APPLICATION OF COMPUTER TO STORE MANAGEMENT SYSTEM

(A CASE STUDY OF KATSINA OIL MILLS LTD, KATSINA)

BY

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APPROVAL

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DEDICATION

To the memory of my grand parents Alh. Danjuma Nassarawa, Haj. Fatimatu (Yargoggo), Muhammad Garba and Hadiza Mohammed (Saraki).

ACKNOWLEDMENT

All praises be to Allah the Almighty peace be upon the last prophet Muhammad (S.A.W).

My gratitude goes to my father Alh. Muhtari Nassarawa, my Uncle Baba Safiyanu, my Aunty Goggo Hauwa'u. The effort of my Uncle Usman Mani Nassarawa (HON), my sister Hajia Binta Nassir (MRS) should not be over emphasised, However, these people bears the pain of sponsoring me throughout the programme. Thank you may Allah bless you.

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I must acknowledge the effort of the H.O.D. Maths and Computer Science in person of Dr. S.A. Reju for his encouragement and support to us. So also to all lecturers of the Department particularly those that taught me during the programme.

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ABSTRACT

Computers are used in almost every field and profession to perform a large number of useful applications.

This research work was based on how computers can be introduced to help store managers carryout their operations and general stores management easily.

To achieve this objective, a close look at the existing system (manual operation) becomes imperative to escalation why it is not satisfying the stores management operation to the fullest.

It is clear that store managers faces problem in managing stores due to irregularities in keeping records which are bane of any successful management.

In order to alternate there stubborn problems that the researcher taught of developing computer programme to be used in carrying out stores operation, for computers are know to be very accurate machines in record keeping, fast in operation and generally reliable.

Database management was chosen for this project and in particular chipper was used for its simplicity and flexibility.

CHAPTER ONE

1.0 Introduction

1.1 SOFTWARE AND STORE MANAGEMENT

The primary function of stores management is to provide for efficient storage of goods and handling of goods to be redistributed to the ultimate consumer. Storage may involve completed product, a subassembly for completion by another manufacturer. Storage operation the purpose for which a stores operation functions, that is as holding area for materials until redistribution. I must assume that storage is both safe and adequate, provide for frequent turnover of stock necessary for maximum utilisation.

Stores management is closely linked with distribution and in a much-neglected area of business study. It is natural that when we approach a largely unknown territory, there will be fields for conjecture; that method of attack and even the terrain itself will open up areas for controversial ideas and conclusions, but this is inevitable.

When goods are idle, no matter for what purpose, energy is locked up. Goods are themselves represented by value, which can be expressed in financial terms. This represents a huge amount of money when put together. A lot of goods, which are in this state, are therefore ultimately a filling a demand at some future progress to their destination. Whatever this may be, should be a course of enquiry because this puts up their costs, but does not add to their value. Furthermore, those goods which are on the move should be examine to see if they can be move quickly, this itself will release financial energy.

As with other areas of neglect in any organisation, the "stores" has been regarded as unnecessary expense and non-producing. In any organisation where stock

are held in a case of administrations. The approach, which they have explored, has not been the engineering matter and not an administrative one. Hence the introduction of "computer" will greatly solve the problem of stores management.

Therefore, in this write-up, we intend to see how best we can introduce the application of "computer" to tackle the bundle of problems faced in the stores and all other areas of stores management.

A Computer is an electronic device which can receive data (input), process the data (processing) and emits results (output) very accurately, faster and much more reliable than human efforts. In brief a computer is a logical machine, which picks up facts and figures at exceptionally high speeds and which can be used to solve very complex problems.

The information which we need to pass to the machine has to be carefully sorted so that it is correct when it is ready to dealt with, careful, verification is the key to the avoidance of difficulty. It is very obvious that the speed of operation all procedures need to be standardised. This means that personnel must be very carefully educated with the strict need to stick to the procedure.

For most stores the assembly and feeding of data is a simple process. It often takes the form of transcription of normal information as a series of holes or tokens in paper tape and other secondary or primary storing devices in the older computer systems, or their magnetic or optical equipment in modern computers. The information has to be verified for its accuracy and is then ready for passing to the computer. In other words, one could say that instead of storing the information on stock card or a ledger the information is stored on paper tape, magnetic tape or magnetic disk.

The essence of using computer is the speed with which the data is accessed and processed. As a rule, the stores supervisor will be held responsible for adhering to the fixed time schedule is necessary. As always happens when a procedure is standardised, there is an inherent danger of flexibility. Organisations should endeavour to produce their own standard application programs for controlling stocks. These programs are very good, but need careful examination when a careful study is being undertaking. Each industry has its own peculiarities and the programs should be seen in their light and organised to reflect these peculiarities.

It is obvious that no policy could be adopted by any organisation without any benefit for its adoption. Our urgent needs to use Computers is not without some benefits.

Some Of Which Includes: -

1. To record issues, receipt and balances on hand at high speed.
2. To record stock on order and awaiting delivery
3. Information about items which have fallen to re-order level.

In all we shall try to put to gather some application capable in (abase IV) which will be capable enough to meet our demand in stores management particularly the central store of Kastina oil mills which is one case study.

1.2 MANUAL FORM OF OPERATION IN KATSINA OIL MILLS

Different people have different ideas and different approaches to problem solving. Definitionally, stores are building where finished and semi-finished items are kept in transit to the ultimate consumers and users.

This involves a lot of things or procedures, which includes records on issues, receipts and balances at hand. It also involves records on stock on order and delivery.

The procedure above involve a lot of risks being that they are carried manually every where. This study therefore, comes as an attempt to see how best computers could come up in this vital area of management to enhance the speed with which these computers are carried out and to bring to minimum the financial/resources misappropriation going on in the stores as a result of manual operation.

1.3 SOFTWARE APPROACH TO KATSINA OIL MILLS

The aim of this research work is to identify, analyze computer introduction the use of computers to stores management with the existing system and identify the problems associated with the activities and forward recommendations and advices.

The growing need to put computers in all aspects of life can not over-emphasized. The application of Computers will in no small amount help in achieving an effective and efficient stores management system at the oil mills industry in particular.

The research therefore intends to examine the system and application of computers to stores management in Katsina oil Mills Ltd:

1. To determine its contribution to the effective and efficient management of research at the industry.
2. To evaluate the effectiveness of stores management system to highlight problems encountered in oil mill and suggest ways for curtailing them.

3. To see whether the application of Computers will help in proper management of some aspects of stores management, some of which **are:**

   a. Records issues, receipt and balances at hand

   b. Records stock on order and awaiting delivery

   c. Throws out information about items, which have fallen to re-order level.

   d. Records changes to prices and indicate demand changes.

   e. Enables more accurate assessment of minimum and maximum ordering levels.

The research work will also help Katsina oil mills to improve its management of stores if the recommendations and suggestions given at the end of the research work are objectively implemented.

