m,00 say replicate("-",80)
@m+1,00 say "Sub-Total"
@m+1,13 say nMint pict '9999'
@m+1,21 say nCounted pict '9999'
@m+1,32 say nAwaiting pict '9999'
@m+1,46 say nTime pict '9999'
@m+1,54 say nTbox pict '9999'
@m+1,61 say nfaceva pict '999,999,999,999.99'
@m+2,00 say replicate("-",80)
@m+3,20 say "Grand Total"
Gtot1 =nTbox+mTbox
Gtot2 =nfaceva+mfaceva

```

```
@m+3,53 say Gtot1 pict '999999'  
@m+3,61 say Gtot2 pict '999,999,999,999.99'  
set device to screen  
!edit &t
```

```
procedure val_repl  
  sele b  
  append blank  
  repl Denomin with mcode  
  repl Mint with mbox1  
  repl Counted with mbox2  
  repl Awaiting with mbox3  
  repl Time with mbox4  
  repl Tbox with mTbox  
  repl Facevalue with faceval  
  repl Rem with mrem  
return
```

```
set talk off  
set exact on  
set device to screen  
set safety off  
use stock  
store ctod(" / / ") to stdate, fdate  
clear  
@8,12 say "Enter the start date" get stdate  
@10,12 say "Enter the stop date" get fdate  
read  
store cdown(stdate) to sstdate  
store cdown(fdate) to ffdate  
if fdate = ctod(" / / ")  
  store stdate to fdate  
endif  
if lastkey() =27  
  clear  
  return  
endif  
store 0.00 to Dface,Wface,B50k, B25k,B10k,B10k,B1k,B1,B50,B20,B10,B5
```

```
store 0.00 to WB50k,  
WB25k,WB10k,WB10k,WB1k,WB1,WB50,WB20,WB10,WB5  
store 0.00 to cB50k, cB25k,cB10k,cB10k,cB1k,cB1,cB50,cB20,cB10,cB5  
store 0.00 to WcB50k,  
WcB25k,WcB10k,WcB10k,WcB1k,WcB1,WcB50,WcB20,WcB10,WcB5  
use stock
```

```
do while .not. eof()
```

```
  if (date >= stdate .and. date <=fdate)
```

```
    if tran_type ="Deposit"
```

```
      if T_type ="Banking Office"
```

```
        if note ="50"
```

```
          B50 =B50 +face_valu
```

```
        endif
```

```
        if note ="20"
```

```
          B20 =B20 +face_valu
```

```
        endif
```

```
        if note ="10"
```

```
          B10 =B10 +face_valu
```

```
        endif
```

```
        if note ="1"
```

```
          B1 =B1+Face_valu
```

```
        endif
```

```
        if note ="50k"
```

```
          B50k =B50k+Face_valu
```

```
        endif
```

```
        if note ="25k"
```

```
          B25k =B25k+Face_valu
```

```
        endif
```

```
        if note ="10k"
```

```
          B10k =B10k+Face_valu
```

```
        endif
```

```
        if note ="1k"
```

```
          B1k =B1k+Face_valu
```

```
        endif
```

```
      Endif
```

```
*****
```

```
    if T_type ="Commercial Banks"
```

```
      if note ="50"
```

```
        cB50 =cB50 +face_valu
```

```
      endif
```

```
if note ="20"
  cB20 =cB20 +face_valu
endif
if note ="10"
  cB10 =cB10 +face_valu
endif
if note ="1"
  cB1 =cB1+Face_valu
endif
if note ="50k"
  cB50k =cB50k+Face_valu
endif
if note ="25k"
  cB25k =cB25k+Face_valu
endif
if note ="10k"
  cB10k =cB10k+Face_valu
endif
if note ="1k"
  cB1k =cB1k+Face_valu
endif
endif
Endif
```

```
if tran_type ="Withdrawal"
  if T_type ="Banking Office"
    if note ="50"
      WB50 =WB50 +face_valu
    endif
    if note ="20"
      WB20 =WB20 +face_valu
    endif
    if note ="10"
      WB10 =WB10 +face_valu
    endif
    if note ="1"
      WB1 =WB1+Face_valu
    endif
    if note ="50k"
      WB50k =WB50k+Face_valu
```

