COMPUTERISATION OF COMMERCIAL ACTIVITIES IN NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT, MINNA.

BY

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CERTIFICATION

I Certify that this project carried out by Mr. Samuel S.A. Atteh, in the department of Mathematics & Computer Science is fully adequate in scope and quality as a project for the award of Post-Graduate Diploma in computer Science of the University of Technology, Minna.

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DATE

DEDICATION

I dedicated this project to Almighty God, whose mercy and grace make it possible for me and put me through this challenging course a worthwhile part of trade and profession.

The dedication also goes to my father Chief Zaccheous Atteh and my late Mother Madam Abigal Abihawu Atteh, who through their disciplinary upbringing made me what I am today.

I also remember my Dear wife Mrs. Grace Bola Atteh and my children for their patience and understanding throughout the period of the programme.

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ABSTRACT

This project work is concerned with the need to develop computerized procedure for the Commercial Activities in Niger State Agicultural Development project,(NSADP) Minna.

The main emphasis is the computerisation of the commercial activities to replace the existing manual system.

This project first discuss the NSADP and the existing manual system of commercial activities. However, after studying the existing systems and procedures, it was recommended that a computerisation system needs to be designed.

Finally, the mode of operation of the proposed system is analysed, and its stages of implementation. The implementaion is developed in a way to ensure reliability and continuity of commercial activities in Niger State Agricultural Development Project, Minna.

CHAPTER ONE

1.1 INTRODUCTION

The main objectives of the Project were computerization of commercial activities and designing effective formats and controls. The commercial activities are controlled by the Commercial Services Department of the NSADP.

The main function of this Department is the Procurement and distribution of farm inputs like fertilizer, chemicals, seeds and agricultural equipment etc, to farmers through a network of outlets spread all over the state. While rending a valuable service to the farmers, this Department is also expected to be run on sound commercial principles and earn a reasonable profit.

(A) LIST OF LOCATIONS

The commercial activity is spread over the entirely of the Niger State ADP network, as listed below.

(i) **AT MINNA**

NSADP Headquarters, Commercial Department.

Minna Central Stores. Storage of commercial inputs and served as Farm Service Centre (FSC) for large and medium scale farmers.

The field network consists of Zones, Primary Distribution Points (PDP) and Farm Service Centres (FSC)

(ii) **AT ZONES**

The NSADP divided into 3 Zones, semi autonomous. The PDPs and FSCs spread across the three zones. PDPs are located at each

Local Government Area. They act as Central Stores for the LGA. They receive Fertilizer, Chemicals, seeds and Equipment from the Headquarters and distribute them to the FSCs, under their the control.

The FSCs act as the retail selling points in the remote villages to serve the rural farmers. In this process a valuable service is rendered to the farmers who get the inputs at affordable prices within their village. There are 19 PDPs and 124 FSCs, therefore the total number of sales points in the state is 143.

THE OBJECTIVE OF THE PROJECT

The main emphasis of the project are the computerization of the commercial activities and provision for effective information system on sales and collections. This process involves, development of a coding system, introduction of new input formals and installing appropriate underlying system and software development and implementation.

STATUS BEFORE THE COMMENCEMENT OF THE PROJECT

The commercial activities were recorded by a manual process using a formerly adequate set of documents which could be modified, with the addition of a few new formats to form the base for a computerize information system; The introduction of a suitable computerised commercial Accounting System is expected to reduce the manual work load on the staff lists cultivating the habit of day to

day compliance with set procedures and routines. Besides, the qualitative improvement in data generation, and managerial decisions, based on a systematic flow of information are the major advantages expect out of computerization.

1.2 BRIEF HISTORICAL BACKGROUND OF ADP

Prior to independence in 1960, Nigeria economy received little formal attention from government in term of policies and Programmes. Self sufficiency in food, agricultural investment and agricultural development were left to the initiative of the people, 78% of whose adult population was engaged in agriculture.

The post independence period however witnessed remarkable government efforts and involvements in the areas of agricultural, planning policies and Programmes. In the 1970s, the alarming situation and the rapid decline on crops production pushed the federal government and state governments into fresh thinking and action based on direct intervention in agricultural activities. From a facilitating role, the governments virtually assumed the mantle of the producers' role not leaving everything to the private farmers.

The governments evolved a new agricultural policies, launching of fresh agricultural Programmes and multiplication of agricultural institutions. Among the institutions established to enhance agricultural development in the country by governments was the Agricultural Development Projects (ADPs). The Agricultural Development Projects (ADPs) have come to be recognises as the most

significant amongst various types of institutions involved in Agricultural Development. The ADPs were initially established as Pilot projects in 1975 with World Bank assistance. The ADP strategy consisted of identification of improved technologies to enhance agricultural production, transfer of the technology package through a well organized extension system, timely and adequate supply of inputs and strengthening of infrastructural facilities. The first three enclave projects turn out to be a successful experiment, as food production in the enclaves increased, the standard of Living of the farming family also improved. Enthused by the successes, the Federal Government set up more ADPs. The impressive successes of the enclave ADP, the government introduced the multi-state ADP.

The enclave ADP cover only a part of a state, whereas Multi-state ADP covered the entire state.

1.3 OBJECTIVE OF NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT

The Niger State Agricultural Development Project (NSADP) is an offshoot of the former enclave Bida Agricultural Development Project (BADP). The success of the Bida ADP led to the inclusion of Niger State in the Second Multi-State Agricultural Development Project.

The main objective of NSADP are:

i. To support increased agricultural production in the state and the raise the living standard of the population.

ii. To strengthen agricultural Services

iii. To improve the coverage and maintenance of supportive rural infrastructure.

iv. To strengthen Supporting Commercial Services Involving farm inputs such as Fertilizer, agro-chemicals improved seeds and Equipments.

v. To strengthen the management and technical staff capabilities required to carry out agricultural development.

vi. To strengthen the capacity for policy formulation, planning and expenditure programming in the state Ministry of Agriculture and Natural Resources. Thus one of the NSADP major components and activities involve conducting commercial operations in the areas of Purchases and sales of Agricultural Farm Inputs. These activities must be beneficiary to the farming population. All the Farm Inputs and Implements should be made available through out the state at Farm services centre and primary Distribution points networks at a reasonable price. The specific objective of commercial services Department is to establish and operate input supply delivery system.

vii. Provision of assistance in the review and staffing of agricultural institutions in the state.

viii. Improvement in the procurement and distribution of farm inputs in the state.

NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT (NSADP)

The Niger State Agricultural Development Project (NSADP) is an off-shoot of the former enclave Bida Agricultural Development Project (BADP). The BADP existence cover the period of 1980-1987. NSADP become effective in 1989 following the drawn down effectiveness of the World Bank loan with which to finance the project's activities.

The project was Agricultural Development Program to raise the standard of living of the rural farming family in Niger State. It has a life span of 10 years to run in three phases of Four, three and three years period each. The total project cost in the first phase is estimated to be $28.54 million equivalent to ₦146,326 million in 1988. The project is to be financed by 3 funding Agencies.

(1) World Bank 63.7%;

(ii) Federal Government 12.4%

(iii) Niger State Government 23.9%.

The project was divided into Core components and Supporting Components. Commercial Services Department was one of the core components. Its operations were run as a private entity going concern. It has a separate Accounts Department Headed by a Chief Accountant. They prepare Trading and profit and loss Account and Balance sheet. The Commercial Services Department was designed to be semi autonomous as a supply Agency under the NSADP. They procured, store, and fell farm inputs and Equipments to farmers at

a reasonable price that is beneficial to the farming community in Niger State.

1.4 RESEARCH METHODOLOGY

The research approach was based on the following strategy.

i. Studying the existing systems and procedures

ii. Identifying areas requiring improvements/modifications for computerisation and generation of reports.

iii. Develop an underlying system to achieve timely Management Information system requirement in various areas.

iv. The new system is to achieve some set goals that have proved difficult and cumbersome to achieve under the present manual system.

1.5 PROBLEM DEFINITION

Before problem can be solved there must be a clear definition of such problem. However the following questions may help in defining the problem.

i. What is the Problem?

ii. Details of the problem

iii. How significant is the problem?

iv. What are the feasible solution to the problem?

In the cause of defining the problem, computerisation of the Commercial Services Activities was considered to be the tool to solve the identified problems.

1.6 FEASIBILITY STUDY

The main emphasis of the protect are the computerisation of the commercial activities and provision for effective information system on sales and collections. The feasibility study is a preliminary stage that determine whether or not the proposed computerisation system is desirable.

Therefore, it involve the study of the existing system in details in order to provide the management with detail information about the proposed computerisation system.

The feasibility study covers 3 major areas namely:

a. Analysis of the present manual system

b. Design of the computerised system and

c. Testing and implementation of the system.

1.7 FACT FINDING TECHNIQUE

Methods employed for data collection about the present manual system are interview and question are:

i. Interview is a fact finding tool used for collecting information from individual or holding discussions with staff that are involve in the day to day operation of the system in order to ascertain their suggestion and comments and also the relevance of any particular report/statement required by the department.

ii. Questions is an instrument uses to collect information in a written form about various aspect of study from large population. The method will be uses to obtain objective comments from the operators and users of the present system.

CHAPTER TWO

COMMERCIAL ACCOUNTING

The Commercial activities of the project are aimed at ensuring that the inputs are being made available to the farmers in their locality at the correct time and at affordable prices so that the farmers do not have to travel long distance to procure them.

The Commercial Department Procures inputs in bulk and distribute them through the state-wide network of Farm Services Centres (FSCs) to the small and large scale farmers. Procurement of inputs is done with World Bank Loan Funds.

TYPES OF INPUT

The input can be broadly classified into the following categories:-

(a) Fertilizer

(b) Agro-chemical

(c) Improved Seeds

(d) Vegetable Seeds

(e) Agricultural Equipment and Implements

DISTRIBUTION NETWORK

The nerve-centre of the Distribution Network consists of Headquarters and Stores at Minna namely Fertilizer and other Farm Input Stores. All input are first received in these stores. They

are subsequently distributed to the Primary Distribution Points (PDP), and Farm Services Centres (FSC).

The PDPs are located in each Local Government Area. They act both as bulk stores as well as retail outlets. At the grass-root level the Farm Services Centres (FSC) act as the rural outlet serving farming communities is remote areas of the state.

LOCATION

i. The NSADP is divided into three Zones. each zone control a number of PDPs, which in turn control a certain number of FSCs.

ii. There are Two main stores in Minna at Maitumbi for handling Fertilizers and other Farm inputs respectively.

iii. There are 19 PDP stores and 143 FSC stores in the state.

STORES PROCEDURES

NSADP's main stores received all procurement of goods and distributed to the PDPs and FSCs. The store officer prepares Good Receive Note to take on change the materials. The GRN are pre-numbered.

For this purpose brand wise booklet are maintained. All Fertilizer sales are authorized by a Monitoring Committee appointed by the state Government. The sales of other inputs are controlled by NSADP. The store officer prepares a store issue voucher (SIV) in four copies.

When consignment of farm inputs are delivered, the store officer raise store receipt voucher (SRV) Transfer of Fertilizer to other store.

The documentation for transfers is almost similar to that of sales. The store officer prepares SIV for the farm inputs transfer to the PDPs and FSCs.

The transfer to other stores are approved by the principal store officer or Director of Commercial Services.

Commercial services department served as an Input supply entity within the NSADP set up. A separate accounting record were kept by the commercial services Department. They prepare separate financial statement and reports which are consolidate in to the NSADP Accounts and reports.

The commercial Accounting focus on the following Accounting functions.

i. Procurement,

ii. Store Procedure,

iii. Sales,

iv. Banking

v. Ledger Accounts

Vi. Profit and loss statement.

SALES

The sales are effected through the network of selling points, spread throughout the state. They are:

a) The Headquarters at Minna

b) The primary Distribution point (PDP)

c) The farm services centre.

All sales are on cash basis and based on the availability of products.

Document use for cash sales transactions are:

a) Cash Receipt - issued by salesman to the buyer of farm inputs.

b) Stores Issues Voucher (S.I.V) on the basis of the cash Receipt issued by the salesman, the store keeper will issue a stores issue voucher (S.I.V) which is the authority for issue of stores.

c) Consolidated cash collection summary (CCCS), for everyday's collections, the salesman will prepare a CCCS giving reference of the cash Receipts.

d) Daily sales Report. The sales officer will prepare a Daily sales Report form for Daily sales records product wise of the farm inputs.

e) Monthly sales report. The zonal commercial manager will prepare the monthly sales report form on product wise for submission to the commercial accounts division.

BANKING

All daily cash sales have to be banked by the sales officer or salesman on daily basis. The sales officer will forward the following document to the commercial accounts division.

a) Bank Teller, b) CCCS, c) SIV, d) Cash Receipt.

These document will be attached to the daily sales report form. The commercial account division will acknowledge the receipts of the documents.

The accountant will than check the dates of the banking and ensure that the cash collected is banked within 3 days of the sales.

STORE ACCOUNTING

The commercial stores accounting involve the recording of all purchase in stock ledger account for fertilizer and other farm inputs.

The commercial account division will received the SRV from store Division, cost and entered the value for individual products on the SRV before posting to the stock ledger Accounts.

All the sales cr transfer have to be posted into the stock ledger. The entry in the stock ledger must be posted on daily basis.

At the end of every month, stock balance of each item or product will be prepare for management. Information and decision making.

LEDGER ACCOUNT

The central record in which all financial transaction of the NSADP are recorded in the form of accounts under double entry system, is called the general Ledger. All transaction of the NSADP are recorded on transaction documents (basic documentary evidence

of transaction) and from there transaction amounts and relevant reference data required for recording in the General Ledger are copied into data input documents. These data input documents from 'Books of Original Entry' in accounting Parlance. The channel of transactions is the documentary evidence to input documents and unto General Ledger to form accounts.

SALES LEDGER

The control record in which all sales transactions are recorded before pasting to relevant accounts in the General Ledger the sales ledger shows the total sales made product wise and location wise. This is the source for all Journal entries to Sales Book.

PURCHASE LEDGER

The control record in which all purchases transactions are recorded before posting to relevant accounts in the General Ledger. The purchases ledger shows the total purchases on product wise. This is the source for all Journal entries to purchase book.

STOCK LEDGER

The control record in which all stock transaction are recorded. The stock ledger shows the total stock on product - wise and location-wise.

2.2 OBJECTIVE OF COMMERCIAL ACTIVITIES

The objective of the commercial activities is to direct the course of conduct of all activities relating or incidental to supply and sales of Farm inputs in such manner that the inputs get to the Farmers at the right time for the increase in agricultural products.

The main function of the commercial department is the procurement and distribution of farm inputs like Fertilizer, Chemicals, Seeds and Agricultural equipment to Farmer through a network of outlets. The commercial activities is expected to be run on sound commercial principles and earn a fair profit margin. The commercial activities of Agricultural Development Project cannot be run on Public Accounting principle, where the motive is service to the people without any regards to capital outlay and Return on Capital.

As the main investment on the commercial activities is the World Bank Loan used to procure Farm Input on a revolving loan, hence there is need for proper Book-keeping and Accounting entries to be maintained for periodic and timely preparation of Accounts and Financial reports for management decision.