1.4 SCOPE AND JUSTIFICATION OF SOFTWARE APPLICATION TO STORES

Stores management courses a range of activities and it means a different thing to different organizations such as manufacturing industries, engineering firms, training institute etc and to profit and profit organizations.

This work therefore, focuses impact to profit organization with a clear reference to Katsina oil mills Ltd.

In any organization, stores are like live wires to the success of the policies that set up the organization. Many times, management policies cannot be implemented for not having the right information at the right time. In many academic institutions, financial institutions, profit and non-profit organizations a lot of research works failed

because of not getting the right materials on time. This is largely due to the improper management of stores, which results in, lost of information, squandering of the stores items, financial mismanagement etc. all which comes from the manual system of stores management.

The application of computer to stores management will in no small amount help to put an end to a lot if not all of the above mention problems. Hence this study can easily be justified despite the financial commitments.

CHAPTER TWO

2.0.0 LITERITURE REVIEW

2.1.0 STORES MANAGEMENT

The word "management" as defined in the Longman dictionary of contemporary English is ***"the art of practice of managing a business or money"***

One useful break down of the management job is that suggested by ***Luther Gulick*** (1930s). Gulick coined the word ***POSDCORB*** from the initials of the seven functions; planning, organization, staffing, directing, co-ordinating, reporting, and budgeting. (The last "O" is to make the word pronounceable).

Stores management can therefore be seen as a system which has inputs that includes:- Customers need, information, technology, labour and management, fixed assets and variable assets, that are relevant to the transformation process.

The transformation process incorporates planning, operating, and controlling the system. The output of the system include: products and services and may even provided by a consulting organization.

The operation of the system are influenced by many external factors such as safety regulations and fair labour practices.

2.2.0 MANAGEMENT AND PERSONNEL

The success of any function lies in the management policies that are established and the quality assigned personnel. Stores management must recognize the full

concept of its responsibilities and must select, train, and upgrade its personnel accordingly. Not only should personnel be well trained in handling stores, they should also be familiar with the total plant operation to help executives a bottle job in their own function. Management may use in-house personnel and outside specialists to teach home personnel how to accomplish this objective especially when computer is used. The computer operators in the store need to up date their knowledge.

2.2.1. RELATIONSHIP TO OTHER DEPARTMENTS

Store management is generally organized as a unit within the purchasing department. This strengthens coordination between the two interrelated material functions of buying and storing, whether a total materials management concept has been adopted or not. Under material management organization, the stores management unit should have of equal departmental status with other functions of purchasing, traffic, material control, and manufacturing or production under a single head.

In compasses, which do a large amount of warehousing, the stores management function may be nearly synonymous with physical distribution. In this case traffic, purchasing and other supply and material control departments may well report to stores management.

2.2.3 MANAGING THE FACILITIES

1. UTILISATION OF SPACE

Whenever ever utilization is needed then it is suppose that over-all-cubic foot requirements have been determine from an item-by-item. Analysis of the total

projected maximum inventory, Form this study, the size, shape, weight and special features should be connected to bin, box, self, and pallet loads, and finally, to the shelves and racks needed to contain them

The receiving and dispensing areas should be designed to provide maximum anticipated activity headspace for inside storage, Shelves and wall decking should be designed with no more unused space above items stored longer than necessary for accessibility.

(2) DESIGN AND LAYOUT

For proper space utilisation, scale drawing and templates are useful at the design and layouts should stage of planning. All possible logical layouts should be considered and rendered with the stores operating be considered and received with the stores operating personnel before a final plan is made. Normally straight line and uniformity of arrangement minimise accessibility, orderly flow, and flexibility. Trade - offs may likely be necessary to attain priority objectives for any particular stores system. For example accessibility might be sacrificed for greater security of items most subject to pilferage.

(3) HANDLING AIDS

In any store there should be proper selection of material handling processes and equipment. This is to achieve a set goal. Below, are some of the most important goals:

(a) To eliminate handling wherever possible

(b) To eliminate travel distance.

(c) To increase speed of assembly processes, eliminate bottleneck, co-ordinate operations and fill orders rapidly.

(e) To reduce chance for physical injury to stores personnel.

2.3 COMPUTERS IN STORES MANAGEMENT

The primary function of stores is to provide for storage and handling of goods to be redistributed to the ultimate consumer.

It is particularly important that in any organisation the stores decision and purchasing department work closely together since their combined efforts are essentially for keeping store inventory in the most economical level. All the inventory on stores stock are purchased by the purchasing department on the basis of the information should furnish information regarding inventory on stock, the rate of use, minimum and minimum stocking qualities, and estimated future requirement.

However, all of the above information will be best achieved by the use of Computer, it has the ability of keeping large quantity of information and can be access and retrieve very easily, faster and accurately.

A continuing concerted effort is necessary to maintain the most economical system for purchasing, releasing, receiving, distributing, and paying for stores materials.

2.4 STORES LOCATION AND CLASSIFICATION

2.4.1 STORES LOCATION

When planning a new store, we are actually examining a dynamic situation. Normally, we tend to look at the situation as if it was static, whereas even at the time we are looking at it, it is moving and changing. For this reason, although we must to plan - and often to find details we have to retain a considerable amount of room for judgement, this is because most of the times when a store building is erected by the times it is computed, many are needed so that the building has come almost out of date when it is about to be used for the first time.

The first general thing to be said about the building then is that we are considering an expensive item which must give an impression of permanency and yet when it has been coupled it could be out of date. This immediately imposes a need for flexibility in one planning.

Firstly, with regards to the location we can use any theoretical formula we like to choose the best site, but a change in economic circumstances, a government edict, or a change in transport facilities can offset all our calculations. Thus to keep alternatives in mind is very essential.

As for the building itself, we should live elbowroom on the site, if possible. We should always try our acquired land than is really needed, to put it in other words, do not plan to cover the site in stages.

2.4.2 STORES CLASSIFICATION

Stores can be classified into direct materials and indirect materials

2.4.3 DIRECT MATERIALS STORES ARE:

(a) Components store

These types of stores carry the piece parts, which are:

(i) Manufactured in the Factory, or

(ii) Purchased from outside sources, which may include special costings, switches, plugs etc.

(c) Finishing Part Store

Where the concern is not using automation or using transfer machines, finished parts needs to be stored in readiness for the assembly or sub - assembly stages.

(d) Warehouse

In this store, the finished goods are stored or kept prior to dispatch to customers.

2.4.4 Indirect Stores are:

(a) Tools Store

Items used by the tool store may be classified into two categories:

(i) **RETURNABLE TOOLS**: these tools are used in exchange for a metal plastic tool check bearing the operators name or number. The check is held against the return of the tools. These types of tools include: Taps and drills. Cutter for milling machines, spanners and screwdrivers.

(II) CONSUMABLE TOOLS: These are tools, which are consumed by the work such as files, glass - paper etc. They are obtained on requisition, as they are not returnable.

(b) **Indirect Material Store**:

These includes clearing materials, rags, lubricating oil, Paint and grease. They are kept away from other goods.