```
endif
if note ="25k"
  WB25k =WB25k+Face_valu
endif
if note ="10k"
  WB10k =WB10k+Face_valu
endif
if note ="1k"
  WB1k =WB1k+Face_valu
endif
endif
if T_type ="Commercial Banks"
  if note ="50"
    WcB50 =WcB50 +face_valu
  endif
  if note ="20"
    WcB20 =WcB20 +face_valu
  endif
  if note ="10"
    WcB10 =WcB10 +face_valu
  endif
  if note ="1"
    WcB1 =WcB1+Face_valu
  endif
  if note ="50k"
    WcB50k =WcB50k+Face_valu
  endif
  if note ="25k"
    WcB25k =WcB25k+Face_valu
  endif
  if note ="10k"
    WcB10k =WcB10k+Face_valu
  endif
  if note ="1k"
    WcB1k =WcB1k+Face_valu
  endif
Endif
Endif
* endif
skip
```

```
else
skip
Endif
Enddo
tt ="ty.rpt"
set printer to &tt
set device to print
*set device to file 'ty.txt'
m =0
*clear
@m+0,35 say "CENTRAL BANK OF NIGERIA"
@m+1,35 say " MINNA BRANCH"
@m+3,06 say "WEEKLY SUMMARY OF DEPOSITS AND WITHDRAWALS
BY COMMERCIAL BANKS AND BANKING OFFICE PERIOD "
+dtoc(stdate)+" TO "+dtoc(fdate)
@m+ 4,00 say replicate("-",147)
@m+6,00 say "DEPOSITS"
@m+6,28 say "N50"
@m+6,43 say "N20"
@m+6,58 say "N10"
@m+6,73 say "N5"
@m+6,88 say "N1"
@m+6,103 say "50k"
@m+6,118 say "25k"
@m+6,133 say "10k"
@m+6,148 say "1k"
@m+ 7,00 say replicate("-",147)
@m+8,00 say "Banking Office"
@m+8,25 say B50 pict "9,999,999"
@m+8,40 say B20 pict "9,999,999"
@m+8,55 say B10 pict "9,999,999"
@m+8,70 say B5 pict "9,999,999"
@m+8,85 say B1 pict "9,999,999"
@m+8,100 say B50k pict "9,999,999"
@m+8,115 say B25k pict "9,999,999"
@m+8,130 say B10k pict "9,999,999"
@m+8,145 say B1k pict "9,999,999"
@m+ 9,00 say replicate("-",147)
*****
@m+10,00 say "Commercial Banks"
```

@m+10,25 say cB50 pict "9,999,999"
@m+10,40 say cB20 pict "9,999,999"
@m+10,55 say cB10 pict "9,999,999"
@m+10,70 say cB5 pict "9,999,999"
@m+10,85 say cB1 pict "9,999,999"
@m+10,100 say cB50k pict "9,999,999"
@m+10,115 say cB25k pict "9,999,999"
@m+10,130 say cB10k pict "9,999,999"
@m+10,145 say cB1k pict "9,999,999"
@m+ 11,00 say replicate("-",147)

@m+12,00 say "TOTAL"
@m+12,25 say (B50+cB50) pict "9,999,999"
@m+12,40 say (B20+cB20) pict "9,999,999"
@m+12,55 say (B10+cB10) pict "9,999,999"
@m+12,70 say (B5+cB5) pict "9,999,999"
@m+12,85 say (B1+cB1) pict "9,999,999"
@m+12,100 say (B50k+cB50k) pict "9,999,999"
@m+12,115 say (B25k+cB25k) pict "9,999,999"
@m+12,130 say (B10k+cB10k) pict "9,999,999"
@m+12,145 say (B1k+cB1k) pict "9,999,999"
@m+ 13,00 say replicate("-",147)

*@m+13,00 say replicate("-",147)
@m+16,00 say "WITHDRAWALS"
@m+16,28 say "N50"
@m+16,43 say "N20"
@m+16,58 say "N10"
@m+16,73 say "N5"
@m+16,88 say "N1"
@m+16,103 say "50k"
@m+16,118 say "25k"
@m+16,133 say "10k"
@m+16,148 say "1k"
@m+ 17,00 say replicate("-",147)
@m+18,00 say "Banking Office"
@m+18,25 say WB50 pict "9,999,999"
@m+18,40 say WB20 pict "9,999,999"
@m+18,55 say WB10 pict "9,999,999"
@m+18,70 say WB5 pict "9,999,999"

@m+18,85 say WB1 pict "9,999,999"
@m+18,100 say WB50k pict "9,999,999"
@m+18,115 say WB25k pict "9,999,999"
@m+18,130 say WB10k pict "9,999,999"
@m+18,145 say WB1k pict "9,999,999"
@m+ 19,00 say replicate("-",147)

@m+20,00 say "Commercial Banks"
@m+20,25 say WcB50 pict "9,999,999"
@m+20,40 say WcB20 pict "9,999,999"
@m+20,55 say WcB10 pict "9,999,999"
@m+20,70 say WcB5 pict "9,999,999"
@m+20,85 say WcB1 pict "9,999,999"
@m+20,100 say WcB50k pict "9,999,999"
@m+20,115 say WcB25k pict "9,999,999"
@m+20,130 say WcB10k pict "9,999,999"
@m+20,145 say WcB1k pict "9,999,999"
@m+ 21,00 say replicate("-",147)

@m+22,00 say "TOTAL"
@m+22,25 say (WB50+WcB50) pict "9,999,999"
@m+22,40 say (WB20+WcB20) pict "9,999,999"
@m+22,55 say (WB10+WcB10) pict "9,999,999"
@m+22,70 say (WB5+WcB5) pict "9,999,999"
@m+22,85 say (WB1+WcB1) pict "9,999,999"
@m+22,100 say (WB50k+WcB50k) pict "9,999,999"
@m+22,115 say (WB25k+WcB25k) pict "9,999,999"
@m+22,130 say (WB10k+WcB10k) pict "9,999,999"
@m+22,145 say (WB1k+WcB1k) pict "9,999,999"
@m+ 23,00 say replicate("-",147)
ledit &tt

save screen to mk2
set talk off
set exact on
set safety off
use stock
store ctod(" / / ") to stdate, fdate
clear