The functions of the commercial activities in the Agricultural Development Project System or

i. Procurement of Improved Farm Inputs

ii. Distribution of Farm Inputs

ii. Sales of Farm Inputs to targeted farming family in the state.

One of the main objective is to enable farmers benefitted on any new Technology or Improve farm produces at a reasonable price.

2.3 COMMERCIAL ACTIVITIES IN NSADP

OBJECTIVE

The Commercial Activities of the NSADP are aimed at ensuring that the Farm Inputs are being made available to the farmers in their locality at the appropriate time and at affordable prices so that the farmers do not have to travel long distance to procure them.

FUNCTION

The Commercial Department procure the input in bulk and distributes them through the state-wide network of Farm Services Centres (FSCs) to the small and large farmers. The NSADP work in close liaison with the state government for the procurement and distribution of Fertilizer, being a controlled commodity. Procurement of other Farm Inputs and Implements are done with World Bank Loan Funds. The loan is incremental and Revolving.

TYPE OF INPUT

The input can be broadly classified into the following categories.

a. Fertilizers

b. Agro-chemicals

c. Improved Seeds

d. Improved Vegetable

e. Agricultural Implements/Equipments

DISTRIBUTION NETWORK

The nerve-centre of the Distribution Network consists of two stores at Headquarters at Minna namely the Fertilizer and other Farm Inputs Bulk Stores. All inputs are first received into these stores before they are subsequently distributed to the Primary Distribution Points (PDP), and Farm Service Centres (FSC).

The PDPs are located in each Local Government Area, they act both as bulk stores as well as retail outlets.

The Farm Service Centres (FSC) act as the rural outlets serving farming communities is remote areas as retail outlets only.

LOCATION

The NSADP is divided into three Zones. Each zone controls a number of PDPs, which in turn control a certain number of FSCs. The zones was set up to be semi autonomous. Input have to be delivered to the each zonal Headquarters. The zone will distribute to the PDPs and FSCs.

There are two main stores in Minna NSADP Headquarter, 19 PDP stores and 143 FSC stores in the state.

The commercial activities is controlled by the Commercial Services Department of the NSADP. The Department is Headed by a Director, the Zonal Offices is headed by Zonal Commercial Manager. A chief accountant headed the accounts division, and a principal store officer headed the stores division.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

3.1 ANALYSIS

The commercial activities of the NSADP are recorded by a manual process using a fairly adequate set of documents which could be modifies to form the base for a computerised information system. From my investigation and study, the present problems centre around the lack of proper follow up rather than the absence of proper procedures.

The introduction of computerised commercial accounting system is expected to reduce the manual work load on the staff.

The analysis is concerned with the study and gathering of data about the existing manual system used for Commercial Accounting. The identification of problems and difficulties encountered by the Accounting staff and the factor that influence the management to introduce computer into commercial accounting.

In the system analysis this regard, is concerned with the NSADP management objective is converting information and data from manual processing to method of computerization.

Full detailed study was carried out of the current manual system of commercial accounting to establish the following.

a. Procedures

b. Information flows

c. Methods of work, organisation and control.

3.1.1 **PROCEDURES**

The commercial services department activity can be summarized into four broad areas:

(i) Procurement (ii) Storage and Distribution (iii) Sales, Banking and Accounts (iv) Management.

3.1.2 **INFORMATION FLOW**

The main function of Commercial Services Department is the procurement, Distribution and Sales of farm Inputs. The information flow is triggered by Management action plan for Farm Inputs for a particular period of time, the information flow circle will run from the action plan through procurement, Distribution, Sales and Accounting.

3.1.3 **METHOD OF WORK**

The commercial activities were recorded by a manual processing using a fairly adequate set of documents which could be modified, with the addition of few new formats to form the base for a computerization information system. The commercial activities are controlled by the commercial services department of NSADP.

The study is the introduction of computerised commercial accounting system for the NSADP commercial activities. The computerization is expected to reduce the manual work load of the staff while cultivating the habit of day to day compliance with set procedures and routines. It will also improve the quality of data

generation, managerial decisions, based on a systematic flow of information. These are the major advantages expected out of the computerization.

3.2 THE EXISTING SYSTEM

The commercial activities were recorded by manual process using a fairly adequate set of documents which could be modified, with the addition of a few new formats.

The major features of the existing system were:

i. All the sales documents from the PDPs/FSCs/HQ stores were centrally processes by the commercial accounts section.

ii. Journal entries were passed for sales but no sales ledger was maintained.

iii. No coding of sales locations or products was done

iv. The Accounting system was effective enough to meet the normal accounting requirements. The intend managerial information available was not adequately planned and required qualitative improvement.

v. Internal controls were inadequate particularly in the area of sales and collection of cash.

vi. The routine work of the commercial accounts section were not always up to date as a result of logistic problems.

vii. Stock Control System were existing, it lack systematic arrangement for compilation of data with check and balances. It was observed that the difficulties centered around the lack of proper follow-up and updating rather than the absence of proper procedure the existing system.

3.2.1 COMMERCIAL SALES

Sales activities takes place at FSC's through the salesmen throughout the state. Zonal Commercial Managers and Zonal Sales Officers Co-ordinate the sales activities. Sales returns are submitted weekly from the FSCs to the Zonal Commercial Managers. The Zonal Commercial Managers submit their sales reports monthly to Headquarters.

The form use for the submission is "consolidated cash collection sales summary (CCCS)". The cash receipt, S.I.V have to be attached to the CCCS.

The sales report are prepared on zonal-wise monthly.

3.2.2 COLLECTION AND BANKING

The salesman collects cash against each sales and issue cash receipt, which the store keeper will use as an authority to raise a store issue voucher S.I.V to release the item. The respective sales officers from Zonal Headquarter collected each day cash receipts, he will prepared the sales area consolidated cash summary. This report is referenced to the respective cash receipt and S.I.V and the total cash deposited into the bank accounts maintained for sales remittances. At the end of the month, the amount deposits in these banks are transferred to the project Headquarters Bank Account.

3.2.3 OPERATION OF COMMERCIAL ACCOUNT

Commercial Accounts as applies to recording of transaction involves in the procurement, distribution, storage, sales and banking of Farm Inputs on Daily basis.

Procurement of Farm Inputs is initiated by the project management on anticipated demand by the farmers. But Fertilizers is received from the Federal Government on approved allocation to each state of the Federation. The procurement are done in accordance to laid down procedures by the Project Management and the World Bank procurement procedure.

The following categories of procurement are carried out:

i. Prie Quotation

ii. Local Competitive Bidding

iii. International Competitive Bidding

Each of the categories have its criteria to followed and Form/Documentation.

All procurement request will be submitted to the procurement committee. Quotations are approved by the procurement committee.

3.2.4 **COMMERCIAL ACCOUNTING**

Information on Commercial sales activities was under the 3 zones cash are collected and channeled through the zonal offices to the headquarters commercial department using the following report/documents.

(a) Cash Receipt

(b) Daily Sales Summary

(c) Sales Area Consolidated Cash Sales Summary

(d) Monthly Sales Report

(e) Monthly Stock Report

(f) Bank Teller Copy

(g) Profit and loss on sales of Farm Inputs.

These reports are presently done by a manual process. A statement of profit and loss on sales of Farm Inputs is prepared manually at project Headquarters from data received from Zones.

3.2.5 COMMERCIAL STORE

Received Farm Inputs, stores and distribute in accordance with the approve allocation to each zones, PDPs and FSCs.

Stores issues out inputs as per laid down procedures i.e. on presentation of cash receipt, the storekeeper issue S.I.V to remove the item from the store.

Documents used to record various stores transactions relating to commercial store:

a. Good Received Note (GRN)

b. Tally Card

c. Stores Issue Voucher (S.I.V)

d. Internal Fertilizer Transportation Contract Form

e. Authority to Load

3.3 SYSTEM DESIGN

This is the stage where the proposed system is design for both clerical and computer procedure, data capture and management information system.

The method selected for the new system was the selection of some of the present set of documents been used, which are fairly adequate to be modified with the design of few new formats to form the base for computerised information system.

The files and programs are kept as simple as possible to be users friendly in relation to computerization of commercial accounting of the NSADP.

3.3.1 THE DESIGN OF THE PROPOSED SYSTEM

After the system analysis which produces details description of the existing manual systems and highlights the areas where improvement is needed then the next stage of the proposed system is the system design.

The initial step toward system design is the identification of system requirements, and the formulation of design alternative.

The requirements are those feature or details that have to be incorporated to the propose system to produce the desired result.

In designing the system, the following strategy is adopted.

i. Identifying areas that require improvements/modifications for computerization by the organisation (ADP).
ii. Develop an underlying system to achieve the computerization requirements of the Commercial Accounting
iii. Ensure that the proposed system is easy to operate, understood by all the staff who are in charge of implementation, and which requires minimum changes in the existing systems.
vi. Flexibility:- The propose system should be possible to modify in future to enhance efficiency.
v. Maintainability:- The system should be maintain and can be sustained in the long run.
vi. The staff in adequately train to carry out the new system.

vii. Develop trouble shooting devices for self correction within the project environment.

The system must be able to minimize human error associated with a manual system, it must be efficient and portable and should be users friendly.

3.4 FEATURES OF DBMS

The proposed system is recommended to be Database System.

What is Database?

A database can be defined as a mechanised share and centrally controlled collection of data used in an organisation. It is regarded as any collection of useful information organised in a system and consistent manner. It is an organized databank where data are stored. A database management system is a software that construct, expands and maintain the data contained in database. It also provide the interface between the users to record, organise, select, summarise, extract, report on, and otherwise manage data contained in a database.

DBMS programs keep information in files, and within each file is a collection of related information. The data in a file are organized into rows and column with each row making up a record. A column of data is known as a field. The main purpose of DBMS is to organise data into easy form of useful information. To achieve the goal, data base management software programs provide the following features:

- Creating the database
- querying the data base
- updating the database

Defining the database - it involves describing the characteristics of the data items in each file. A data item (field) is characterised by its name, type and width. Updating database involves adding, deleting, editing or updating a given set of data items.

3.4.1 ADVANTAGES OF DATABASE MANAGEMENT SYSTEM

Database management system help user achieve the following:-

i. Increasing the integrity of data
ii. Reduce data duplication and inconsistency
iii. Provides a single information source for effective management
iv. Data independence can be achieved
v. Data processing
vi. Data are centrally controlled

3.5 FORM DESIGN

The existing formats used have been devised for manual accounting operations. They need modifications for computerization as well as for preparation of sales and stock returns. The changes also take care of improvements in their functional efficiency and effectiveness.

The following forms have been designed for inputs data into the computer:-

(i) Store Receipt Voucher

(ii) Store Issue Voucher

iii) Sales Area consolidated cash collection summary

(iv) Cash Receipt

(v) Teller Control Form

(vii) Stock Transfer Advice

viii) Batch Control Sheet

The form design describes all data inputs of the proposed system in order flow of documents. The Inputs Form Designed as per the Annexure.

The following strategy was adopted in the form design:-

i. Ensure that the new form design is easy to operate.

ii. Codification of locations and products.

iii. Require minimum modification and changes in the existing system.

3.6 FILE SPECIFICATION

It describes the file structure and organisation of all data inputs of the proposed system. The file handling depends on Input/Output requirement and data volume to be retained in the system for reference purposes or updating. The file specification have to have the following considerations.

i. Arrangement for easy access

ii. Sensible size for an output file

iii. Suitable storage facility

iv. File security

The File specification was designed to use five Database Files:-

i. Bank.DBF

ii. Location.DBF

iii. Production.DBF

iv. Batch DBF

v. Sales summary.DBF

Data models define the structure of files and make clearer data needs of the organisation. They also help to segregate data into separate files or its integrate data structure when developing data-base. A database structure contain description of each filed in a data records. The five database file dbf designed for the proposed system have three transaction files and the structure for database field name is as follows

i. Field name - Bank DBF

   (a) Bank Code

   (b) Bank Name

   (c) Account No.

ii. LOCATION DBF

   (a) Location

   (b) Zone

   (c) Local Government Area

   (d) PDP

   (e) FSC

   (f) Bank Code

iii. PRODUCT DBF

(a) Product Code

(b) Product Name

(c) Unit of Measurement

(d) Unit Price

iv. BANK TOTAL DBF

(a) Year and Month

(b) Location

(c) Bank Total Date

(d) Batch Number

(e) Bank Code

(f) Amount Deposited

(g) CCS Number

(h) Validation

(i) Posted

v. CASH SALES DBF

(1) Year and Month

(2) Location

(3) CCS Date

(4) CCS No

(5) Product Code

(6) Unit of Measurement

(7) Quantity Sold

(8) Unit Price

(9) Sales Value

(10) Validation

(11) Posted

CASH SALES.DBF

FIELD	FIELD NAME	FIELD TYPE	WIDTH	DEC	INDEX
1	YYMM	NUMERIC	4	-	N
2	LOCATION	CHARACTER	5	-	N
3	CCSDATE	DATE	8	-	N
4	CCSNO	NUMERIC	6	-	N
5	PROD CODE	CHARACTER	4	-	N
6	UOM	CHARACTER	4	-	N
7	QTYSOLD	NUMERIC	9	3	N
8	UNIT PRICE	NUMERIC	9	2	N
9	SALE VALUE	NUMERIC	12	2	N
10	VALID	CHARACTER	1	-	N
11	POSTED	CHARACTER	1	-	N

BATCH.DBF

FIELD	FIELD NAME	FIELD TYPE	WIDTH	DEC	INDEX
1	YYMM	NUMERIC	4	-	N
2	LOCATION	CHARACTER	5	-	N
3	BTDATE	DATE	8	-	N
4	BTNO	NUMERIC	6	-	N
5	BANK CODE	CHARACTER	6	-	N
6	AMOUNT DEPOSIT	NUMERIC	10	2	N
7	CCS NO	NUMERIC	6	-	N
8	VALID	CHARACTER	1	-	N
9	POSTED	CHARACTER	1	-	N

PRODUCT.DBF

FIELD	FIELD NAME	FIELD TYPE	WIDTH	DEC	INDEX
1	PRODUCTION CODE	CHARACTER	4	-	N
2	PRODUCTION NAME	CHARACTER	30	-	N
3	UOM	CHARACTER	4	-	N
4	UNIT PRICE	NUMERIC	10	2	N

BANK . DBF

FIELD	FIELD NAME	FIELD TYPE	WIDTH	DEC	INDEX
1	BANK CODE	CHARACTER	6	-	N
2	BANK NAME	CHARACTER	35	-	N
3	ACCOUNT NO	CHARACTER	7	-	N

LOCATION .DBF

FIELD	FIELD NAME	FIELD TYPE	WIDTH	DEC	INDEX
1	LOCATION	CHARACTER	5	-	N
2	ZONE	CHARACTER	15	-	N
3	LG AREA	CHARACTER	15	-	N
4	PDP	CHARACTER	15	-	N
5	FSC	CHARACTER	15	-	N
6	BANK CODE	CHARACTER	6	-	N

SALES AREA CONSOLIDATED CASH COLLECTION SUMMARY

STORES: -------- PDP:------- DATE:-------

CODE NO: ☐☐☐☐ LOCATION NO:- ☐☐☐☐

PRODUCT CODE	PRODUCT DESCRIPTION	UOM	QUANTITY	UNIT PRICE	SALES VALUE

Cash ₦: _____

Handed over to: _____

By: _____

On: _____

Time: _____

Bank on: _____

Received at Headquarter on _____

Signature:- _____

BATCH CONTROL SHEET

DATE:- ☐☐☐☐☐☐

FROM:

DOCUMENT PERIOD

FROM:- ☐☐☐☐☐☐

TO:- PRINCIPAL COMMERCIAL ACCOUNTANT HQ

TO:- ☐☐☐☐☐☐

DOCUMENT SENT

ITEMS	PERIOD		TOTAL	RECEIVED BY HQ	
				NAME	SIGN

SENT BY:- ZONAL COMMERCIAL MANAGER/SALES OFFICER
SIGNATURE

STOCK TRANSFER ADVICE

DOCUMENT REFERENCE NO: LOCATION FROM: CODE:			DOCUMENT DATE: LOCATION TO: CODE:		
STOCK CODE	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	VALUE

TOTAL NO OF ITEMS:

TRANSFERRED BY: TALLY CARD REFERENCE: STORE KEEPER/STORE OFFICER:	RECEIVED BY: TALLY CARD REFERENCE: STORE KEEPER/STORE OFFICER:

CHAPTER FOUR

4.1 IMPLEMENTATION

Implementation is the process of applying the developed system for the purpose meant for. System Implementation involves development of quality assurance procedures, including data security, back-up, recovery and system control. System Implementation objective is to complete the orderly and unobtrusive installation of the new system. During the system implementation, new system installed, in a test directory, where users received the opportunity to operate the new system "in parallel" with the existing system.