(C) Maintenance Store

All materials and parts required for routine and preventive maintenance are kept in this store some other types of store do not exist, there may include, inflammable store and Chemical store.

2.5 DUTIES AND RESPONSIBILITIES OF STORES OFFICER

The running of the stores has been seen as being more closely allied to engineering than any other activity.

The manager is responsible for the proper use of an accumulation of wealth, which is represented by tangeable assets. It is his paramount duty to employ all the resources of that enterprise so as to produce for profit and service which is exactly what is wanted by someone else.

The managers must be fully aware of what the business in there for and should know exactly whose this unit stand in relation to the rest of the organisation and put in system which make his unit efficient. He must be constantly appraising himself and his subordinates.

The manager must ensure that statistics of records are kept. He will know that the financial records, which are supplied to him, are probably inadequate and not accurate enough for the purpose, full control and he has to ascertain what other data needs to be gathering to increase his control. He must also keep record which indicate the volume of work passing through his department, such as the number of orders processed, the number of items per order, the length of time to process each order and so on.

The manager should ensure proper checking and control over the affairs of the store in general. Some of such checking includes surprise checks and annual production audit.

2.5.1 SURPRISE CHECKS

The manager should make it part of his duty to see that items are placed where they should be on a routine check. He should ensure the cleanliness and tidiness of the store as maintenance of high morale. He should make it a habit to look at and ensure that the gangways and clearways are always kept clear. The manager must check invoices, which are directly linked with goods inward as well as all expense invoices. He must make sure that someone should be made personally responsible for kept for proper security.

2.5.2 PERIODIC CHECKS

The manager should make it practice to check inventory and at the sometime to see not only that there items are serviceable, but that they are safe to use.

He should layout a proper packing and vehicle movement system. He should inspect all outside walls. Check on all fencing and check n all outside walls. Check on all fencing and check on all common walls with neighbours. Have the fencing and check on all common walls with neighbours. Have the roofs and gates and gutters inspected. All contact should be regularly looked at end brought up to date. Fire alarms and sprinkler systems should be regularly checked.

2.5.3 ANNUAL PRODUCTION AUDIT

It can not be said to often that it pays to have regular and good on machinery. Make it an established part of week's work to have a discussion meeting. This breaks the monotony of routine work. Overhaul filing systems at least one in every twelve month. Space is valuable and time for filing is expensive. Choose the items, which must be kept and get rid of everything else. Make it a practice, at least once in a year to ensure that all proper signs and notices are still where they should be. He should constantly review insurance contract. Even though this may not be specific providence of the stores office he should know that the company covers the department that the cover is adequate.

2.6 STOCK TAKING

2.6.1 MEANING

Stocktaking is one of the chores of warehouse or stores work. In almost every organisation where some sort of stores exists, different rules exist and the quality of the effort at stock - taking time varies also. But there are some facts which are universal and worth bearing in mind.

(1) There was the suggestion that materials and goods in the stores should be seen as if they were heaps of bank notes and the stuff of the stores should be taught to see things in this light.

(2) Stocktaking is more than just the verification of the stocks with the company. The accuracy of the results as shown in the firms financial accounts.

(3) Stores should be test, checked by the stores officer especially the valuable or attractive stores.

(4) Stores should be examined to see if they are still useful for the purpose for which they were purchased.

2.6.2 METHODS OF TAKING STOCK

There are two forms of taking stock, namely;

(1) FIXED STOCKTAKING: This is when the stock is counted and verified at fixed period e.g. annually or every two years.

(2) CURRENT STOCK TAKING: This is a system whereby this stock is derived up, say into six, which areas that the stock can be counted and verified on two months basis, one-sixth at a time.

2.6.1 TYPES OF STOCK

In any organisation where a non-profitable store exists, such stores contains different types of stock items. To give this item a general look and approach we can classify them as:

(1) Raw Materials And Purchased Parts Stock: This is largely recognise as the stock of raw materials (such as steel, copper, rubber etc) and purchased parts and components awaiting processing or assembly.

(2) Work - In Progress Stock: This includes parts of progressive slopes if completion, such as raw materials just issued from stores, materials in various stages of processing, and parts of assemblies awaiting final acceptance as finished stock.

(3) Finishes Stock: Finished stock comprises units of the manufactured products awaiting sales or consignment.

(4) Supplies: Supplies are the expendable items which are required to manufacture the product but does not become a part of that product. Such as tools, cleaning materials and Cutting Oils: There are commonly termed as MRO, that is, maintenance, repair and operating supplies.

2.7.0 APPLICATION OF COMPUTER TO MANAGEMENT INFORMATION SYSTEM

2.7.1 MANAGERS AND INFORMATION

Davis in 1975 defined information as follows:

"Information is data that has been processed into a form that is meaningful to the recipient, and is of real decisions".

This simply suggests data has to be processed to obtain information, information is more than raw data.

During the last four decades, the number of computer based information systems in private and public sectors have grown exponentially. New computer products and services industry were developed to supply the tools necessary to build Computer based information system, many more individuals are involved as users or consumers of information systems.

A user includes individuals ranging from workers in a factory to the top management of a corporation. Use of information system includes the receipt of a report, the submission of input for a system, and the operating of a terminal or a similar activity. In today's complex society, a knowledge of complex has been information system is vital for an educated individual, particularly for the professional manager, for most organisations to come in the future, if not those present already,

the determing factor for any meaningful development and competition will be the processing and analysis of information.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

3.1 BRIEF HISTORY OF THE CASE STUDY

Katsina oil mills is situated along IBB way Kano road Kofar Kaura Katsina. The firm was registered in the year 1976. It was established as a result of mass production of groundnut in the area. However, due to the shortage of groundnut later it was substituted with cotton seed as the main raw material. The main products of the business has been oil and dried cake.

The Objectives of The Firm Includes:

- To provide job opportunity for the people of the area
- To produce oil within and outside the state
- To encourage farmers especially groundout farmers
- Also serves as a source of Income to the State

The firm was originally owned by the then Kaduna State Government Katsina local government and some private individuals like Alh. Sani Zangon Daura, Alh. Dahiru Saude. But with the creation of Katsina State, Kaduna State ceased to be a shareholder. The major share holders now are Sani Buhari Daura and Katsina State Development Company (K.S.D.C); thus a partnership business.

3.2 Data Collection Procedure

The procedure adapted for sourcing information include personal interview with the people concern particularly the Chief Stores officer and the accountant of the organisation.

More so, information was collated from the existing texts and record concerning stores management in the organisation.

3.3 The Purchasing Unit

There is no substantive-purchasing unit is Katsina oil mills. The authority give contracts to outsiders for the supply of materials to the organisation. However the organisation to a large extent believe in direct purchasing, having the account a audit department as the centre point of the direct purchase.

If a requisition is made for the supply if an item, the bursary makes a cheque ready bearing the name of its staff and the requisition officer will call an auditor to make such purchase.