```

@8,12 say "Enter the start date" get stdate
@10,12 say "Enter the stop date" get fdate
read
store cday(stdate) to sstdate
store cday(fdate) to ffddate
if fdate = ctod(" / / ")
  store stdate to fdate
endif
*if sstdate <> "Monday" .or. ffddate <> "Friday"
* clear
* @10,20 say "illegal specification of transaction date"
* @12,20 say "The start date is suppose to be monday and Stop date
Friday"
* wait +space(20)+"Press any key to continue..."
* return
* else
store (stdate-2) to newdate
use wkstatus
locate for date =newdate
if found()
  store N50 to NN50
  store N20 to NN20
  store N10 to NN10
  store N5 to NN5
  store k50 to Nk50k
  store k25 to Nk25k
  store k10 to Nk10k
  store N1 to NN1
else
clear
@10,20 say "There was no transaction closure on this day"
@11,20 say "please try again"
* go to menu
wait +space(20)+ "Press any key to continue.."
return
endif
*endif
if lastkey() =27
clear
rest screen from mk2

```

```

return
endif
store 0.00 to Dface,Wface,N50k,
N25k,N10k,N10k,N1k,N1,Nm50,Nm20,Nm10,Nm5
store 0.00 to WN50k,
WN25k,WN10k,WN10k,WN1k,WN1,WNm50,WNm20,WNm10,WNm5
use stock
do while .not. eof()
  if (date >= stdate .and. date <=fdate)
    if tran_type ="Deposit"
      if note ="50"
        Nm50 =Nm50 +face_valu
      endif
      if note ="20"
        Nm20 =Nm20 +face_valu
      endif
      if note ="10"
        Nm10 =Nm10 +face_valu
      endif
      if note ="1"
        N1 =N1+Face_valu
      endif
      if note ="50k"
        N50k =N50k+Face_valu
      endif
      if note ="25k"
        N25k =N25k+Face_valu
      endif
      if note ="10k"
        N10k =N10k+Face_valu
      endif
      if note ="1k"
        N1k =N1k+Face_valu
      endif
    endif
    if tran_type ="Withdrawal"
      if note ="50"
        WNm50 =WNm50 +face_valu
      endif
      if note ="20"

```