The system implementation comprises the following task:-

i. Application system installation: The software developed installed.

ii. Documentation: To provide user manuals

iii. Users Training - Training of users personnel on all aspects of the operation of the system.

iv. Parallel System Testing:- The database system develops under the new system run parallel against the existing system.

v. Data conversion:- Upon the conclusion of the parallel testing task, the system analyst will assist the Users personnel in the conversion and transfer of all required data from existing system into new system.

vi. Acceptance of Testing: The system analyst assisted by the User's Personnel in conducting testing of the new system

developed to ensure the system meet all Users need and requirements.

4.2 DOCUMENTATION

The system had been designed and developed using hierarchial menu-structure with on-line help whenever applicable and even with password control. The system Users manual to explain its operations. This most helpful to whoever will operate or maintain the system, especially if a programming error has to be corrected, modified to include new features.

End Users documentation consist of a set of manuals designed to instruct personnel on the operation and administration of the system.

For example, in Commercial Accounting, while a normal authorisation user can change product details such as codes, description, unit of measurement etc, changes to price data requires a password authorisation.

The system has the following menu system:-

i. Data validation have been incorporated into the system to capture specific data validation check for each item of data. Monthly validation reports would be produced for each source document.

ii. Sales Ledger developed for data on sales by location wise to be capture on daily basis from each source document. Sales ledger is where all sales data are recorded.

iii. CCS validation report has been incorporated cash collection

summary (CCS) from each sales location and zonal sales offices.

iv. Product-wise Monthly Sales Report is to capture the sales on product-wise monthly from Data validation report.

v. Collection Bank Deposit Register is to capture the amount paid into various Bank Accounts scattered all over the state. The Collection Bank Deposit Register would be produced monthly to enable management know total amount remitted into each Bank Accounts.

vi. Location-wise sales report have been incorporated to capture sales generated by each PDPs and FSCs. The report will enable the project management establish and monitor sales from each location.

vii. Financial Accounting Journal Voucher (JV) has been designed to capture data from the commercial Accounting system process, to produce all data required to pass journal entries into Financial Accounting System along with suitable controls to guide against errors.

viii. Stock Monthly Report has been incorporated to capture specific data on stock transaction and extract monthly stock received issues and stock balance report.

These main menu system will prompt the user to enter the first letter of any of the available options to choice or Pick.

4.3 SYSTEM TESTING

After the installation of the new system, if management

approves the design, them the system must undergo test, once all programs have been written and the training of departmental personnel is completed. The system testing is to ensure that all the programs have been efficiently and correctly written. The system testing will entail execution of the program with text data to enable the system developer and management to know the operational efficiency of the system.

The system testing will also enable the designer to correct error and delete programs that are not efficient by debugging process with text data input into the programs to produce the desired output reports.

During this task, Programmers or System Designer assist the project staff in conducting testing of the system developed to ensure that the system meets all users needs and requirements. System testing entails the testing and certification of the system developed. Testing is conducted to determine if the physical data model implemented properly represents the conceptual model. This phase ensures that all require features, functions, and capabilities are present in the system developed, and that all other requirements are met. Any necessary revision are made during system testing.

4.4 HARDWARE REQUIREMENT

Major options for system design include mainframe computers, minicomputers, and microcomputers. The choice depends on the task to be done. Factors in selection of the Hardware requirements

depend on the software package developed for the system.

The system design should be able to establish the volume and capacity of the software package before determining the hardware requirement.

In this system the Hardware Requirements are:-

(a) Microcomputer with RAM 640 KB, CPU model 80586 Hard disk (MB) 30; Floppy $3^{1/2}$.

(b) Peripherals; Dax matrix print, Laser Jet Printer, Tape Drive for Back up.

Microcomputers represent the small-scale end of the continuum. Since the entire central processing unit (CPU) is on a single microprocessor chip, it is possible to house the entire microcomputer system in a desk-top or even a portable unit. While it is possible to configure microcomputers as multi-user machine, they are usually stand - alone, single user machine.

Microcomputer based system make computer experimentation more financial feasible, not only because of relatively low cost but also because implementation can proceed in gradual stages.

Since microcomputers require less support personal than either mainframes on minicomputers, recurrent costs are substantially lower.

The computer should have a speed of at least 40 MHZ to aid fast processing of records and also UPS which can store power for a period of time, about 45 minute in case of power failure.

4.5 CHANGE OVER

The change over from old to the new system may take place when the system has been proved to the satisfaction of the system analyst and the other implementation activities have been completed. The Users managers (NSADP) are satisfied with the result of the system tests, training of staff and reference manuals.

The method and approach used for the change our is the parallel running method. The parallel system testing means processing current data by both the old and new system to cross check the results. Its main advantage is that old system is kept alive and operational until the new system has been proved for at least one system circle. Using full live data in the real operational environment of the equipments, people and data. The results of the new system will be compared with the old system to ensure it efficiency, capability and durability before acceptance by the user.

Once the change over ends and the user staff complete their training, and the parallel system testing is successful, the change over task is designed to ensure that the software developed replicate the functionality of the system to be replaced.

After the change over, system will move to an on-line directory, and users may commence operation.

CHAPTER FIVE

5.1 CONCLUSION

Computerization involves issues of people and management as well as hardware and software information is a resource requiring effective management as much or more than any other organisation resources then, it is evident that the advantage of computer system facilitates handling of large amount of data, a high degree of accuracy, suitability for processing edges that repeat themselves over and over again. Suitability for performing most complex calculations, speed and using common data for served different procedures.

Although computerization of commercial accounting may result in documentation of information access and use, the overall information management function should not be equally decentralised in this content the role of the information manager become especially critical. This role has these major elements.

(a) Understanding the new computerization and the impact it will have on the roles of organisation staff;

(b) Developing and implementing services and support that match end-users (management) need;

(c) Providing direction for the organisation's overall information management strategy; and

(d) Managing the process of information sharing among location points of data processing in the system.

For any computerization project to be successful, it is essential that, before taking the plunge on appropriate strategy is developed. Such strategy should take into account the organisational factors, such as criticality of the application areas being considered, monetary budget, manpower and above all the organisations ability to sustain the new system.

5.2 RECOMMENDATION

From the feasibility study on the computerization of commercial Accounting system in ADP, an appropriate environment needs to be created to optimize the benefit of computerization or automation.

For the proper functioning of the new system, the recommendation for sustaining the system are:

i. Control should be exercised over timeliness and reliability of data.

ii. Management should periodically review the status of the system. The authority, role within the organisation and scope of authority of the senior officer in charge of the system need to be defined and made clear to system users.

iii. Mechanisms should be established to ensure that all equipment and software are in good operating conditions at all times with a minimum of down time.

iv. The effect of any computer application will be determined, in part, by its effect on the place of individual in the organisation. A move toward automation may lead to fears on

the part of some staff that their jobs may be lost or downgraded as functions are assumed by the computer. The management have to make the staff felt to be carried along on the computerization exercise, to remove their fears of loosing their job to automation. Automation, often, infact, creates new information related jobs. The need to re-channel human resources should be seized as an opportunity and interpreted as such by management to the organisation's staff. The organisation should train the staff on computer training that directly related to their needs and operator skills.