HERE THREE THINGS ARE ACHIEVED:

1. The bursary staff acts as a bursar and helps to control money
2. The requisition officer see with his eyes the type of goods he wants and
3. The auditor acts as a watchdog for the organisation.

3.4 PROCEDURE ON RECEIPT OF MATERIAL IN K.O.M

Items supplied to the organisation are immediately taken to the main Store for inspection. The inspection is being done by the accounts and audit departments who are

the trustee of the organisation. In the course of this intensive inspection the right order is accepted and handled over to the store officer thereby rejected the country.

It is pertinent to know that items supplied to the stores are received at the receiving base and using the local purchase order (**C.P.O**) which gives full description of the items supplied will raise the stores receiving Voucher (**SRV**) which gives among other things the testification of receipt of the items and taken to the account department to the effect payment.

3.5 SYSTEM DESIGN AND DEVELOPMENT

3. 5. 0 System analysis and design is a process similar to problem solving. There were system analysts in business long before the introduction of computer in the organizations. They were responsible for analysis of work methods and procedures in order to simplify work and to improve work flow.

The process of system analysis involves a number of steps that can be applied to any study. And is applied in this case thus:

3.5.1 **PROBLEM DEFINITION :** Katsina oil mills like all other organisations using manual form of operation is not an exceptions using manual form of operation is not an exception. The stores department suffers the burden of large volume of files, slow operation, and unreliability, error etc hence the introduction of computer is a wise decision. And only restricted to the stores department in our own case.

3.5.2 **FEASIBILITY STUDY:** It is observed that if successfully implemented the benefit will definitely outweight the cost. Hence, feasible to turnover.

3.5.3 **SYSTEMS ANALYSIS STAGE:** Here full detailed study of the current system (Manual operation), its procedures, information flows, and method of work organisation and control in Katsina oil mills were analysed.

Series of question cries for immediate answer in this stage:

(a) Why did the problem occur?

(b) Why were the present method adapted?

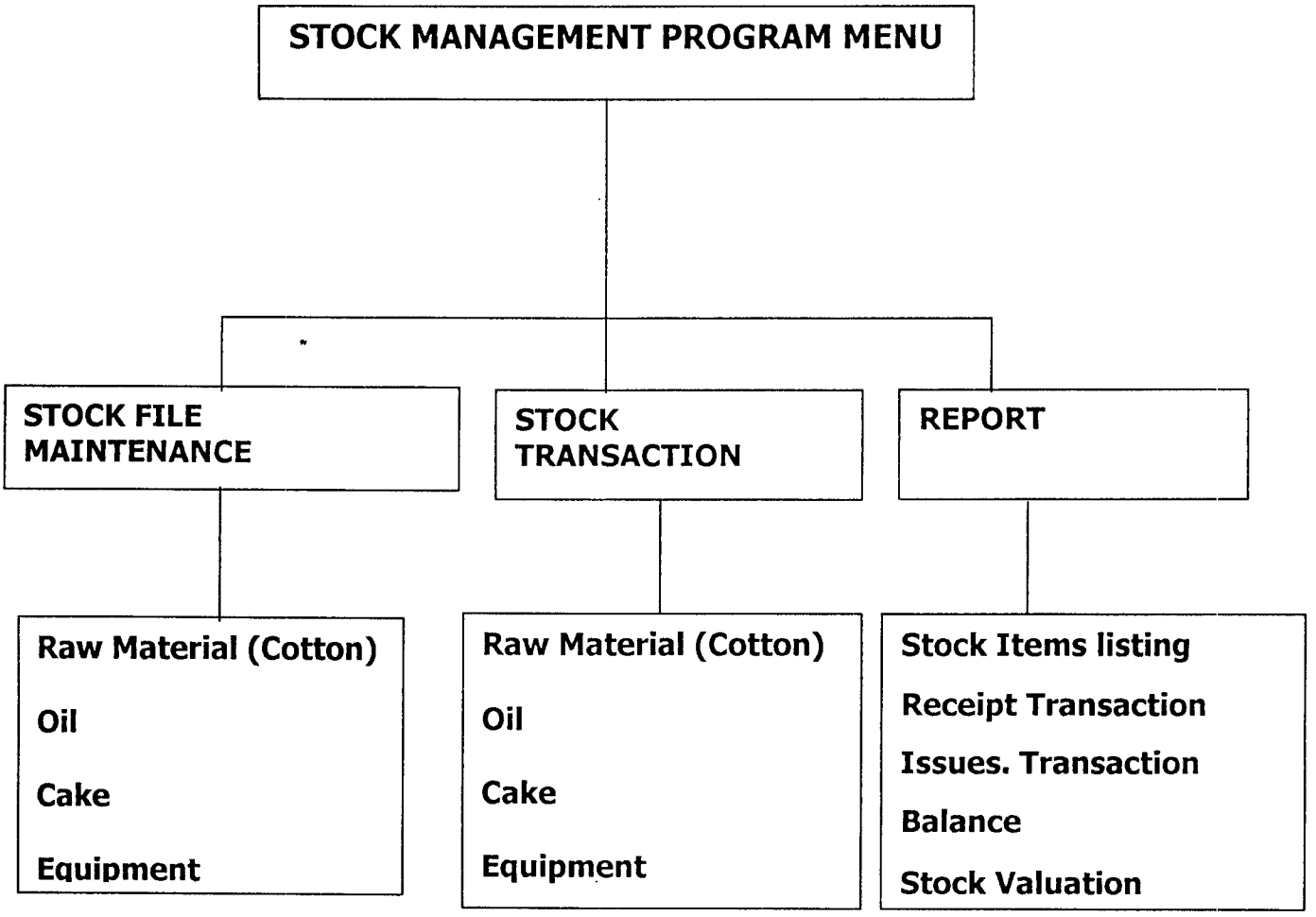
(c) What are the alternative method?

In answering the questions we are able to come out with a good development. The problem occurs as a result of manual operation. The methods were adapted because there were no alternative before. And the alternatives now available are to design computer program that will overcome the weaknesses of the existing system.

3.5.4 **SYSTEM DESIGN**: The analysis of the current form of operation in Katsina Oil Mills serves as the beginning of system design to develop objective for the proposed system.

The analysis lead to a number of possible alternatives designs. Requirement specifications of Katsina oil mills that goes to store were used to developed systems specification. The system specification are set of input documents in the form of raw materials (cotton), Oil. Cake, and equipment in which forms, reports layout provides details of all features of the system.