```
WNm20 =WNm20 +face_valu
endif
if note ="10"
  WNm10 =WNm10 +face_valu
endif
if note ="1"
  WN1 =WN1+Face_valu
endif
if note ="50k"
  WN50k =WN50k+Face_valu
endif
if note ="25k"
  WN25k =WN25k+Face_valu
endif
if note ="10k"
  WN10k =WN10k+Face_valu
endif
if note ="1k"
  WN1k =WN1k+Face_valu
endif
endif
skip
else
skip
Endif
Enddo
tty ='week.rpt'
set printer to &tty
set device to print
*set device to file 'ty.txt'
m =0
*clear
@m+1,35 say "CENTRAL BANK OF NIGERIA"
@m+3,30 say "MINNA BRANCH"
@m+3,60 say "Currency in Store Return for the Week ended "+dtoc(fdate)
@m+5,04 say "Note"
@m+5,51 say "N50"
@m+5,63 say "N20"
@m+5,75 say "N10"
@m+5,87 say "N5"
```

@m+ 6,04 say replicate("-",96)
@m+7,04 say "A. Stock held at close of Business on"
@m+8,10 say newdate
@m+8,46 say NN50
@m+8,58 say NN20
@m+8,70 say NN10
@m+8,82 say NN5
@m+ 9,04 say replicate("-",96)
@m+10,04 say "B. ADD receipts during the period"
@m+11,10 say stdate
@m+11,19 say " - "
@m+11,23 say fdate
@m+11,46 say Nm50
@m+11,58 say Nm20
@m+11,70 say Nm10
@m+11,82 say Nm5
@m+12,04 say replicate("-",96)
@m+14,10 say "SUB-TOTAL:"
@m+14,46 say (Nm50+NN50)
@m+14,58 say (Nm20+NN20)
@m+14,70 say (Nm10+NN10)
@m+14,82 say (Nm5+NN5)
@m+15,04 say replicate("-",96)
@m+16,04 say "C. DEDUCT releases during the period"
@m+18,10 say stdate
@m+18,19 say " - "
@m+18,23 say fdate
@m+18,46 say WNm50
@m+18,58 say WNm20
@m+18,70 say WNm10
@m+18,82 say WNm5
@m+19,04 say replicate("-",96)
@m+20,10 say "D. Stock held at close of business on"
@m+22,10 say fdate
@m+22,46 say (Nm50+NN50-WNm50)
@m+22,58 say (Nm20+NN20-WNm20)
@m+22,70 say (Nm10+NN10-WNm10)
@m+22,82 say (Nm5+NN5-WNm5)

*****This section will produce report for coins*****

m =0

@m+1,35 say "CENTRAL BANK OF NIGERIA"

@m+3,30 say "MINNA BRANCH"

@m+3,60 say "Currency in Store Return for the Week ended "+dtoc(fdate)

@m+5,51 say "N1"

@m+5,63 say "50"

@m+5,75 say "25k"

@m+5,87 say "10k"

@m+ 6,04 say replicate("-",96)

@m+7,04 say "A. Stock held at close of Business on"

@m+8,10 say newdate

@m+8,46 say NN1

@m+8,58 say Nk50k

@m+8,70 say Nk25k

@m+8,82 say Nk10k

@m+ 9,04 say replicate("-",96)

@m+10,04 say "B. ADD receipts during the period"

@m+11,10 say stdate

@m+11,19 say " - "

@m+11,23 say fdate

@m+11,46 say N1

@m+11,58 say N50k

@m+11,70 say N25k

@m+11,82 say N10k

@m+12,04 say replicate("-",96)

@m+14,10 say "SUB-TOTAL:"

@m+14,46 say (N1+NN1)

@m+14,58 say (Nk50k+N50k)

@m+14,70 say (Nk25k+N25k)

@m+14,82 say (Nk10k+N10k)

@m+15,04 say replicate("-",96)

@m+16,04 say "C. DEDUCT releases during the period"

@m+18,10 say stdate

@m+18,19 say " - "

@m+18,23 say fdate

@m+18,46 say WN1

@m+18,58 say WN50k

@m+18,70 say WN25k

```
@m+18,82 say WN10k
@m+19,04 say replicate("-",96)
@m+20,04 say "D. Stock held at close of business on"
@m+22,10 say fdate
@m+22,46 say (N1+NN1-WN1)
@m+22,58 say (Nk50k+N50k-WN50k)
@m+22,70 say (Nk25k+N25k-WN25k)
@m+22,82 say (Nk10k+N10k-WN10k)
set device to screen
!edit &tty
rest screen from mk2
return
```

```
.....
*Weekly Closure
.....
```

```
set talk off
set exact on
set color to w/b
clear
close all
if cday(date()) <> "Friday"
  clear
  @10,20 say "      Illegal closure!!!"
  @12,20 say "You can not close weekly transaction on "+cday(date())
  @9,17 to 15,70 doub color r/b
  wait +space(23) +"Press any key to continue..."
  clear
  return
endif
use temp
do while .not. eof()
  if denomin = "50"
    store facevalue to NN50
  endif
  if denomin = "20"
    store facevalue to NN20
  endif
  if denomin = "10"
    store facevalue to NN10
```

```
endif
if denomin = "5"
    store facevalue to NN5
endif
if denomin = "1"
    store facevalue to NN1
endif
if denomin = "50k"
    store facevalue to NN50k
endif
if denomin = "25k"
    store facevalue to NN25k
endif
if denomin = "10k"
    store facevalue to NN10k
endif
skip
Enddo
use wkstatus
append blank
repl N50 with NN50
repl N20 with NN20
repl N10 with NN10
repl N5 with NN5
repl N1 with NN1
repl k50 with NN50k
repl k25 with NN25k
repl k10 with NN10k
repl date with date()
repl week with cdo(date())
```