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APPENDIX A

```
* niger state agric development project, minna
* clmain.prg
* main menu program for commercial accounting system
* environment section
  set device to screen
  set print off
  set talk off
  set confirm on
  set bell on
  set echo off
  close all
  set alternate to cllog
  set alternate on
  set stat on
* variables section
  mchoice = ' '
  L=0
* L is a variablesused in printing throughout the system

* files section
*  -----------no files used
* main
do while mchoice # 'X'
   clear
   set colo to w/n, r/w
   @ 2,0 clear
   set colo to gr+
   @ 1,5 to 22,75  double
   set colo to w
   @ 1,10 say 'NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT, MINNA'
   set colo to r
   @ 5,20 to 19,60 double
   set colo to n+
   @ 22,18 say ' SAMUEL A.S. ATTEH'
   set colo to gr
   @ 5,25 say 'COMMERCIAL ACCOUNTING SYSTEM'
   set colo to rb
   @ 7,25 say  '1. Master Files Menu '
   @ 8,25 say  '2. Transactions Entry Menu'
   @ 9,25 say  '3. Transcations Validation Menu'
   @ 10, 25 say '4. Transactions Updation Menu'
   @ 11,25 say '5. Transactions Process Menu'
   @ 12, 25 say '6. Print Reports Menu '
   @ 13,25 say '7. Interface with Fin. A/cg'
   @ 14,25 say '8. System Integrity Checking'
   @ 15,25 say '9. Document Flow Control'
   @ 16,25 say 'B. Backing up of Data'
   @ 17,25 say 'X. Exit to DOS'
```

```
   set colo to gr
   @ 18,25 say 'Enter your choice<Return> :  ' get mchoice pict '!'
read
*
   do case
      case mchoice = '1'
        do clmast
      case mchoice = '2'
        do cltrans
      case mchoice =  '3'
        do clvalid
      case mchoice ='4'
        do cltrupd
     case mchoice =  '5'
        set procedure to cltrupro
        do mclose
        close all
      case mchoice = '6'
        do clrprint
      case mchoice ='7'
       do clfalink
      case mchoice = '8'
       do clintgry
      case mchoice = '9'
       do cldocs
      case mchoice = 'X'
         set talk on
         set confirm off
         set bell off
         set colo to w/n
         set alternate off
         set alternate to cllog
         quit
   endcase
enddo


PROC CLZSVAL

* clzsval.prg
* program for validating consolidated stock statements
* environment section
* memory variables section
zsyymm='    '
clzs='CLZS'

* getting yymm for processing month and year
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
```

```
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET ZSYYMM
   read
   if val(substr(ZSYYMM,1,2)) < 93
   @ 14,40 say 'Invaild year...'
   loop
   endif
   if val(substr(ZSYYMM,3,2)) < 1  .OR.  val(substr(ZSYYMM,3,2)) >
12
   @ 14,40  say 'Invalid  month...'
loop
   endif
   exit
enddo

if  file(clzs+zsyymm+".dat")
    dummy = 0
  else
    clear
    @ 12,30 say 'The file not found !!!!! '
    wait
    clear
    return
endif

*  file section
sele a
use clzs&zsyymm+".dat"
sele b
use cllocatn.dat index cllocatn.idx
sele c
use clprodct.dat index clprodct.idx
sele a
clear
@ 12, 30 say 'The file is being validated ......'
if yymm = '    '
   repl all yymm with zsyymm
endif
go top
do while .not. eof()
   store location to mloc
   store prodcode to mprod
   sele b
   seek mloc
   if found()
      dummy = 0
    else
      sele a
      repl locerr with '***'
```

```
   endif
   sele c
   seek mprod
   if found()
      store uom to muom
     else
      store '    ' to muom
      sele a
      repl pcerr with '***'
   endif
   sele a
   if substr(prodcode,1,1) #'A'
      if uom # muom
         repl uomerr with '***'
      endif
   endif

if opstock+recipthq+trfrin - sales - trfrout - shortages # clstock
   repl qtytally with '***'
endif
*
if substr(prodcode,1,1) ='A'
   repl category with 'FERTILISERS'
endif
if substr(prodcode,1,1) ='B'
   repl category with 'AGROLISERS'
endif
if substr(prodcode,1,1) ='C'
   repl category with 'SEED DRESSG CHEMICALS'
endif
if substr(prodcode,1,1) ='D'
   repl category with 'HERBICIDES'
endif
if substr(prodcode,1,1) ='E'
   repl category with 'INSECTICIDES'
endif
if substr(prodcode,1,1) ='F'
   repl category with 'STORAGE CHEMICALS'
endif
if substr(prodcode,1,1) ='G'
   repl category with 'IMPROVED SEEDS'
endif
if substr(prodcode,1,1) ='H'
   repl category with 'VEGETABLE SEEDS'
endif
if substr(prodcode,1,1) ='I'
   repl category with 'EQUIPMENTS'
endif
if substr(prodcode,1,1) ='K'
   repl category with 'SPRAYERS'
endif
if substr(prodcode,1,1) ='L'
```

```
   repl category with 'SPARE PARTS'
endif
if substr(prodcode,1,1) ='M'
   repl category with 'HIRING SERVICES'
endif

skip 1
enddo
*
* printing section

use clzs&zsyymm+".dat"
clear
@ 12, 10 say 'Check whether Printer is ON....'
@ 14, 10 say 'Load 132 col. Stationery and pitch at 12 cpi...'
wait
set console off
report form clzsval1 for location ='10000' to print
report form clzsval2 for location ='20000' to print
report form clzsval3 for location ='30000' to print
report form clzsval5 for location ='50000' to print
set console on
close all
clear
return


PROC CLTRANS

* niger state agric development project, minna
* cltrans.prg
* transactions menu program for commercial accounting system
* environment section
*
* variables section
  tchoice = '0'
* files section
*  ----------no files used, they are opened in programs called
*  by this, depending upon the trans document selected
* main
do while tchoice # '9'
   set colo to b+
   @ 7,30 clear to 20,72
   @ 7,30 to  20,72 double
   set colo to gr
   @ 7,35 say 'TRANSCATIONS ENTRY MENU'
   set colo to rb
   @ 10, 32 say  '1. Consolidated Cash Collection Summary'
   @ 12, 32 say  '2. Bank Teller Document'
   @ 14, 32 say  '3. Zonal Monthly Stock Statements'
   @ 16, 32 say '9. Exit to Main Menu'
   set colo to gr
```

```
==========================================="
L= 10
RETURN

PROCEDURE CSPDPTOT
L = L + 2
@ L,  23  SAY "* * * PDP  TOTAL **  **  **   "
@ L, 87  SAY csdptot
csdptot = 0
L = L + 1
RETURN

PROCEDURE CSZONTOT
L = L + 2
@ L,  23  SAY "* * * ZONE TOTAL **  **  **   "
@ L, 87  SAY   csztot
csztot = 0
L = L + 1
RETURN


PROCEDURE CSPRDTOT
L = L + 2
@ L,  23  SAY "* * * PRODUCT TOTAL  **  **   "
@ L, 73  SAY   cspdtot
cspdtot = 0
L = L + 1
RETURN


PROCEDURE CSGRATOT
L = L + 2
@ L,  23  SAY "* * * GRANT TOTAL **  **  **   "
@ L, 87  SAY   csgtot
csgtot = 0
L = L + 1
RETURN
*
**************************** for prodcutwise monthly sales report

PROCEDURE PSMHDG
eject
pgno = pgno + 1
    @  1,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT "
    @  1, 80  say "DATE:"
    @  1, 85 say pdate
    @  2,  0  SAY "COMMERCIAL ACCOUNTING"
    @  2, 80 say "PAGE:"
    @  2, 85 say  ltrim(str(pgno))
    @  4, 28  SAY "PRODUCTWISE MONTHLY SALES REPORT"
    @  5, 33  SAY "FOR :"
do case
```

```
   case   substr(pryymm,3,2) ='01'
          store "JANUARY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='02'
          store "FEBRUARY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='03'
          store "MARCH "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='04'
          store "APRIL "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='05'
          store "MAY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='06'
          store "JUNE "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='07'
          store "JULY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='08'
          store "AUGUST "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='09'
          store "SEPTEMBER "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='10'
          store "OCTOBER "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='11'
          store "NOVEMBER "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='12'
          store "DECEMBER "+SUBSTR(pryymm,1,2) to prperiod
endcase
    @  5, 39  say prperiod
               @            7  ,            0            S  A  Y
"================================================================
==========================="
    @  8,  0  SAY "LOCATION
  QTY            SALE VALUE           V"
    @  9,  0  SAY "CODE        ZONE              PDP
  SOLD           N       K            P"
              @       1  0  ,              0              S  A  Y
"================================================================
==========================="
    L = 12
RETURN

PROCEDURE PSSHDG
* sub heading for product
  if l > 50
     do psmhdg
  endif
  l = L + 3
   @  L,  0  SAY "PRODUCT          PRODUCT"
  l = l + 1
    @  L,  0  SAY "CODE:"
    @  L,  6  SAY   prodcode
    @  L, 17  SAY "NAME:"
    @  L,  24 SAY mprodname
    @  L,  60 SAY  "UOM:"
```

```
    @  L, 67  SAY   muom
    L = l +1
    @  L,  0  SAY "---------"
    @  L, 17  SAY "-----------------------------------"
    @  L,  60 SAY  "----------"
L = L + 2
RETURN


PROCEDURE PSLSEEK
sele c
seek mplocation
if found()
      store zone to mzone
      store pdp to mpdp
    else
      store '** invalid loc' to mzone
      store '** invalid loc' to mpdp
endif
 sele a
RETURN

PROCEDURE PSPSEEK
store prodcode to mkey
sele b
seek  mkey
if found()
   store prodname to mprodname
   store uom to muom
  else
   store '**  INVALID PRODCUCT CODE  ** ' to mprodname
   store '***' to muom
 endif
 sele a

RETURN

PROCEDURE PSPTOT

L = L+ 2
@ l, 29 say "PRODCUT TOTAL"
@ l,43  say mprodtotq
@ l,61  say mprodtotv
mprodtotq = 0
mprodtotv = 0
mpprod=prodcode
RETURN


PROCEDURE PSLTOT
* print locationwise total line for a product
@ L,  0  SAY   mplocation
```

```
@ L, 12  SAY   mzone
@ L, 29  SAY   mpdp
@ L, 43  SAY   mloctotq
@ L, 61  SAY   mloctotv
@ L, 86  SAY   mvalid
@ L, 87  SAY   mposted
mloctotq = 0
mloctotv = 0
mplocation=location
store ' '  to  mvalid
store ' '  to  mposted
L = L + 1
RETURN

************************************************
* procedures for locationwise totals

PROCEDURE CSLHDG
@  0,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT "
@  0,  67 SAY "DATE:"
@  0,  73 SAY PRDATE
@  1,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM "
@  1,  67 SAY "PAGE:"
prpg = prpg +1
@  1, 73 SAY LTRIM(STR(PRPG))
do case
   case   substr(pryymm,3,2) ='01'
          store "JANUARY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='02'
          store "FEBRUARY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='03'
          store "MARCH "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='04'
          store "APRIL "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='05'
          store "MAY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='06'
          store "JUNE "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='07'
          store "JULY "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='08'
          store "AUGUST "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='09'
          store "SEPTEMBER "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='10'
          store "OCTOBER "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='11'
          store "NOVEMBER "+SUBSTR(pryymm,1,2) to prperiod
   case   substr(pryymm,3,2) ='12'
          store "DECEMBER "+SUBSTR(pryymm,1,2) to prperiod
endcase
@  3, 27  SAY "LOCATIONWISE SALES REPORT FOR "
```

```
@  3, 59 SAY PRPERIOD

@                5   ,                  0                  S   A   Y
"================================================================
========================"
@  6,  0  SAY "Location      L   O   C   A   T   I   O   N
            Total Sales           "
@  7,  0  SAY "code          Zone                PDP
            N           k         "
@                8   ,                  0                  S   A   Y
"================================================================
========================"
L= 8
RETURN


PROCEDURE CSLZONTOT
L = L + 2
@ L,  15  SAY "* * * ZONE TOTAL **  **  **   "
@ L,  63  SAY   mzontot
mzontot = 0
RETURN


PROCEDURE CSLGRATOT
L = L + 2
@ L,  15  SAY "* * * GRANT TOTAL **  **  **   "
@ L,  63  SAY   mgrtot
mgrtot = 0
L = L + 1
RETURN
*


PROC CLPRSLDG

* clprsldg.prg
* sales ledger printing program for  commercial accounting system
* environment section
* files section
sele a
 use clcs&pryymm+".dat"  index clcs&pryymm+".idx"
sele b
 use clprodct.dat index clprodct.idx
 set proce to clprpro
sele c
  use cllocatn.dat index cllocatn.idx
*
clear
@ 12, 10 say 'Please wait.... the file is being verified/sorted'
sele a
set safety off
```

```
reindex
set safety on
count for valid ='N' to invalno
count for posted='N' to unposted
if invalno > 0
   @ 14, 10 say str(invalno)+"  records are not valid"
endif
if unposted > 0
   @ 16, 10 say str(unposted)+"  records are not posted"
endif
if  invalno > 0 .or.  unposted > 0
   @ 18, 10 say 'This report can be wrong due to above errors'
   wait
endif
clear
*
go top

* memory variables
L = L - L
plocation = location
pzone = substr(location,1,1)
ppdp =  substr(location,2,2)
pprod = prodcode
csztot = 0
csdptot = 0
* for pdp total
cspdtot = 0
* for product total
csgtot = 0
prdate = date()
prpg = 0
prperiod = '        '
* initial prodcut master seek
  sele b
  seek  pprod
      if found()
         store prodname to mprodname
        else
         store '** INVALID PRODCUCT CODE **' to mprodname
      endif
     sele a
*****************

*main()
clear
@ 12, 10 say "Check whether Printer is ON ..."
@ 14, 10 say 'Load 132 col. stationery OR put the printer on 12/15
pitch'
wait
@ 12,0 clear
@ 12, 10 say 'Printing Sales Ledger ......'
```

```
set print on
set device to print
do cshdg
do while .not. eof()
   if substr(location,1,1)  # pzone
      do cspdptot
      do cszontot
      do cshdg
    else
      if substr(location,2,2) # ppdp
         do cspdptot
         do cshdg
      endif
   endif
   if prodcode # pprod
      store prodcode to mprod
*      do csprdtot
*      do cshdg
      sele b
      seek  mprod
      if found()
         store prodname to mprodname
        else
         store '** INVALID PRODCUCT CODE **' to mprodname
      endif
     sele a
   endif
   if L > 60
      do cshdg
   endif

L = L + 1
@ L,  0  SAY LTRIM(STR(CCSNO))
@ L,  7 SAY CCSDATE PICT "@B"
@ L,  17  say   PRODCODE
@ L, 22 say mprodname
@ L, 55  say   QTYSOLD
@ L, 66  say   UOM
@ L, 75  say   UNITPRICE
@ L, 89  say   SALEVALUE
@ L, 106  say  valid+posted
* error/posting indicator in the report
*
csztot = csztot + salevalue
csdptot = csdptot + salevalue
*cspdtot = cspdtot + salevalue
csgtot = csgtot + salevalue
*
plocation =  location
pzone = substr(location,1,1)
ppdp =  substr(location,2,2)
pprod = prodcode
```

```
skip 1
if eof()
   do cspdptot
   do cszontot
   do csgratot
endif

enddo
* eoj section
  L = L + 4
  @ L, 16  say "**  ***  END OF REPORT  **  ***"
  set print off
  set device to screen
  dele file temp.idx
  close all
  clear
  return

* eof/


PROC CLINTGRY

*  clintgry.prg
* program to check the intgrity of the commercial a/cg system
* environment section
* memory variables section
iyymm='    '
* file section
* main()
*  to get processing month
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM) - '
   @ 11,40 SAY 'the processing month and year'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET IYYMM
   read
   if val(substr(IYYMM,1,2)) < 93
      @ 14,40 say 'Invaild year...'
      loop
   endif
   if val(substr(IYYMM,3,2)) < 1  .OR.  val(substr(IYYMM,3,2)) > 12
      @ 14,40  say 'Invalid  month...'
      loop
   endif
   exit
enddo
```

```
*  ccs  file  checking
set talk on
use clcs&iyymm+".dat"
index on location+str(ccsno) to clcs&iyymm+".idx"
use
*  bank teller file
use  clbt&iyymm+".dat"
index on  location+str(btno) to clbt&iyymm+".idx"
use

* location  master  file
use cllocatn.dat
index on location to cllocatn.idx

* bank master  file
use clbank.dat
index on bankcode to clbank.idx
use
use clprodct.dat
index on prodcode to clprodct.idx
use
*  exit
set talk off
clear
return


PROC CLBACKUP
* clbackup.prg
* program to backup data files of commercial accounting system
* files to be backed up
*
*   TRANSACTION FILES
*   -  CLCSyymm.DAT
*   -  CLBTyymm.DAT
*   -  CLSRVyymm.DAT
*
*   MASTER FILES
*   -  CLLOCATN.DAT
*   -  CLPRODCT.DAT
*   -  CLBANK.DAT
dummy=' '
bkyymm = '    '
* main()
clear
@ 12, 10  say "Insert a 1.44 MB floppy into Drive A:"
@ 14, 10  say "Press any  key to start....."
set confirm off
@ 14, 50 get dummy
read
set confirm on
cl = 'cl??'
```

```
!copy clcs????.dat a:
!copy clcs????.idx a:
!copy clbt????.dat  a:
!copy clbt????.idx a:
!copy cllocatn.dat a:
!copy cllocatn.idx a:
!copy clprodct.dat a:
!copy clprodct.idx a:
!copy clbank.dat a:
!copy clbank.idx a:
clear
return


PROC CLMAST
* niger state agric development project, minna
* clmast.prg
* master maintenance/reports menu program for commercial accounting
system
* environment section
*
* variables section
  mschoice = '0'
* files section
*  ----------no files used, they are opened in programs called
*  by this, depending upon the options selectesd selected

set proce to clmpro
* main
do while mschoice # '9'
   set colo to b+
   @ 7,30 clear to 20,72
   @ 7,30 to  20,72 double
   set colo to gr
   @ 7,35 say 'MASTER FILES MENU'
   set colo to rb
   @ 9, 32 say   '1. Updating Product Master '
   @ 10, 32 say  '2. Updating Location Master'
   @ 11, 32 say '3. Updating Bank Codes Master'
   @ 12, 32 say '4. Updating Prices of Products'
   @ 13, 32 say '5. Printing Location Codes List'
   @ 14, 32 say '6. Printing Prodcut Codes List'
   @ 15, 32 say '7. Printing Bank Codes List'
   @ 16, 32 say '9. Exit to Main Menu'
   set colo to gr
   @ 18, 32 say 'Enter your choice<Return> :  ' get mschoice
   read
*
   do case
      case mschoice = '1'
           do clpmupd
      case mschoice = '2'
```

```
          do cllmupd
      case mschoice = '3'
          do clbmupd
      case mschoice = '4'
          do clprice
      case mschoice ='5'
          do clloclst
      case mschoice = '6'
          do clprdlst
      case mschoice = '7'
          do clbnklst
      case mschoice ='9'
          close all
          return
* exit section
        exit
   endcase
enddo
return to master
*eof


PROC CLMPRO
* clmpro.prg
* procedure file for all master updations
PROCEDURE CLPMUPD
    mupdyes ='Y'
    mdeleted = 0
    use clprodct.dat index clprodct.idx
do while mupdyes ='Y'
    mprodcode='     '
    maction =' '
    clear
    set colo to gr
    @  2, 10  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
    @  3, 10  SAY "COMMERCIAL ACCOUNTING SYSTEM - PRODUCT MASTER
UPDATING"
    set colo to gr+
    @  5,  0  TO 14, 77
    set colo to rb
    @  6,  3  SAY "Action (A - Addition, M - Modify,  D - Delete)
:"
    @  8,  3  SAY "Product Code:"
    @ 10,  3  SAY "Product Name:"
    @ 12,  3  SAY "Unit of Measurement:"
    @ 12, 48  SAY "Unit Price:"
    set colo to N+
    @ 17,  1  SAY "Price can not be amended in this menu, use Price
Change Menu for that."
    @ 18,  1  SAY "Product Code and UOM are coded. Follow the
coding scheme and update the"
    @ 19,  1  SAY "Codes Directory, maintained manually, before
```

```
updating here."
    @ 20,  1  SAY "To change product code, Delete old and Add new
one."
*
    @  6, 51 get  maction pict '!'
    read
    if maction $ 'AMD'
        dummy=0
      else