THE DESIGNS AND LAYOUTS ARE SHOWN BELOW:



1 – COTTON dbf

S/NO	Field Name	Field description	Type	Width	Dec Index
I	C date	Date	Date	10	
2	Code	Item number	Character	10	
3	Description	Cotton description	Character	20	
4	Uprice	Unit Price	Numeric	9	2
5	Q ISS	Quantity Issued	Numeric	9	
6	LNO	Lorry Number	Character	10	
7	WB	Way bill Number	Character	10	
8	Ticket No	Ticket Number	Character	10	
9	Gross wt	Gross weight	Numeric	5	
10	Net wt	Net weight	Numeric	5	
11	No bags	Number	Numeric	5	

2 – Oil dbf

S/NO	Field Name	Field Description	TYPE	Width	Dec. Index
1	C date	Oil date	Data	10	
2	Ticket No	Ticket Number	Character	10	
3	NW Rec.	Quantity received	Numeric	9	
4	NW Issued	Quality Issued	Numeric	9	
5	Cumm.	Cumulative Qty	Numeric	9	
6	Code	Item Number	Character	10	
7	Desc.	Item Description	Character	20	
8	U-Price	Unit Price	Number	9	2

3. Cake dbf

S/No	Field Name	Field Description	Type	Width	Dec	Index
1.	C Date	Cake Date	Date	10		
2.	Ticket No	Ticket Number	Character	10		
3.	NW Rec.	Quantity Received	Numeric	9		
4.	NW Issued	Quantity Issued	Numeric	9		
5.	Cumm.	Cumulative Quantity	Numeric	9		
6.	Code	Item Number	Character	10		
7.	Desc	Item Description	Character	20		
8.	U-Price	Unit Price	Number	9	2	

4. Equipment dbf

S/No	Field Name	Field Description	Type	Width	Dec	Index
1.	C Date	Date	Date	10		
2.	Detail	Equipment Name	Character	20		
3.	QTY Rec.	Quantity Received	Number	9		
4.	QYT Issued	Quantity Issued	Number	9		
5.	Code	Item Number	Character	10		
6.	U-Price	Unit Price	Character	9	2	

5 MASTER FILE DBF

S/NO	Field Name	Description	Type	Width	Dec. Index
1	Code	Item Number	Character	10	
2	Desc.	Description	Character	20	
3	U-price	Unit Price	Numeric	9	2
4	Q-Rec.	Quantity received	Numeric	9	2
5	Q-Iss.	Quantity Issued	Numeric	9	2
6	R-O-L	Re-order Level	Numeric	9	2
7	C date	Date Updated	Date	10	
8	Bal.	Stock Balance	Numeric	9	2

REPORTS LAYOUT

1 – STOCK ITEM LISTING

Katsina Oil Mills Ltd

IBB way Kofar Kaura Katsina

Item Code	Description
=	=

2 – STOCK RECEIPT TRANSACTIONS

Katsina Oil mills

IBB way, Kofar Kaura Katsina

Item Code	Description	Date	Unit Price	Qty received
-	-	-	-	-
-	-	-	-	-

3 STOCK ISSUES TRANSACTIONS

Katsina Oil Mill Limited

Kofar Kaura IBB way Katsina

Item Code	Description	Date	Unit Price	Qty received
-	-	-	-	-
-	-	-	-	-

4 STOCK VALUATION REPORT

Katsina Oil mills Ltd

IBB way Kofor Kaura Katsina

Item Code	Description	Date	Unit Price	Qty received
-	-	-	-	-
-	-	-	-	-

PROGRAM LIST

1. STOCK. PRG	–	Stock management System Main Menu
2. FILEMEN. PGR	-	STOCK TRANSACTIONS MENU
3. TRANSMEN. PGR	-	Stock Transaction Menu
4. REPMEN.PGR	-	Stock Items Entry
5. MAINTF.PGR	-	New Stock Items Entry
6. TRANSC.PRG	-	Transaction entry
7. TRANS E.PRG	-	Transaction entry
8. TRANS O.PGR	-	Transaction entry
9. TRANS K .PGR	-	Transaction entry
10. ISSTRANS.PGR	-	Issue Transaction Report
11. STOCKVAL.PGR	-	Stock Valuation Report
12. RECTRANS.PRG	-	receipt Transaction Report
13. ITEMREP.PGR	-	Stock Item Report

CHAPTER FOUR

4.0 SYSTEMS IMPLEMENTATION

4.00 Under this chapter, it is hope that all the finding, system analysis, and systems developments will be put into physical action. This chapter will specially tells us how store officers can make use of the computer to carryout the stores operation.

4.1.0 CHOICE PROGRAMMING LANGUAGE

The programming language adopted is the ***"Clipper"*** Clipper, is a database management computer. Its files are organized in form of a table made up of rows and columns. A database files can have up to one billion records or two billion characters. A record can have up to 128 fields and can contain up to 4000 characters of information.

The choice of the system is as a result of its several advantages among which are:

- **COMPATIBILITY:** A clipper is compatible to dbase III, dBase IV, FoxPro, AND PARADOX i.e. they are all replaceable files.

- **PORTABILITY:** This programme can run on many computers with no stringent formalities.

- **ACCESSIBILITY:** Since it can run on many computers, it means it has easy access to different systems at different places.

4.2 STRUCTURE OF THE PROGRAM

4.2.0 The Program involve three modules

1. Stock file maintenance
2. Stock transaction module and
3. Report

The program is expected to specifically perform two basic tasks:

1. Taking input in the form of

(a) Raw materials (cotton seed)

(b) Oil

(c) Cake

(d) Equipment

Thereby identifying and posting them in their respective files

2 - Generates an appropriate report on output specifications, which are:

(a) Stock item listing

(b) Receipts

(c) Issues

(d) Balance

(e) Stock valuation

4.3.0 PROGRAM TESTING

This program has been tested and approved to be free from any error and meets the requirements of stores department of Katsina oil mills Ltd.

4.4.0 INSTALLATION

This is the physical placing of the computer equipment and making it operational.

4.4.1 INSTALLATION REQUIREMENTS:

Hardware:
- 133MHZ
- 3.5" Floppy disk drive
- 2.1 ab Hard disk
- Colour Graphic monitor
- Standard keyboard

Software: MS DOS B.O or Higher

REFERENCE: Clipper 5.2 Documentation
Programmers guide
By – C.A. International Inc. U.S.A.
(1993).

4.5 TRAINING

4.5.0 Since workers are Ignorant of the system, training them becomes necessary. However, since everybody in the department cannot be trained before the final take off of the new system place training program can be conducted for phase training program can be conducted for those that will be using the systems.

4.6 CHANGE OVER

4.6.0 This is process of changing from the old to a new system i.e. from the manual form of managing stores to a computerized one.

However, the researcher suggests direct changeover among others. Because in developing the programs it was the new ones (Computerized) that were used in developing the new ones (computerized), Hence, it will be easy to understand. It is least expensive among others and in the case of failure the managers can easily revert to the old system.

Other type of changeovers includes: parallel running, pilot running, and stayed changeover.

4.7 IMPLEMENTATION AND MAINTAINANCE

After the implementation project has been completed that is not the ultimate. To maintain the system is also necessary. Hence, a post implementation exercise is perform it can be quarterly, half yearly or annually at a minimum. Here all the realized benefits and costs are revisited. Intangible benefit including improved operations, better services and better morale are also visited.