        @ 22,10 say 'Invalid Action Code .....'
        @ 23,10 say 'Do you want continue with Updation Menu : '
        @ 23,52 get mupdyes pict '!'
        read
        loop
    endif
    @  8, 25  GET   mprodcode pict '!!!!'
    read
    seek mprodcode
    if maction ='A'
       if found()
       set colo to w
       @ 22,10 say 'The Prodcut Code already exists ....'
       set colo to bg
       @ 23,10 say 'Do you want continue with Updation Menu : '
       @ 23,52 get mupdyes pict '!'
       read
       loop
       endif
    endif
    if maction ='A'
       append blank
       repl prodcode with mprodcode
    endif
***  modification of  record
    if maction ='M' .or. maction ='D'
        if .not. found()
        set colo to w
        @ 22,10 say 'The Prodcut Code not found ....'
        @ 23,10 say 'Do you want continue with Updation Menu : '
        set colo to bg
        @ 23,52 get mupdyes pict '!'
       read
       loop
        endif
    endif
    set colo to rb
    @ 10, 25  GET  PRODNAME  pict '!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!'
    @ 12, 25  GET   UOM  pict '!!!!'
    if maction = 'A'
        @ 12, 60  GET   UNITPRICE  PICTURE "9999999.99"
      else
        @ 12, 60  SAY  UNITPRICE
```

```
    endif
    if maction ='M' .OR. maction ='A'
       read
      else
       clear gets
    endif
    if maction = 'D'
       store 'N' to delyes
       set colo to r
       @ 22, 10 say 'Are you sure, you want to delete it ? Y/N : '
get delyes pict '!'
       read
           if delyes = 'Y'
              delete
              mdeleted =  mdeleted + 1
              @ 22, 0 clear
           endif
    endif
   set colo to bg
    @ 23,10 say 'Do you want continue with Updation Menu : '
    @ 23,52 get mupdyes pict '!'
    read
    clear
enddo
*
if mdeleted > 0
   clear
    @ 12, 30 say "Please wait ....."
    go top
    dele all for prodcode = '     '
    pack
endif
close data
clear
RETURN
*
PROCEDURE CLPRICE
* procedure to update price in prodcut master
    mupdyes ='Y'
    mdeleted = 0
    use clprodct.dat index clprodct.idx

****************************************  pass word check
   mattempt=0
   clear
  do while .t.
      mpass = '        '
      set colo to r
      @ 12, 10 SAY "Enter your authorisation password : "
      set colo to b, b/b
      @ 12, 47 get mpass pict '!!!!!!!'
      read
```

```
      mattempt = mattempt + 1
       if mattempt > 3
          close all
          set colo to r, r/w
          clear
          RETURN
       endif
       if mpass = 'SHIRORO'
           exit
         else
           loop
       endif
  enddo
***

do while mupdyes ='Y'
*
   mprodcode='     '
    clear
    set colo to gr
    @  2, 10  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
    @  3, 10  SAY "COMMERCIAL ACCOUNTING SYSTEM - PRODUCT PRICE
UPDATING"
    set colo to gr+
    @  5,  0  TO 13, 77
    set colo to rb
    @  7,  3  SAY "Product Code:"
    @  9,  3  SAY "Product Name:"
    @ 11,  3  SAY "Unit of Measurement:"
    @ 11, 48  SAY "Unit Price:"
    set colo to N+
    @ 15,  1  SAY "Price changing is an important step. Note that
once the Price is changed"
    @ 16,  1  SAY "all the sales keyed in  after that will be
compared with that price."
    @ 17,  1  SAY "Therefore, if price changes mid-period, key in
sales before and after"
    @ 18,  1  SAY "in seperate batches. Change the prices, before
post-change sales are "
    @ 19,  1  SAY "keyed in.  However, as Sales are keyed in the
Price can be modified"
    @ 20,  1  SAY "for each entry.  But that should be used rarely
and carefully."
*
    set colo to rb, r/w
   @  7, 25  GET   mprodcode pict '!!!!'
    read
    seek mprodcode
    if .not. found()
        set colo to w
        @ 22,10 say 'The Prodcut Code not found ....'
        @ 23,10 say 'Do you want continue with Price Updation Menu
```

```
: '
        set colo to bg
        @ 23,60 get mupdyes pict '!'
       read
       loop
    endif
    set colo to rb
    @  9, 25  SAY   PRODNAME  pict '!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!'
    @ 11, 25   SAY    UOM  pict '!!!!'
    @ 11, 60   GET    UNITPRICE  PICTURE "9999999.99"
    read
   set colo to bg
    @ 23,10 say 'Do you want continue with Price Updation Menu : '
    @ 23, 60 get mupdyes pict '!'
    read
    clear
enddo
*
close data
clear
RETURN
*
*
PROCEDURE CLLMUPD
    mupdyes ='Y'
    mdeleted = 0
    use cllocatn.dat index cllocatn.idx
do while mupdyes ='Y'
    mlocation= '     '
    maction =' '
    clear
    set colo to gr
    @  2, 10  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
    @  3, 10  SAY "COMMERCIAL ACCOUNTING SYSTEM - LOCATION  MASTER
UPDATING"
    set colo to gr+
    @  5,  0  TO 16, 77
    set colo to rb
    @  6,  3  SAY "Action (A - Addition, M - Modify,  D - Delete)
:"
    @  8,  3  SAY "Location Code:"
    @ 10,  3  SAY "Zone :"
    @ 11,  3  SAY  "Local Govt. Area :"
    @ 12,  3  SAY "PDP :"
    @ 13,  3  SAY "Farm Service Centre :"
    @ 15,  3  SAY "Collection Bank Account :"
   set colo to N+
    @ 17, 10 SAY "The descriptions must be keyed in carefully, "
    @ 18, 10 SAY "for they will appear in the reports."
    @ 19, 10 SAY "Refer to the Codes Directory for coding scheme
and also update it"
    @  6, 51 get  maction pict '!'
```

```
    read
    if maction $ 'AMD'
        dummy=0
      eHse
     !!Ä7▾ëêâî1óCatêÆÆ╨"ÇNêñ▸0å☻╨╙♠┤¶"ó–↕¶♥ëH♦↑ó☻≡D↑,       73   SAY
PRDATE
@  1,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM "
@  1,  67 SAY "PAGE:"
prpg = prpg +1
@  1, 73 SAY LTRIM(STR(PRPG))
do case
   case    substr(pryymm,3,2) ='01'
           store "JANUARY "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='02'
           store "FEBRUARY "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='03'
           store "MARCH "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='04'
           store "APRIL "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='05'
           store "MAY "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='06'
           store "JUNE "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='07'
           store "JULY "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='08'
           store "AUGUST "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='09'
           store "SEPTEMBER "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='10'
           store "OCTOBER "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='11'
           store "NOVEMBER "+SUBSTR(pryymm,1,2) to prperiod
   case    substr(pryymm,3,2) ='12'
           store "DECEMBER "+SUBSTR(pryymm,1,2) to prperiod
endcase
@  3, 27  SAY "LOCATIONWISE SALES REPORT FOR "
@  3, 59 SAY PRPERIOD

@                5  ,                0                 S   A   Y
"=================================================================
========================"
@  6,  0  SAY "Location      L   O   C   A   T   I   O   N
              Total Sales         "
@  7,  0  SAY "code          Zone                  PDP
              N           k         "
@                8  ,                0                 S   A   Y
"=================================================================
======================="
L= 8
RETURN
```

```
PROCEDURE CSLZONTOT
L = L + 2
@ L,  15  SAY "* * * ZONE TOTAL **  **  **   "
@ L,  63  SAY   mzontot
mzontot = 0
RETURN



PROCEDURE CSLGRATOT
L = L + 2
@ L,  15  SAY "* * * GRANT TOTAL **  **  **   "
@ L,  63  SAY   mgrtot
mgrtot = 0
L = L + 1
RETURN


PROC CLPRCBR
* clprcbr.prg
* programme to print Monthly Collection Bank Register

* files section
sele a
use clbt&pryymm+".dat"
sele b
use clbank.dat  index clbank.idx
sele c
use cllocatn.dat index cllocatn.idx
sele a
clear
@ 12,30 say 'Please wait ...'
set safety off
index on bankcode+str(btno) to tmp.idx
set safety on
count for valid ='N' to minvalid
count for posted ='N' to munposted
if minvalid > 0 .or. munposted > 0
   clear
   @ 12, 10 say 'No. of records not validated/valid :'
   @ 12, 50 say ltrim(str(minvalid))
   @ 14, 10 say 'No. of records not posted          :'
   @ 14, 50 say ltrim(str(munposted))
   @ 16, 10 say 'The regsiter could contain errors ?'
   wait
   clear
endif
go top
* memory variables section
pbank=bankcode
mbtot= 0
mbgrtot = 0
```

```
L = 59
mpgno=0
pdate=date()
*
@ 12,30 say 'Check for Printer ON, pitch at 12/15'
wait
clear
@ 12, 30 say 'Collection Bank Register printing in progress...'
*
set device to print
set print on
set console off
do while .not. eof()
mbank = bankcode
if L > 55
*     eject
      mpgno=mpgno+1
      @  0,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT
                      DATE:"
      @  0,  73 say pdate
      @  1,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM
                      PAGE:"
      @  1,  73 say ltrim(str(mpgno))
      @  3, 26  SAY "MONTHLY CASH COLLECTION REGISTER"
      @  4, 31  SAY "FOR"
      do case
         case   substr(pryymm,3,2) ='01'
             store "JANUARY "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='02'
             store "FEBRUARY "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='03'
              store "MARCH "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='04'
              store "APRIL "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='05'
              store "MAY "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='06'
              store "JUNE "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='07'
               store "JULY "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='08'
              store "AUGUST "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='09'
              store "SEPTEMBER "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='10'
              store "OCTOBER "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='11'
              store "NOVEMBER "+SUBSTR(pryymm,1,2) to prperiod
         case   substr(pryymm,3,2) ='12'
              store "DECEMBER "+SUBSTR(pryymm,1,2) to prperiod
      endcase
      @  4, 35  say prperiod
```

```
     @  6,  0  SAY "COLLECTION BANK CODE:"
     @  6, 22  SAY   mbank
     sele b
     seek mbank
     if found()
        mbankname = bankname
        macct = acctno
      else
        mbankname = '*** BANK CODE NOT VALID ***'
        macct = '???????'
     endif
     sele a
     @  6, 46  SAY "BANK NAME:"
     @  6, 57 say mbankname
     @  7, 46  SAY "ACCT. NO :"
     @  7, 57  say macct

@9,0 SAY
"================================================================
================================="
@ 10,0  SAY "BANK                          AMOUNT DEPOSITED   CCS
LOCATION"
@ 11,  0  SAY "TELLER NO     DATE         N             K     NO
CODE         ZONE                PDP"
@ 12,0 SAY
"================================================================
================================="
     L = 14
endif
*
  L = L + 1
  @ L,  0  SAY   BTNO
  @ L, 14  SAY   BTDATE
  @ L, 26  SAY   AMTDEPOSIT
  @ L, 45  SAY   CCSNO
  @ L, 52  SAY   LOCATION
  mbtot = mbtot + amtdeposit
  mbgrtot = mbgrtot + amtdeposit
  store location to mloc
  sele c
  seek mloc
    if found()
          @ L, 65 say zone
          @ L, 84 say pdp
       else
          @ L, 65 say '** INVALID LOCATION CODE *** '
       endif
sele a
store bankcode to pbank
skip 1
   if bankcode # pbank
       L = L + 2
```

```
        @ L, 10 say "BANK TOTAL >>>>>"
        @ L, 23 say  mbtot
        mbtot = 0
        L = 57
    endif
enddo
* eoj routine
L = L + 3
@ L, 14 SAY "TOTAL BANK DEPOSITS FOR THE MONTH : "
@ L, 52 SAY mbgrtot
L = L + 2
@ L, 30 say "** End of Report **"
set device to screen
set print off
set console on
*
close all
clear
return


PROC CLPRPRD

* clprprd.prg
* prodcut wise monthly sales report program
* files section
set proce to clprpro
* all procedures start with PS
sele a
 use clcs&pryymm+".dat"
sele b
 use clprodct.dat index clprodct.idx
sele c
use cllocatn.dat index cllocatn.idx
*
clear
@ 12, 10 say 'Please wait.... the file is being verified/sorted'
*
sele a
set safety off
index on prodcode+location+str(ccsno) to tmp.idx
set safety on
count for valid ='N' to invalno
count for posted='N' to unposted
if invalno > 0
   @ 14, 10 say str(invalno)+"  records are not valid"
endif
if unposted > 0
   @ 16, 10 say str(unposted)+"  records are not posted"
endif
if  invalno > 0 .or.  unposted > 0
   @ 18, 10 say 'This report can be wrong due to above errors'
```

```
   @ 20, 10 say 'Load 132 Col. paper or set pitch at 15 ot 17 ,
Check Printer ON'
   wait
endif
clear
@ 12, 10 say 'Printing Sales Ledger ......'
*
*
go top
store prodcode to mprodcode
store mprodcode to mpprod
store location to mlocation
store location to mplocation
mloctotq = 0
mloctotv = 0
mprodtotq = 0
mprodtotv = 0
mgrtotv = 0
mvalid = valid
mposted = posted
mprodname = '************'
mzone = '***********'
mpdp = '************'
muom = '*** '
pdate = date()
pgno = 0
L = 0
*
* environment section
  set device to print
  set print on
  set console off
*
do pspseek
do pslseek
do psmhdg
do psshdg
do while .not. eof()
   if location # mplocation
      do psltot
      do pslseek
    endif
   if prodcode # mpprod
       do psltot
       do psptot
       do pspseek
       do pslseek
       do psshdg
   endif
   if L > 55
      do pspseek
      do psmhdg
```

```
   endif
      mloctotq = mloctotq + qtysold
      mloctotv = mloctotv + salevalue
      mprodtotq = mprodtotq + qtysold
      mprodtotv = mprodtotv + salevalue
      mgrtotv = mgrtotv + salevalue
*
      if valid ='N'
         store valid to mvalid
      endif
      if posted = 'N'
         store posted to mposted
      endif
store location to mplocation
store prodcode to mpprod
skip 1
enddo
*
if l > 48
   do psmhdg
endif
do pslseek
do pspseek
do psltot
do psptot
L = L + 3
@ L, 20 say '***  GRAND TOTAL OF SALES *** : '
@  L, 55 SAY MGRTOTV
L = L + 2
@ L, 20 SAY '(Check this total with Sales Ledger Total for the
Period)'
*
close data
dele file temp.idx
*
L = L + 3
@ L,30 say '** End of Report **'
set print off
set device to screen
clear
return

* eof/


PROC CLFAPRO
* procedure file for all fa linking programs
*

PROCEDURE FAPHDG
eject
```

```
pgno = pgno + 1
    @  1,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT "
    @  1, 80  say "DATE:"
    @  1, 85 say pdate
    @  2,  0  SAY "COMMERCIAL ACCOUNTING >>> >>> >>> FINANCIAL
ACCOUNTING SYSTEM"
    @  2, 80 say "PAGE:"
    @  2, 85 say  ltrim(str(pgno))
    @  4, 28  SAY "DETAILS FOR MONTHLY SALES JV "
    @  5, 33  SAY "FOR :"
do case
   case   substr(fayymm,3,2) ='01'
          store "JANUARY "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='02'
          store "FEBRUARY "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='03'
          store "MARCH "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='04'
          store "APRIL "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='05'
          store "MAY "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='06'
          store "JUNE "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='07'
          store "JULY "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='08'
          store "AUGUST "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='09'
          store "SEPTEMBER "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='10'
          store "OCTOBER "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='11'
          store "NOVEMBER "+SUBSTR(fayymm,1,2) to prperiod
   case   substr(fayymm,3,2) ='12'
          store "DECEMBER "+SUBSTR(fayymm,1,2) to prperiod
endcase
    @  5, 39  say prperiod
     @  7,  0  SAY
"=============================================================
==========================="
    @  8,  0  SAY "PRODUCT
  QTY             SALE VALUE            V"
    @  9,  0  SAY "CODE         PRODCUT DESCRIPTION
  SOLD             N       K             P"
    @ 10,  0  SAY
"=============================================================
==========================="
    L = 12
RETURN

PROCEDURE FAPSEEK
store mpprod to mkey
```

```
sele b
seek  mkey
if found()
   store prodname to mppname
   store uom to muom
  else
   store '**  INVALID PRODCUCT CODE  ** ' to mppname
   store '***' to muom
 endif
 sele a

RETURN

PROCEDURE FAPTOT

L = L+ 2
@ l, 0 say  mpprod
@ l, 12 say mppname
@ l,43  say mprodtotq
@ l,61  say mprodtotv
@ l, 86 say mvalid
@ l, 87 say mposted
mprodtotq = 0
mprodtotv = 0
mpprod=prodcode
RETURN


PROC CLFALINK
* niger state agric development project, minna
* clfalink.prg
* program to link commercial accounting system with fa system
* environment section
*
**  ***  **   ***  report period selection

do while .t.
   fayymm= '    '
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET fayymm
   read
   if val(substr(fayymm,1,2)) < 93
   @ 14,40 say 'Invaild year...'
   loop
   endif
```

```
   if val(substr(fayymm,3,2)) < 1   .OR.   val(substr(fayymm,3,2))
> 12
   @ 14,40   say 'Invalid   month...'
loop
   endif
   exit
enddo

*****************************************************
* files section
*  -----------no files used, they are opened in programs called
*  by this, depending upon the trans document selected
* main
fchoice = '0'
do while fchoice # '9'
   set colo to b+
   @ 7,30 clear to 20,72
   @ 7,30 to  20,72 double
   set colo to gr
   @ 7,35 say 'FINANCIAL ACCTG. INTERFACE'
   set colo to rb
   @ 9, 32 say  '1. Sales- Monthly Summary for JV'
   @ 11, 32 say  '2. Collections - Summary for JV'
   @ 15, 32 say '9. Exit to Main Menu'
   set colo to gr
   @ 18, 32 say 'Enter your choice<Return> :   ' get fchoice
   read
*
   do case
      case fchoice = '1'
        do clfasale
      case fchoice = '2'
        do clfacoll
      case fchoice = '9'
* exit section
         exit
   endcase
enddo
return
*eof


PROC CLFACOLL
* clfacoll.prg
* programme to print Monthly Collection JV Summary

* files section
sele a
use clbt&fayymm+".dat"
sele b
use clbank.dat  index clbank.idx
sele a
```

```
clear
@ 12,30 say 'Please wait ...'
set safety off
index on bankcode+str(btno) to tmp.idx
set safety on
count for valid ='N' to minvalid
count for posted ='N' to munposted
if minvalid > 0 .or. munposted > 0
   clear
   @ 12, 10 say 'No. of records not validated/valid :'
   @ 12, 50 say ltrim(str(minvalid))
   @ 14, 10 say 'No. of records not posted          :'
   @ 14, 50 say ltrim(str(munposted))
   @ 16, 10 say 'The Summary for JVs could contain errors ?'
   wait
   clear
endif
go top


* memory variables section
pbank=bankcode
mbtot= 0
mbgrtot = 0
L = 59
mpgno=0
pdate=date()
*
@ 12,30 say 'Check for Printer ON, pitch at 12/15'
wait
clear
@ 12, 30 say 'Summary for Collections JV printing in progress...'
*

set device to print
set print on
set console off


do while .not. eof()
mbank = bankcode
if L > 55
*     eject
     mpgno=mpgno+1
     @  0,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT
        DATE:"
     @  0,  63 say pdate
     @  1,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM
        PAGE:"
     @  1,  63 say ltrim(str(mpgno))
     @  3, 24  SAY "MONTHLY SUMMARY FOR JV -CASH COLLECTIONS"
     @  4, 29  SAY "FOR"
```

```
     do case
        case   substr(fayymm,3,2) ='01'
            store "JANUARY "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='02'
            store "FEBRUARY "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='03'
             store "MARCH "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='04'
             store "APRIL "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='05'
             store "MAY "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='06'
             store "JUNE "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='07'
              store "JULY "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='08'
             store "AUGUST "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='09'
             store "SEPTEMBER "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='10'
             store "OCTOBER "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='11'
             store "NOVEMBER "+SUBSTR(fayymm,1,2) to prperiod
        case   substr(fayymm,3,2) ='12'
             store "DECEMBER "+SUBSTR(fayymm,1,2) to prperiod
     endcase
     @  4, 33  say prperiod
     @  6,  0  SAY
"================================================================
============"
     @  7,  0  SAY "BANK
  AMOUNT DEPOSITED      A/C"
     @  8,  0  SAY "CODE       BANK NAME
  N             K        NO        "
     @  9,  0  SAY
"================================================================
============="
     L = 10
  endif

*
    if bankcode # pbank
        L = L + 2
        @  L, 0  SAY   pbank
        sele b
        seek pbank
          if found()
             mbankname = bankname
             macct = acctno
           else
             mbankname = '*** BANK CODE NOT VALID ***'
             macct = '???????'
```

```
            endif
          @ L, 11 say mbankname
          @ L, 49 say mbtot
          @ L, 67 say macct
          mbtot = 0
       endif
   sele a
   mbtot = mbtot + amtdeposit
   mbgrtot = mbgrtot + amtdeposit
   store bankcode to pbank
   skip 1
enddo

* eoj routine
   sele b
   seek pbank
   if found()
       mbankname = bankname
       macct = acctno
      else
       mbankname = '*** BANK CODE NOT VALID ***'
       macct = '???????'
    endif
    L = L + 2
        @ L, 0 say pbank
        @ L, 11 say mbankname
        @ L, 49 say mbtot
        @ L, 67 say macct
        mbtot = 0
      endif

L = L + 3
@ L, 14 SAY "TOTAL BANK DEPOSITS FOR THE MONTH : "
@ L, 52 SAY mbgrtot
L = L + 4
@ L, 10 say 'Check this Summary with Cash Collection Register for
the month'
L =  L + 1
@ L, 10 say 'Reconcile this Summary &  Sales Summary, and pass
Journal Entries'
L = L + 3
@ L, 30 say "** End of Report **"
set device to screen
set print off
set console on
*
close all
clear
return


PROC CLVALID
```

```
* niger state agric development project, minna
* clvalid.prg
* transactions validation menu program for commercial accounting
system
* environment section
*
* variables section
  vchoice = '0'


* files section
*  -----------no files used, they are opened in programs called
*  by this, depending upon the trans document selected
* main
do while vchoice # '9'
   set colo to b+
   @ 7,30 clear to 20,72
   @ 7,30 to  20,72 double
   set colo to gr
   @ 7,35 say 'TRANSCATIONS VALIDATION MENU'
   set colo to rb
   @ 9, 32 say  '1. Consolidated Cash Collection Summary'
   @ 11, 32 say  '2. Bank Teller Document'
   @ 13, 32 say '                          '
   @ 15, 32 say '9. Exit to Main Menu'
   set colo to gr
   @ 18, 32 say 'Enter your choice<Return> :  ' get vchoice
   read
*
   do case
      case vchoice = '1'
        do clcsval
      case vchoice = '2'
        do clbtval
      case vchoice = '9'
* exit section
         exit
   endcase
enddo
return
*eof


PROC CLCSVAL
* niger state agric development project, minna
* clcsval.prg
* transactions validation  program for Consolidated Cash
Collection summary
* environment section
*
* variables section
  clcs='CLCS'
```

```
* for the file name of ccs transaction file
  valyymm ='     '
  L = 59
  rdate = date()
  mpgno = 0
  valerr = 0
  merr = 0
  mprod = '     '
  muom = '    '
  munitprice = 0
  mcount = 0
  msaletot = 0
  mqtytot = 0
*
set procedure to clvalpro
do valyymm
if  file(clcs+valyymm+".dat")
    dummy = 0
  else
    clear
    @ 12,30 say 'The file not found !!!!!!'
    wait
    return
 endif
* coverting valyymm to date format
store substr(valyymm,3,2)+'/01/'+substr(valyymm,1,2) to ym
store ctod('&ym') to yymmdate
* files section
sele a
use clcs&valyymm+".dat"  index  clcs&valyymm+".idx"
sele b
use cllocatn.dat index cllocatn.idx
sele c
use clprodct.dat  index clprodct.idx
sele a
* main
*
clear
@ 12, 30 say 'Check whether Printer is ON'
@ 14, 30 say 'Load 132 col paper Pitch at 12 cpi'
wait
clear
@ 12, 30 say 'CCS Validation & printing in progress ..... '
set device to print
set print on
*
do while .not. eof()
  valerr = 0
  mprod = '     '
  muom = '    '
  munitprice = 0
 *
```

```
   if L > 55
      do csvalhdg
   endif
   L = L + 1
   do   csprint
   L = L + 1
   do   csyymmval
   do   cslocval
   do   csdateval
   do   csnoval
   do   csprodval
   do   csqtyval
   do   csupval
   do   cssvval
   do   csacumul
   skip 1
enddo
*
L = L + 3
@ L, 30 say ' ***  END OF REPORT  ***'
*
set device to screen
set print off

* exit section
  close all
  clear
  return

* eof/


PROC CLVALPRO
clvalpro.prg
* procedure file for  validating transactions


PROCEDURE VALYYMM
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET VALYYMM
   read
   if val(substr(VALYYMM,1,2)) < 93
   @ 14,40 say 'Invaild year...'
   loop
```

```
   endif
   if val(substr(VALYYMM,3,2)) < 1   .OR.
val(substr(VALYYMM,3,2)) > 12
   @ 14,40  say 'Invalid  month...'
loop
   endif
   exit
enddo
RETURN


PROCEDURE CSVALHDG
    L = 1
    @  L,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
    @  L,  68 SAY "DATE:"
    @  L, 73 SAY RDATE
    L = L + 1
    @  L,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM"
    @ L, 68 SAY "PAGE:"
    mpgno = mpgno + 1
    @  L, 73 SAY ltrim(str(mpgno))
    L = L + 2
    @  L, 10  SAY "VALIDATION REPORT ON CONSOLIDATED CASH
COLLECTION SUMMARY(CCS)"
    L = L + 1
    @  L, 30  SAY "FOR  "
    @  L,  35  SAY VALYYMM
    L = L + 1
    @  L,  0  SAY
"================================================================
=============="
    L = L + 1
    @  L,  7  SAY "LOC.  CCS      CCS     PROD         QTY
UNIT       SALE         V/"
    L = L + 1
    @  L,  1  SAY "YYMM  CODE  DATE     NO      CODE  UOM   SOLD
    PRICE      VALUE        P"
    L = L + 1
    @  L,  0  SAY
"================================================================
==============="
    L = 9
RETURN

*
*
PROCEDURE  CSPRINT
    L = L + 2
    @  L,  1  SAY   YYMM
    @  L,  7  SAY   LOCATION
    @  L, 13  SAY   CCSDATE
    @  L, 22  SAY   CCSNO
```

```
    @  L, 30  SAY   PRODCODE
    @  L, 36  SAY   UOM
    @  L, 42  SAY   QTYSOLD
    @  L, 53  SAY   UNITPRICE
    @  L, 64  SAY   SALEVALUE
    @  L, 77  SAY   VALID
    @  L, 78  SAY   POSTED
RETURN
*
*
PROCEDURE CSYYMMVAL
    if ltrim(str(yymm)) # valyymm
        @  L,  1  SAY   '????'
        valerr = 1
    endif
RETURN
*
*
PROCEDURE CSLOCVAL
   store location to mloc
   sele b
   seek mloc
   if found()
     sele a
     return
     else
      @  L,  7  SAY   '*****'
      valerr = 1
   endif
   sele a
RETURN
*
PROCEDURE CSNOVAL
   if ccsno = 0 .or. ccsno < 0
      @ L, 22 say '******'
   endif
RETURN
*
*
PROCEDURE CSDATEVAL
    if month(yymmdate) # month(ccsdate)  .or.  year(yymmdate) #
year(ccsdate)
       @  L, 13  SAY   '?? ?? ??'
       valerr = 1
    endif
RETURN

*
PROCEDURE CSPRODVAL
store prodcode to mprod
store uom to muom
store 0 to munitprice
```

```
sele c
seek mprod
if found()
      store unitprice to munitprice
   if muom # uom
      @  L, 36 say '***'
   endif
   sele a
   return
 else
   @ L, 30 say '****'
   @ L, 36 say '***'
   valerr = 1
endif
sele a
RETURN

*
PROCEDURE CSQTYVAL
if qtysold = 0  .or. qtysold < 0
   @ L, 42 say '*********'
   valerr = 1
endif
RETURN

PROCEDURE CSUPVAL
if munitprice # unitprice
   @ L, 53 say '??????????'
   valerr = 1
endif
if unitprice = 0  .or. unitprice < 0
   @ L, 53 say '**********'
   valerr = 1
endif

RETURN
*

PROCEDURE CSSVVAL
if qtysold*unitprice # salevalue .or. salevalue = 0 .or.
salevalue < 0
   @ L, 64 say '***********'
   valerr = 1
endif
RETURN
*
PROCEDURE CSACUMUL
mcount = mcount + 1
mqtytot = mqtytot + qtysold
msaletot = msaletot + salevalue
if valerr = 1
   merr = merr + 1
```

```
endif
RETURN


********** procedures for Bank Teller validation
*
PROCEDURE BTVALHDG
    L = 1
    @  L,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
    @  L,  68 SAY "DATE:"
    @  L, 73 SAY RDATE
    L = L + 1
    @  L,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM"
    @ L, 68 SAY "PAGE:"
    mpgno = mpgno + 1
    @  L, 73 SAY ltrim(str(mpgno))
    L = L + 2
    @  L, 10  SAY "VALIDATION REPORT ON BANK TELLER FORM"
    L = L + 1
    @  L, 30  SAY "FOR  "
    @  L,  35  SAY VALYYMM
    L = L + 1
    @  L,  0  SAY
"================================================================
========"
    L = L + 1
    @  L,  1  SAY "      LOC.  BT       BT        BANK
AMOUNT      CCS       V/"
    L = L + 1
    @  L,  1  SAY "YYMM  CODE  DATE     NO        CODE
DEPOSITED   NO        P"
    L = L + 1
    @  L,  0  SAY
"================================================================
========"
    L = 9
RETURN

*
*
PROCEDURE  BTPRINT
    L = L + 2
    @  L,  1  SAY   YYMM
    @  L,  7  SAY   LOCATION
    @  L, 13  SAY   BTDATE
    @  L, 22  SAY   BTNO
    @  L, 31  SAY   BANKCODE
    @  L, 46  SAY   AMTDEPOSIT
    @  L, 58  SAY   CCSNO
    @  L, 68  SAY   VALID
    @  L, 70  SAY   POSTED
RETURN
```

```
*
*
PROCEDURE BTYYMMVAL
    if ltrim(str(yymm)) # valyymm
        @  L,  1  SAY   '????'
        valerr = 1
    endif
RETURN
*
*
PROCEDURE BTLOCVAL
   store location to mloc
   sele b
   seek mloc
   if found()
     sele a
     return
     else
      @  L,  6  SAY   '*****'
      valerr = 1
   endif
   sele a
RETURN
*
PROCEDURE BTNOVAL
   if btno = 0 .or. btno < 0
      @ L, 21 say '******'
      valerr = 1
   endif
RETURN
*
*
PROCEDURE BTDATEVAL
    if month(yymmdate) # month(btdate)  .or.  year(yymmdate) #
year(btdate)
       @  L, 12  SAY   '?? ?? ??'
       valerr = 1
    endif
RETURN

*
PROCEDURE BTBANKVAL
store bankcode to mbank
sele c
seek mbank
if found()
      sele a
      return
    else
      @  L, 31 say '***'
      valerr = 1
endif
```

```
sele a
return
RETURN

*
PROCEDURE BTAMTVAL
if amtdeposit = 0  .or. amtdeposit < 0
   @ L, 46 say '*********'
   valerr = 1
endif
RETURN

PROCEDURE BTACUMUL
mcount = mcount + 1
mtotdeposit = mtotdeposit + amtdeposit
mbanktot    = mtotdeposit + amtdeposit
if valerr = 1
   merr = merr + 1
endif
RETURN
*


PROC HK
set device to screen
set print off
set talk on
set echo off

close all
set procedure to
clea


PROC CLFASALE

* clprprd.prg
* program to print monthly product wise sales report for JV
* The JV itself is not prepared  to provide flexibility
* A manual JV can be passed based on data provided here


* files section
set proce to clfapro
sele a
 use clcs&fayymm+".dat"
sele b
 use clprodct.dat index clprodct.idx
sele c
 use cllocatn.dat index cllocatn.idx
*
```

```
clear
@ 12, 10 say 'Please wait.... the file is being verified/sorted'
*
sele a
set safety off
index on prodcode to tmp.idx
set safety on
count for valid ='N' to invalno
count for posted='N' to unposted
if invalno > 0
   @ 14, 10 say str(invalno)+"  records are not valid"
endif
if unposted > 0
   @ 16, 10 say str(unposted)+"  records are not posted"
endif
if  invalno > 0 .or.  unposted > 0
   @ 18, 10 say 'Do not pass JV based on this report, due to
above errors'
   @ 19, 10 say 'But you can get the printout and check it. ????'
   @ 20, 10 say 'Load 132 Col. paper or set pitch at 15 ot 17 ,
Check Printer ON'
   wait
endif
clear
@ 12, 10 say 'Printing Sales JV Summary ......'
*
*
go top
store prodcode to mprodcode
store mprodcode to mpprod
mprodtotq = 0
mprodtotv = 0
mgrtotv = 0
mvalid = valid
mposted = posted
mprodname = '************'
muom = '*** '
store '************' to mppname
pdate = date()
pgno = 0
L = 0
*
* environment section
  set device to print
  set print on
  set console off
*
do fapseek
do faphdg

do while .not. eof()
   if prodcode # mpprod
```

```
        do faptot
        do fapseek
    endif
    if L > 55
       do faphdg
    endif
       mprodtotq = mprodtotq + qtysold
       mprodtotv = mprodtotv + salevalue
       mgrtotv = mgrtotv + salevalue
*
       if valid ='N'
          store valid to mvalid
       endif
       if posted = 'N'
          store posted to mposted
       endif
store location to mplocation
store prodcode to mpprod

skip 1

enddo
*
if l > 48
   do faphdg
endif
do fapseek
do faptot
L = L + 3
@ L, 20 say '***  GRAND TOTAL OF SALES *** : '
@  L, 55 SAY MGRTOTV
L = L + 2
@ L, 20 SAY '(Check this total with Sales Ledger Total for the
Period)'
L = L + 2
@ L, 20 SAY 'Depending upon the scheme of entry and after
reconciling with'
L =  L + 1
@ L, 20 SAY 'Collection Register for the period, prepare JVs.'
*
close data
dele file temp.idx
*
L = L + 3
@ L,30 say '** End of Report **'
set print off
set device to screen
clear
return

* eof/
```

```
PROC CLDOCS
*  cldocs.prg
* program to print document control reports

* environment section
set safety off
* memory variables section
dyymm='    '
L = 59
mpgno = 0
rdate= date()
*  to get processing month
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM) - '
   @ 11,40 SAY 'the processing month and year'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET DYYMM
   read
   if val(substr(DYYMM,1,2)) < 93
      @ 14,40 say 'Invaild year...'
      loop
   endif
   if val(substr(DYYMM,3,2)) < 1  .OR.  val(substr(DYYMM,3,2)) >
12
      @ 14,40  say 'Invalid  month...'
      loop
   endif
   exit
enddo
clear
@ 12, 30 say 'Please wait... '
* file section
 sele a
 use cllocatn.dat index cllocatn.idx
 set filt to substr(location,4,2) ='00'
 go top

*  ccs  file  checking
sele b
use clcs&dyymm+".dat"  index clcs&dyymm+".idx"
reindex
*
@ 12,30 say 'Check whether Printer is ON..'
wait
clear
@ 12,30 say 'Document Control Report Printing in progress...'
```

```
set device to print
set print on
*
sele a
do while .not. eof()
       if L > 55
           @  1,  0  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT
PROJECT"
           @  1,  68 SAY "DATE:"
           @  1, 73 SAY RDATE
           @  2,  0  SAY "COMMERCIAL ACCOUNTING SYSTEM"
           @ 2, 68 SAY "PAGE:"
           mpgno = mpgno+ 1
   if L > 55
      do faphdg
   endif
      mprodtotq = mprodtotq + qtysold
      mprodtotv = mprodtotv + salevalue
      mgrtotv = mgrtotv + salevalue
*
      if valid ='N'
         store valid to mvalid
      endif
      if posted = 'N'
         store posted to mposted
      endif
store location to mplocation
store prodcode to mpprod

skip 1

enddo
*
if l > 48
   do faphdg
endif
do fapseek
do faptot
L = L + 3
@ L, 20 say '***  GRAND TOTAL OF SALES *** : '
@  L, 55 SAY MGRTOTV
L = L + 2
@ L, 20 SAY '(Check this total with Sales Ledger Total for the
Period)'
L = L + 2
@ L, 20 SAY 'Depending upon the scheme of entry and after
reconciling with'
L =  L + 1
@ L, 20 SAY 'Collection Register for the period, prepare JVs.'

*
close data
```

```
dele file temp.idx
*
L = L + 3
@ L,30 say '** End of Report **'
set print off
set device to screen
clear
return

* eof/


PROC CLRPRINT
* niger state agric development project, minna
* cltrprint.prg
* report printing menu program for commercial accounting system
* environment section
*
* variables section
  prchoice = '0'
  pryymm= '    '
**  ***  **   ***  report period selection

do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET pryymm
   read
   if val(substr(pryymm,1,2)) < 93
   @ 14,40 say 'Invaild year...'
   loop
   endif
   if val(substr(pryymm,3,2)) < 1  .OR.  val(substr(pryymm,3,2))
> 12
   @ 14,40  say 'Invalid  month...'
loop
   endif
   exit
enddo
**         **        **          **
* files section
*  -----------no files used, they are opened in programs called
*  by this, depending upon the trans document selected
* main
do while prchoice # '9'
   set colo to b+
```

```
   @ 7,30 clear to 20,72
   @ 7,30 to  20,72 double
   set colo to gr
   @ 7,35 say 'REPORT PRINTING MENU'
   set colo to rb
   @ 9, 32 say  '1. Sales Ledger (Detailed) '
   @ 10, 32 say '2. Locationwise Sales Report'
   @ 11, 32 say '3. Productwise Monthly Sales Report'
   @ 12, 32 say  '4. Monthly Cash Collection Register'
   @ 15, 32 say '9. Exit to Main Menu'
   set colo to gr
   @ 18, 32 say 'Enter your choice<Return> :  ' get prchoice
   read
*
   do case
      case prchoice = '1'
        do clprsldg
      case prchoice = '2'
        do clprloc
      case prchoice = '3'
        do clprprd
      case prchoice = '4'
        do clprcbr
      case prchoice = '9'
* exit section
         exit
   endcase
enddo
return
*eof


PROC CLBTVAL
* niger state agric development project, minna
* clbtval.prg
* transactions validation  program for Bank Teller Form
* environment section
*
* variables section
  clbt='CLBT'
* for the file name of ccs transaction file
  valyymm ='    '
  L = 59
  rdate = date()
  mpgno = 0
  valerr = 0
  merr = 0
  mcount = 0
  mtotdeposit = 0
  mbanktot = 0
*
set procedure to clvalpro
```

```
do valyymm

if  file(clbt+valyymm+".dat")
    dummy = 0
  else
    clear
    @ 12,30 say 'The file not found !!!!!!'
    wait

 endif

* coverting valyymm to date format
store substr(valyymm,3,2)+'/01/'+substr(valyymm,1,2) to ym
store ctod('&ym') to yymmdate
* files section
sele a
use clbt&valyymm+".dat"  index  clbt&valyymm+".idx"
sele b
use cllocatn.dat index cllocatn.idx
sele c
use clbank.dat  index clbank.idx
sele a
* main
*
clear
@ 12, 30 say 'Check whether Printer is ON'
* @ 14, 30 say 'Load 132 col paper Pitch at 12 cpi'
wait
clear
@ 12, 30 say 'Bank Teller Validation & printing in progress .....
'
set device to print
set print on
*
do while .not. eof()
  valerr = 0
 *
   if L > 55
      do btvalhdg
   endif
   L = L + 1
   do   btprint
   L = L + 1
   do   btyymmval
   do   btlocval
   do   btdateval
   do   btnoval
   do   btamtval
   do   btacumul
   skip 1

enddo
```

```
*
L = L + 3
@ L, 30 say ' ***  END OF REPORT  ***'
*
set device to screen
set print off

* exit section
  close all
  clear
  return

* eof/


PROC CLCCSPRO
* clccspro.prg
* procedure file for ccs document entry and validation

PROCEDURE CCSYYMM
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET CCSYYMM
   read
   if val(substr(CCSYYMM,1,2)) < 93
   @ 14,40 say 'Invaild year...'
   loop
   endif
   if val(substr(CCSYYMM,3,2)) < 1  .OR.
val(substr(CCSYYMM,3,2)) > 12
   @ 14,40  say 'Invalid  month...'
loop
   endif
   exit
enddo

if  file(clcs+ccsyymm+".dat")
    return
  else
    clear
    @ 12,30 say 'Please wait ....   Opening a new file ...'
    use clcs9999.str
    copy stru to clcs&ccsyymm+".dat"
    use clcs&ccsyymm+".dat"
    index on location+str(ccsno) to clcs&ccsyymm+".idx"
```