All these is to determine whether the project has been successful. If there are problems, the lifecycle can be restarted so as to make necessary improvements.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMEDATION

5.1 CONCLUSION

This project has greatly shown the system in effect as regards to Katsina oil Mills Ltd. in handling its stores management operation.

Materials handling is such an exercise that if not adequately handled will result in the recurrence of cost, which will though appear insignificant in the short run but runs into millions of Naira in the long run. These costs are either incurred while material are being sourced, stored or used.

Computer approach to stores management should serve as a general guide to a profit and non profit organizations. Each organization concerned should tailor its own system to suit its own peculiar needs.

In view of what was found in this research work as regards stores management in Katsina oil mills. It is apparent that the whole system as it runs here needs a relative improvement for effective and efficient operation, which appears better if totally computerized.

5.2 RECOMMENDATION

The primary function for embarking on this research work was to see how best to use computer for effective and efficient stores management at Katsina oil mills Ltd. Taking as to highlights problems that hinder smooth running of the stores management at the organisation. A lot of these problems were already seen and discussed in the previous chapters.

However, the recommendation of the researcher is total computerization of the whole activities at the store. It is in view of this that the researcher designs some computer programs using ***"clipper"*** to control the system of stores management at Katsina oil mills Ltd.

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   F.U.T MINNA

APPENDIX

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

STOCK MANAGEMENT SYSTEM

F I L E M A I N T E N A N C E

T R A N S A C T I O N S

R E P O R T

E X I T

DEVELOPED BY:- MUKHTAR NURUDEEN NASS KATSINA

Enter your choice.

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

RAW MATERIALS RECEIPT REPORT

ATE : 09/06/00 PAGE 1

ODE	ITEM DESCRIPTION	L.P.O.NO	NET WEIGHT	UNIT PRICE	DATE RECVD
T002	WHITE COTTON		500	450.00	17/08/20
T001	BROWN COTTON		0	450.00	17/08/20

ess any key to continue...

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

RAW MATERIALS ISSUE REPORT

DATE : 09/06/00 PAGE 1

CODE	ITEM DESCRIPTION	QTY ISSUED	UNIT PRICE	ISSUE DATE

ss any key to continue...

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

STOCK REPORTS MENU

STOCK ITEMS LISTING

RECEIPT TRANSACTIONS

ISSUES TRANSACTIONS

VALUATION REPORT

E X I T.

Enter your choice.

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

STOCK TRANSACTIONS MENU

RAW MATERIAL (COTTON) TRANSACTIONS

OIL TRANSACTIONS

CAKE TRANSACTIONS

EQUIPMENT TRANSACTIONS

E X I T.

Enter your choice.

\CLIP52\BIN\stock>

002 WHITE COTTON	0	450.00	17/08/20
001 BROWN COTTON	4	450.00	17/08/20

ss any key to continue...

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

RAW MATERIALS ISSUE REPORT

DATE : 09/06/00 PAGE 1

CODE	ITEM DESCRIPTION	QTY ISSUED	UNIT PRICE	ISSUE DATE
CT002	WHITE COTTON	0	450.00	17/08/20
CT001	BROWN COTTON	4	450.00	17/08/20

Press any key to continue...