computerisation system needs to be designed.

Finally, the mode of operation of the proposed system is analysed, and its stages of implementation. The implementaion is developed in a way to ensure reliability and continuity of commercial activities in Niger State Agricultural Development Project, Minna.

```
    use
    clear
 endif

RETURN


PROC CLTRUPD
* niger state agric development project, minna
* cltrupd.prg
* transactions updation program for commercial accounting system
* environment section
*
* variables section
  uchoice = '0'
  truyymm='    '
* files section
*  all transaction updation programs are in this
*  so files are opened in the main section depending on documents
set procedure to cltrupro
* main
do while uchoice # '9'
   set colo to b+
   @ 7,30 clear to 20,72
   @ 7,30 to  20,72 double
   set colo to gr
   @ 7,35 say 'TRANSCATIONS UPDATION MENU'
   set colo to rb
   @ 9, 32 say  '1. Consolidated Cash Collection Summary'
   @ 11, 32 say  '2. Bank Teller Document'
   @ 13, 32 say '3. Stock Recipt Notes '
   @ 15, 32 say '9. Exit to Main Menu'
   set colo to gr
   @ 18, 32 say 'Enter your choice<Return> :  ' get uchoice
   read
*
   do case
      case uchoice = '1'
        clcs='CLCS'
        do ccsupd
      case uchoice = '2'
        do btupd
      case uchoice =  '3'
        do srvupd
      case uchoice = '9'
* exit section
         exit
   endcase
enddo
return to master
*eof
```

```
PROC CLTRBT
* cltrbt.prg
* data entry  program for  bank teller docs for commercial a/cg
system
* environrment section

*  memory variables
btyes='Y'
btyymm='    '
clbt='CLBT'
* files section
set proce to clbtpro.prg
do btyymm

sele a
use clbt&btyymm+".dat"  index clbt&btyymm+".idx"
sele b
use cllocatn.dat index cllocatn.idx
sele c
use clbank.dat  index clbank.idx
sele a
* main
do while btyes='Y'
    clear
    append blank
    repl yymm with val(btyymm)
    set colo to g
    @  3,  9  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT  PROJECT,
MINNA"
    @  5,  5  SAY "COMMERCIAL ACCOUNTING SYSTEM  -  BANK  TELLER
DOCUMENT  ENTRY"
    set colo to  n+
    @  8,  3  SAY "Location Code :"
    @  8, 54  SAY "Date of"
    @  9, 54  SAY "Deposit  :"
    @ 11,  3  SAY "Bank Accout Code:"
    @ 11, 54  SAY "Teller Cotrol"
    @ 12,  3  SAY "(As per A/cs)
   Doc. No. :"
    @ 14,  3  SAY "Amount
   CCS No"
    @ 15,  3  SAY "Deposited :"
    @ 15, 54  SAY "(X Ref.) :"
    set colo to gr+
    @  6,  0  TO 16, 79
*
    set colo to  r
   @  8, 19  GET   LOCATION
    @  9, 65  GET   BTDATE
    @ 11, 21  GET   BANKCODE
    @ 12, 65  GET   BTNO
    @ 15, 15  GET   AMTDEPOSIT
```

```
    @ 15, 65  GET   CCSNO
    read

    set colo to bg
    @ 23,10 say 'Do u have more Bank Tellers to enter ? Y/N'  get
btyes pict '!'
    read


enddo

* eoj
close all
clear
return
* eof


PROC CLTRZS
* niger state agric development project, minna
* cltrzs.prg
* transactions entry program for Zonal Stock Statements
* environment section
*
* variables section
  zsentry='Y'
  mdel = 0
  mlocation = '     '
  clzs='CLZS'
* for the file name of zs transaction file
  zsyymm ='    '

* files section
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET ZSYYMM
   read
   if val(substr(ZSYYMM,1,2)) < 93
      @ 14,40 say 'Invaild year...'
      loop
   endif
   if val(substr(ZSYYMM,3,2)) < 1  .OR.  val(substr(ZSYYMM,3,2))
> 12
      @ 14,40  say 'Invalid  month...'
      loop
```

```
   endif
   exit
enddo

if  file(clzs+zsyymm+".dat")
    dummy =0
  else
    clear
    @ 12,30 say 'Please wait ....   Opening a new file ...'
    use clzs9999.str
    copy stru to clzs&zsyymm+".dat"
    use clzs&zsyymm+".dat"
    index on location+yymm+prodcode to clzs&zsyymm+".idx"
    use
    clear
 endif
sele a
use clzs&zsyymm+".dat"  index  clzs&zsyymm+".idx"
sele b
use cllocatn.dat index cllocatn.idx
sele c
use clprodct.dat  index clprodct.idx
sele a
* main
do while zsentry='Y'
  mprodcode ='    '
  muom='    '
  mprodname='                                '
*
   set colo to b+
   clear
   @  2,  0  TO  7, 79
   @  1, 13  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
   @  2, 19  SAY "COMMERCIAL ACCOUNTING  SYSTEM"
   @  4, 15  SAY "MONTHLY ZONAL STOCK STATEMENT DATA ENTRY"
   @  5, 15  SAY "======================================="
   append blank
   @  8, 1 say "ZONE: "
   @  8, 50  SAY "YEAR/MONTH(YYMM) :"
   @  9,  0  SAY
"-------------------------------------------------------------
----------"
   @ 11,  0  SAY "PRODUCT CODE:"
   @ 13,  0  SAY "PRODUCT NAME:"
   @ 13, 50  SAY "UOM :"
   @ 16,  0  SAY "Op.       Recipts     Transfers
Tranafers  Shortage   Closing"
   @ 17,  0  SAY "Stock     from HQ     IN              SALES
OUT         /Losses   Stock"
   set colo to r/w
   @  8, 12  GET   mlocation
   read
```

```
   sele b
   seek mlocation
   set colo to w
   if found()
      @ 8, 20 say ZONE
    else
      @ 8,20  say "Invalid  Location Code !!! "
      loop
   endif
   set colo to r/w
   sele a
   @  8, 69  say  ZSYYMM
   mprodcode ='     '
     @ 11, 15  GET   mprodcode
     read
     sele c
     seek mprodcode
     set colo to w
      if found()
         @ 13,15  say prodname
         @ 13, 56 say uom
         store prodname to mprodname
         store uom to muom
       else
         store '    ' to muom
         @  13, 15 say 'Invalid Prod Code !!!'
         @  13, 56  say '***'
       endif
      set colo to b+
      sele a

     repl prodcode with mprodcode, prodname with mprodname, uom
with muom, location with mlocation
     @ 13, 15  GET   PRODNAME
     @ 13, 56  GET   UOM
     @ 19,  0  GET   OPSTOCK
     @ 19, 10  GET   RECIPTHQ
     @ 19, 22  GET   TRFRIN
     @ 19, 38  GET   SALES
     @ 19, 48  GET   TRFROUT
     @ 19, 59  GET   SHORTAGES
     @ 19, 70  GET   CLSTOCK
     read
     if opstock+recipthq+trfrin - sales-trfrout # clstock
        @ 22, 10 say 'op. stock + recipts - issues # cl. stock
!!!'
          @ 19,  0  GET   OPSTOCK
          @ 19, 10  GET   RECIPTHQ
          @ 19, 22  GET   TRFRIN
          @ 19, 38  GET   SALES
          @ 19, 48  GET   TRFROUT
          @ 19, 59  GET   SHORTAGES
```

```
          @ 19, 70  GET   CLSTOCK
         read
    endif

*
   @ 22,0  clear
   @ 23,10 say  "Do u want to continue ? Y/N  "  get zsentry pict
'!'
   read
   clear
if location='     ' .and. prodcode ='     '  .and. clstock =0
   delete
   mdel= mdel + 1
endif
enddo
* exit section
  sele a
  clear
  @ 12, 30 say 'Please wait....'
  pack
  close all
  clear
  return
* eof/


PROC CLTRUPRO
* niger state agric development project, minna
* cltrupro.prg
* transactions updation procedure file for all transactions


PROCEDURE CCSUPD
  ccsupd='Y'
  clcs='CLCS'
* for the file name of ccs transaction file
  truyymm ='    '
  mdeleted = 0
*
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
   set colo to r
   @ 12,51 GET truyymm
   read
   if val(substr(truyymm,1,2)) < 93
   @ 14,40 say 'Invaild year...'
```

```
   loop
   endif
   if val(substr(truyymm,3,2)) < 1   .OR.
val(substr(truyymm,3,2)) > 12
     @ 14,40  say 'Invalid  month...'
     loop
   endif
   exit
enddo

if  file(clcs+truyymm+".dat")
    use  clcs&truyymm+".dat"  index  clcs&truyymm+".idx"
    clear
    @ 12,30 say 'Please wait...'
    reindex
    go top
    clear
  else
    clear
    @ 12,30 say 'File not found .... ???????'
    @ 13,30 say 'How can it be ?? Either the YYMM is wrong or
file deleted..'
    @ 14,30 say 'If deleted, investigate and copy from Backup..'
    wait
    clear
    close all
    return
 endif
*
*if posted #'N'
*   clear
*   @ 12, 10 say 'The data for this month has already been'
*   @ 14, 10 say 'processed, NO UPDATION WILL BE ALLOWED NOW...'
*   wait
*   close all
*   clear
*   return
*endif


do while ccsupd = 'Y'
maction=' '
mnext ='N'
ccsupd='Y'
mlocation ='     '
mccsno =0
clear
set colo to gr
@  1, 14  SAY "NIGER STATE AGRICULTURAL DEVELOPMENT PROJECT"
@  2, 21  SAY "COMMERCIAL ACCOUNTING SYSTEM"
set colo to gr+
@  3, 16  TO  5, 55
```

```
* variables section
  ccsentry='Y'
  clcs='CLCS'
* for the file name of ccs transaction file
  ccsyymm ='    '

* files section
set procedure to clccspro
do ccsyymm
sele a
use clcs&ccsyymm+".dat"  index  clcs&ccsyymm+".idx"
sele b
use cllocatn.dat index cllocatn.idx
sele c
use clprodct.dat  index clprodct.idx
sele a
* main

do while ccsentry='Y'
  ccsdoc='Y'
  mlocation ='     '
  mprodcode ='    '
  mccsno='      '
  muom='    '
  mccsdate= ctod("  /  /  ")
*
   set colo to b+
   clear
   @  0, 0  SAY "NIGER  STATE  AGRICULTURAL  DEVELOPMENT
PROJECT"
   @  1, 0  SAY "SALES AREA CONSOLIDATED CASH COLLECTION SUMMRY
(CCS)"
   @  2,  0  TO  7, 79
append blank
   @  3,  3  SAY "Location Code:"
   @  3, 17  GET  MLOCATION  pict '99999'
   @  3, 25  SAY "Location  : "
   @  5,  3  SAY "CCS  Date   :"
   @  5, 17  GET  MCCSDATE  pict "@B"
   @  5, 31  SAY "CCS No :"
   @  5, 40  GET  MCCSNO  pict "999999"
   read
   @  5, 61  SAY "Period :"
   @  5, 70  SAY CCSYYMM
   sele b
   seek mlocation
   set colo to w
   if found()
      @ 3, 37 say trim(ZONE)+"  -  "+trim(FSC)
    else
      @ 3, 37  say "Invalid  Location Code !!! "
   endif
```

```
          @ 10,0 clear
          L = 11
       endif
       if ccsdoc ='Y'
          appe  blank
       endif
   enddo
*
   @ 22,0  clear
   @ 23,10 say  "Any more  CCS to enter ?  Y/N  "  get ccsentry
pict '!'
   read
enddo


* exit section
  close all
  clear
  return

* eof/


PROC UNCLOSE
set talk of
clear
ypm='law'
ypm='   '
@ 12, 10 say'what is your password:'get ypm
read
if ypm
clear
set talk on
return
endif
set talk off
  clcs='CLCS'
  clbt ='CLBT'
  clzs='CLZS'
* for the file name of ccs transaction file
  truyymm ='     '
  mdeleted = 0
  set talk on
*
do while .t.
   set colo to g
   @ 9,37 TO 15,71
   set colo to w
   @ 10,38 clear to 14,70
   @ 10,40 SAY 'Enter year(YY) and month(MM)'
   @ 11,40 SAY 'to whcih the document pertains'
   @ 12,40 SAY 'as YYMM :  '
```