KATSINA OIL MILLS LIMITED
I.B.B. WAY KOFAR KAURA, KATSINA

STOCK VALUATION REPORT

DATE : 09/06/00 PAGE 1

CODE	ITEM DESCRIPTION	UNIT PRICE	QTY.RECVD	QTY.ISSD	BALANCE	STOCK VA
CT001	BROWN COTTON	3050.0	0	0	4	12200
CT002	WHITE COTTON	4100.0	0	0	20	82000
OL001	THICK OIL	2450.0	0	0	0	0
OL002	LIGHT OIL	1500.0	0	0	0	0
CK001	BROWN CAKE	245.0	0	0	0	0
CK002	FINE CAKE	355.0	0	0	0	0
EQ001	COTTON DRIER	45000.0	0	0	0	0
EQ002	OIL EXTRACTOR	59500.0	0	0	0	0
EQ003	RESERVOIR TANK B	29800.0	0	0	0	

```
*****************************************************************
***** PROGRAM :    STOCK MANAGEMENT SYSTEM
***** COMPANY :    KATSINA OIL MILLS LIMITED
***** ADDRESS :    I.B.B. WAY KOFAR KAURA, KATSINA
***** PROGRAMMER: MUKHTAR NURUDEEN NASS KATSINA
***** REG.NO. :    PGD/MCS/98/871
***** DEPT.    :    MATHEMATICS/COMPUTER SCIENCE
***** DATE     :    JULY, 2000
*****************************************************************

***** MAIN PROGRAM

SET TALK OFF
SET ECHO OFF
SET STAT OFF
PUBLIC I
DO WHILE .T.
CLEAR
@ 2,9 TO 19,65 DOUBLE
@ 4,20 SAY "         KATSINA OIL MILLS LIMITED"
@ 5,20 SAY "      I.B.B. WAY KOFAR KAURA, KATSINA"
@ 7,20 SAY "         STOCK MANAGEMENT SYSTEM"
@ 8,10 TO 8,64
@ 10,24 SAY "F I L E  M A I N T E N A N C E"
@ 12,24 SAY "T R A N S A C T I O N S"
@ 14,24 SAY "R E P O R T"
@ 16,24 SAY "E X I T"
SET COLO TO W+
@ 18,16 SAY "DEVELOPED BY:- MUKHTAR NURUDEEN NASS KATSINA"
SET COLO TO R+
@ 10,24 SAY "F"
@ 12,24 SAY "T"
@ 14,24 SAY "R"
@ 16,24 SAY "E"
SET COLOR TO W+
@ 20,24 SAY "Enter your choice."
SET COLOR TO
I=0
DO WHILE I=0
I=INKEY()
IF UPPER(CHR(I)) $ "FTRE"
   EXIT
ENDIF
I=0
ENDDO
DO CASE
   CASE UPPER(CHR(I)) $ "F"
     DO FILEM
   CASE UPPER(CHR(I)) $ "T"
     DO TRANSM
   CASE UPPER(CHR(I)) $ "R"
     DO REPORTM
   CASE UPPER(CHR(I)) $ "E"
     EXIT
ENDCASE
ENDDO
CLEAR
CLEAR ALL
RETURN
```

```
*************** REPORT MENU
SET TALK OFF
SET ECHO OFF
SET STAT OFF
DO WHILE .T.
CLEAR
@ 2,9 TO 19,65 DOUBLE
@ 4,23 SAY "   KATSINA OIL MILLS LIMITED"
@ 5,23 SAY "I.B.B. WAY KOFAR KAURA, KATSINA"
@ 7,23 SAY "       STOCK REPORTS MENU"
@ 8,10 TO 8,64
@ 10,24 SAY "STOCK ITEMS LISTING"
@ 12,24 SAY "RECEIPT TRANSACTIONS"
@ 14,24 SAY "ISSUES TRANSACTIONS"
@ 16,24 SAY "VALUATION REPORT"
@ 18,24 SAY "E X I T."
SET COLO TO R+
@ 10,24 SAY "S"
@ 12,24 SAY "R"
@ 14,24 SAY "I"
@ 16,24 SAY "V"
@ 18,24 SAY "E"
SET COLOR TO W+
@ 20,24 SAY "Enter your choice."
SET COLOR TO
I=0
DO WHILE I=0
I=INKEY()
IF UPPER(CHR(I)) $ "SRIVE"
   EXIT
ENDIF
I=0
ENDDO
DO CASE
   CASE UPPER(CHR(I)) $ "S"
     DO ITEMREP
   CASE UPPER(CHR(1)) $ "R"
     DO RECTRANS
   CASE UPPER(CHR(I)) $ "I"
     DO ISSTRANS
   CASE UPPER(CHR(I)) $ "V"
     DO STOCKVAL
   CASE UPPER(CHR(I)) $ "E"
     EXIT
ENDCASE
ENDDO
CLEAR
CLEAR ALL
RETURN
```

```
********** FILE MAINTENANCE MENU
SET TALK OFF
SET ECHO OFF
SET STAT OFF
DO WHILE .T.
CLEAR
@ 2,9 TO 19,65 DOUBLE
@ 4,23 SAY "   KATSINA OIL MILLS LIMITED"
@ 5,23 SAY "I.B.B. WAY KOFAR KAURA, KATSINA"
@ 7,23 SAY "    STOCK FILE MAINTENANCE"
@ 8,10 TO 8,64
@ 10,24 SAY "RAW MATERIAL (COTTON)"
@ 12,24 SAY "OIL FILE MAINTENANCE"
@ 14,24 SAY "CAKE FILE MAINTENANCE"
@ 16,24 SAY "EQUIPMENT FILE MAINTENANCE"
@ 18,24 SAY "E X I T."
SET COLO TO R+
@ 10,24 SAY "R"
@ 12,24 SAY "O"
@ 14,24 SAY "C"
@ 16,24 SAY "E"
@ 18,26 SAY "X"
SET COLOR TO W+
@ 20,24 SAY "Enter your choice."
SET COLOR TO
I=0
DO WHILE I=0
I=INKEY()
IF UPPER(CHR(I)) $ "ROCEX"
   EXIT
ENDIF
I=0
ENDDO
DO CASE
   CASE UPPER(CHR(I)) $ "R"
     DO MAINTF
   CASE UPPER(CHR(I)) $ "O"
     DO MAINTF
   CASE UPPER(CHR(I)) $ "C"
     DO MAINTF
   CASE UPPER(CHR(I)) $ "E"
     DO MAINTF
   CASE UPPER(CHR(I)) $ "X"
     EXIT
ENDCASE
ENDDO
CLEAR
CLEAR ALL
RETURN
```

```
************** CREATE NEW STOCK ITEM
CLEAR
@08,12 to 20,67
USE MASTFILE

DO WHILE .T.
STORE SPACE(10) TO MCODE,MDATE
STORE SPACE(20) TO MDESC
SET COLO TO GB+
IF UPPER(CHR(I)) $ "R"
   @7,25 SAY "NEW COTTON TYPE DATA ENTRY"
ENDIF
IF UPPER(CHR(I)) $ "O"
   @7,25 SAY "NEW OIL TYPE DATA ENTRY"
END
IF UPPER(CHR(I)) $ "C"
   @7,25 SAY "NEW CAKE TYPE DATA ENTRY"
ENDIF
IF UPPER(CHR(I)) $ "E"
   @7,25 SAY "NEW EQUIPMENT DATA ENTRY".
ENDIF
SET COLO TO
STORE 0 TO MROL,MUP
@10,15 SAY "NEW ITEM CODE [XXXXXXXXXX]=Exit " GET MCODE PICT "@!"
READ
IF MCODE=SPACE(10)
   LOOP
ENDIF
IF MCODE =  "XXXXXXXXXX"
   EXIT
ENDIF
LOCATE FOR CODE =  MCODE
IF .NOT. EOF()
   @20,1 SAY ""
   ? CHR(7)
   WAIT+"                  ITEM CODE ALREADY EXITS !  PRESS ANY KEY."
   @21,10 SAY SPACE(50)
   LOOP
ENDIF
@12,15 SAY "NEW ITEM DESCRIPTION   " GET MDESC PICT "@!"
@14,15 SAY "UNIT PRICE             " GET MUP PICT "999999.99"
@16,15 SAY "RE-ORDER LEVEL         " GET MROL   PICT "999999"
@18,15 SAY "TODAY'S DATE           " GET MDATE PICT "99/99/9999"
READ
K=SPACE(1)
@21,15 SAY "     [C]ontinue  [E]xit  [A]bandon" GET K PICT "!"
READ
IF K = "A"
   LOOP
ENDIF
   APPEND BLANK
   REPLACE CODE WITH MCODE, DESC WITH MDESC,U_PRICE WITH MUP
   REPLACE CDATE WITH MDATE, R_C_L WITH MROL
IF K = "E"
   EXIT
ENDIF