APPENDIX B

STATE AGRICULTURAL DEVELOPMENT PROJECT
RCIAL ACCOUNTING SYSTEM

DATE: 03/05/98
PAGE: 1

SALES LEDGER FOR SEPTEMBER 97

CODE:35100 ZONE:KONTAGORA PDP:BORGU

CCS Date	PRODUCT Code	PRODUCT Name	QUANTITY Sold	UOM	UNIT PRICE N	k	SALES VALUE N	k	V/ P
09/10/97	D105	HERBICIDES - PRIMEXTRA	15.000	LTR	770.00		11550.00		NN
09/10/97	D130	HERBICIDES - PARAQUAT	7.000	LTR	715.00		5005.00		NN
09/10/97	C121	SEED -DRESSING- APRON PLUS	3.000	SCH	60.00		180.00		NN
09/10/97	D123	HERBICIDES - NUVACRON	5.000	LTR	1620.00		8100.00		NN
09/10/97	K101	SPRAYERS - ELECTRODYN	3.000	STK	290.00		870.00		NN
09/02/97	A120	UREA	331.000	BAG	150.00		49650.00		NN
09/07/97	A120	UREA	163.000	BAG	150.00		24450.00		NN
09/08/97	A140	SSP	17.000	BAG	110.00		1870.00		NN
09/02/97	A140	SSP	72.000	BAG	110.00		7920.00		NN
		* * * PDP TOTAL ** ** **					109595.00		

SALES LEDGER FOR SEPTEMBER 97

CODE:35200 ZONE:KONTAGORA PDP:NASKO

	CCS Date	PRODUCT Code	PRODUCT Name	QUANTITY Sold	UOM	UNIT PRICE N k	SALES VALUE N k	V/ P
5	09/13/97	A101	NPK 15.15.15	85.000	BAG	150.00	12750.00	NN
	* * * PDP TOTAL ** ** **						12750.00	

SALES LEDGER FOR SEPTEMBER 97

CODE:35300 ZONE:KONTAGORA PDP:KONTAGORA

CCS Date	PRODUCT Code	PRODUCT Name	QUANTITY Sold	UOM	UNIT PRICE N	k	SALES VALUE N	k	V/ P
09/18/97	D123	HERBICIDES - NUVACRON	6.000	LTR	1620.00		9720.00		NN
		* * * PDP TOTAL ** ** **					9720.00		
		* * * ZONE TOTAL ** ** **					132065.00		

SALES LEDGER FOR SEPTEMBER 97

CODE:50000 ZONE:HEADQUARTERS PDP:MINNA FARM CENT

CCS Date	PRODUCT Code	PRODUCT Name	QUANTITY Sold	UOM	UNIT PRICE N	k	SALES VALUE N	k	V/ P
07/15/97	0104	** INVALID PRODCUCT CODE **	4.000		145.00		580.00		NN
07/15/97	D130	HERBICIDES - PARAQUAT	21.000	LTR	715.00		15015.00		NN
07/15/97	G101	IMPROVED SEEDS - RICE ALL VAR.	55.000	KGS	55.00		3025.00		NN
07/15/97	C121	SEED -DRESSING- APRON PLUS	14.000	SCH	60.00		840.00		NN
07/15/97	D123	HERBICIDES - NUVACRON	1.000	LTR	1620.00		1620.00		NN
07/29/97	I102	EQUIPMENT - IRRIGATION PUMP 2"	1.000	NOS	30000.00		30000.00		NN
07/29/97	G102	IMPROVED SEEDS - MAIZE ALL VAR	100.000	KGS	13.00		1300.00		NN
09/04/97	A120	UREA	10.000	BAG	150.00		1500.00		NN
09/04/97	A104	NPK 20.10.10	760.000	BAG	150.00		114000.00		NN
08/01/97	A140	SSP	5.000	BAG	110.00		550.00		NN
08/01/97	A104	NPK 20.10.10	1603.000	BAG	150.00		240450.00		NN
08/04/97	A120	UREA	600.000	BAG	150.00		90000.00		NN
08/04/97	A104	NPK 20.10.10	2803.000	BAG	150.00		420450.00		NN
08/01/97	H102	VGTBLE SEEDS- TOMATO - UC-82B	2.000	SCH	85.00		170.00		NN
08/01/97	G102	IMPROVED SEEDS - MAIZE ALL VAR	50.000	KGS	35.00		1750.00		NN
08/01/97	D130	HERBICIDES - PARAQUAT	18.000	LTR	715.00		12870.00		NN
08/01/97	K101	SPRAYERS - ELECTRODYN	13.000	STK	290.00		3770.00		NN
08/01/97	E111	STORAGE CHEM.- PHOSTOXINE	5.000	TAB.	14.00		70.00		NN
08/01/97	G101	IMPROVED SEEDS - RICE ALL VAR.	138.000	KGS	20.00		2760.00		NN
08/01/97	I103	EQUIPMENT - IRRIGATION PUMP 3"	1.000	NOS	50000.00		50000.00		NN
08/01/97	C121	SEED -DRESSING- APRON PLUS	24.000	SCH	60.00		1440.00		NN
08/01/97	D102	HERBICIDES - GRAMAXONE	14.000	LTR	700.00		9800.00		NN
08/01/97	D106	HERBICIDES - BUTACHARLOR(TEER)	14.000	LTR	1200.00		16800.00		NN
08/01/97	G101	IMPROVED SEEDS - RICE ALL VAR.	60.000	KGS	55.00		3300.00		NN
08/01/97	D105	HERBICIDES - PRIMEXTRA	15.000	LTR	770.00		11550.00		NN
08/14/97	A104	NPK 20.10.10	4668.000	BAG	150.00		700200.00		NN

* * * PDP TOTAL ** ** ** 1733810.00

* * * ZONE TOTAL ** ** ** 1733810.00

* * * GRANT TOTAL ** ** ** 1865875.00

** *** END OF REPORT ** ***

PRODUCTWISE MONTHLY SALES REPORT
FOR : SEPTEMBER 97

TION ZONE	PDP	QTY SOLD	SALE VALUE N	K	V P
CT K101	PRODUCT NAME: SPRAYERS - ELECTRODYN		UOM: STK		
KONTAGORA	BORGU	3.000	870.00		NN
HEADQUARTERS	MINNA FARM CENT	13.000	3770.00		NN
	PRODCUT TOTAL	16.000	4640.00		
CT 0104	PRODUCT NAME: ** INVALID PRODCUCT CODE **		UOM: ***		
HEADQUARTERS	MINNA FARM CENT	4.000	580.00		NN
	PRODCUT TOTAL	4.000	580.00		

*** GRAND TOTAL OF SALES *** : 1865875.00

(Check this total with Sales Ledger Total for the Period)

** End of Report **