ENDDO
CLEAR
CLOSE DATABASE
RETURN
```

```
***** TRANS OIL
SELE 1
USE MASTFILE
SELE 2
USE OIL

DO WHILE .T.
CLEAR
@08,12 TO 23,67
@6,15 SAY "          OIL TRANSACTIONS ENTRY"
STORE SPACE(10) TO MCODE,MDATE,MTKTNO
STORE SPACE(20) TO MDESC
STORE 0 TO MQREC,MQISS,MUP,MB
@10,15 SAY "NEW ITEM CODE {XXXXXXXXXX}=Exit " GET MCODE PICT "@!"
READ
IF MCODE =  "XXXXXXXXXX"
   EXIT
ENDIF
SELE 1
LOCATE FOR CODE =  MCODE
IF EOF()
   @23,1 SAY ""
   ? CHR(7)
   WAIT+"                  ITEM CODE DOES NOT EXITS !  PRESS ANY
KEY."
   @24,10 SAY SPACE(50)
   LOOP
ENDIF
MDESC=DESC
MB=BAL
@12,15 SAY "NEW ITEM DESCRIPTION   " GET MDESC PICT "@!"
CLEAR GETS
@14,15 SAY "TICKET NUMBER          " GET MTKTNO
@16,15 SAY "UNIT PRICE             " GET MUP PICT "999999.99"
@18,15 SAY "QUANTITY REC'VED(grams)" GET MQREC   PICT "999999"
@20,15 SAY "QUANTITY ISSUED (grams)" GET MQISS   PICT "999999"
@22,15 SAY "TODAY'S DATE           " GET MDATE PICT "99/99/9999"
READ
K=SPACE(1)
@24,15 SAY "     [C]onLinue  [E]xit  [A]bandon" GET K PICT "!"
READ
IF K = "A"
   LOOP
ENDIF
   SELE 2
   APPEND BLANK
   REPLACE CODE WITH MCODE, DESC WITH MDESC,U_PRICE WITH MUP
   REPLACE CDATE WITH MDATE, NW_REC WITH MQREC, NW_ISS WITH MQISS
   REPLACE TICKET_NO WITH MTKTNO
   SELE 1
   REPLACE BAL WITH MB+ABS(MQREC-MQISS), Q_REC WITH Q_REC+MQREC
   REPLACE Q_ISS WITH Q_ISS+MQISS
IF K = "E"
   EXIT
ENDIF
ENDDO
CLEAR
CLOSE DATABASE
RETURN
```

```
****** TRANS 1
SELE 1
USE MASTFILE
SELE 2
USE COTTON

DO WHILE .T.
CLEAR
@02,12 TO 22,67
@1,15 SAY "   RAW MATERIAL TRANSACTIONS ENTRY"
STORE SPACE(10) TO MCODE,MDATE,MWBNO,MTNO,MLNO
STORE 0 TO MGWT,MNWT,MBAGS
STORE SPACE(20) TO MDESC
STORE 0 TO MQREC,MQISS,MUP,MB
@4,15 SAY "NEW ITEM CODE [XXXXXXXXXX]=Exit " GET MCODE PICT "@!"
READ
IF MCODE =  "XXXXXXXXXX"
   EXIT
ENDIF
SELE 1
LOCATE FOR CODE =  MCODE
IF EOF()
   @22,1 SAY ""
   ? CHR(7)
   WAIT+"                  ITEM CODE DOES NOT EXITS !  PRESS ANY
KEY."
   @23,10 SAY SPACE(50)
   LOOP
ENDIF
MDESC=DESC
MB=BAL
@6,15 SAY "NEW ITEM DESCRIPTION   " GET MDESC PICT "@!"
CLEAR GETS
@8,15 SAY "TODAY'S DATE           " GET MDATE PICT "99/99/9999"
@10,15 SAY "UNIT PRICE             " GET MUP PICT "999999.99"
@12,15 SAY "QUANTITY ISSUED        " GET MQISS   PICT "999999"
@14,15 SAY "LORRY NUMBER           " GET MLNO PICT "@!"
@16,15 SAY "WAY BILL NUMBER        " GET MWBNO
@18,15 SAY "GROSS WEIGHT (tons)    " GET MGWT
@20,15 SAY "NET WEIGHT (tons)      " GET MNWT
READ
K=SPACE(1)
MBAGS=MNWT/25
@23,15 SAY "     [C]ontinue  [E]xit  [A]bandon" GET K PICT "!"
READ
IF K = "A"
   LOOP
ENDIF
   SELE 2
   APPEND BLANK
   REPLACE CODE WITH MCODE, DESC WITH MDESC,U_PRICE WITH MUP
   REPLACE CDATE WITH MDATE, Q_REC WITH MBAGS, Q_ISS WITH MQISS
   REPLACE NO_BAGS WITH MBAGS, L_NO WITH MLNO, WB_NO WITH MWBNO
   REPLACE GROSS_WT WITH MGWT, NET_WT WITH MNWT
   SELE 1
   REPLACE BAL WITH MB+ABS(MBAGS-MQISS),Q_REC WITH Q_REC+MBAGS
   REPLACE Q_ISS WITH Q_ISS+MQISS
IF K = "E"
   EXIT
ENDIF
ENDDO
```

```
CLEAR
CLOSE DATABASE
RETURN
```

```
**** TRANS EQUIPMENT
SELE 1
USE MASTFILE
SELE 2
USE EQUIPMT

DO WHILE .T.
CLEAR
@08,10 TO 21,67
@6,15 SAY "         EQUIPMENT TRANSACTIONS ENTRY"
STORE SPACE(10) TO MCODE,MDATE
STORE SPACE(20) TO MDESC
STORE 0 TO MQREC,MQISS,MUP,MB
@10,15 SAY "NEW ITEM CODE {XXXXXXXXXX}=Exit " GET MCODE PICT "@!"
READ
IF MCODE = "XXXXXXXXXX"
   EXIT
ENDIF
SELE 1
LOCATE FOR CODE = MCODE
IF EOF()
   @21,1 SAY ""
   ? CHR(7)
   WAIT+"                    ITEM CODE DOES NOT EXITS !  PRESS ANY
KEY."
   @22,10 SAY SPACE(50)
   LOOP
ENDIF
MDESC=DESC
@12,15 SAY "NEW ITEM DESCRIPTION   " GET MDESC PICT "@!"
CLEAR GETS
@14,15 SAY "UNIT PRICE             " GET MUP PICT "999999.99"
@16,15 SAY "QUANTITY RECEIVED      " GET MQREC   PICT "999999"
@18,15 SAY "QUANTITY ISSUED        " GET MQISS   PICT "999999"
@20,15 SAY "TODAY'S DATE           " GET MDATE PICT "99/99/9999"
READ
K=SPACE(1)
@22,15 SAY "     [C]ontinue  [E]xit  [A]bandon" GET K PICT "!"
READ
IF K = "A"
   LOOP
ENDIF
   SELE 2
   APPEND BLANK
   REPLACE CODE WITH MCODE, DESC WITH MDESC,U_PRICE WITH MUP
   REPLACE CDATE WITH MDATE, Q_REC WITH MQREC, Q_ISS WITH MQISS
   SELE 1
   REPLACE BAL WITH MB+ABS(MQREC-MQISS), Q_REC WITH Q_REC+MQREC
   REPLACE Q_ISS WITH Q_ISS+MQISS

IF K = "E"
   EXIT
ENDIF
ENDDO
CLEAR
CLOSE DATABASE
RETURN
```

```
CH1=SPACE(1)
DO WHILE CH1 <> "Y" .AND. CH1 <> "N"
@23,20 SAY "IS THE PRINTER READY ? (Y/N)" GET CH1 PICT "!"
READ
ENDDO
IF CH1="N"
   RETURN
ENDIF
CLEAR
STORE 0 TO SUBH,SUBS,P
STORE 0 TO TOTH,TOTS
STORE 60 TO L
USE COTTON
*SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
IF L > 22
*TOTH=TOTH+SUBH
*TOTS=TOTS+SUBS
*STORE 0 TO SUBH,SUBS
P=P+1
@1,25 SAY "        KATSINA OIL MILLS LIMITED"
@2,25 SAY "     I.B.B. WAY KOFAR KAURA, KATSINA"
@4,25 SAY "      RAW MATERIALS RECEIPT REPORT"
@5,01 SAY "DATE :"
@5,08 SAY DATE()
@5,70 SAY "PAGE "+LTRIM(STR(P))
@7,01 SAY REPL('-',78)
@8,01 SAY "CODE"
@8,07 SAY "ITEM DESCRIPTION"
@8,30 SAY "L.P.O.NO"
@8,42 SAY "QTY RECEIVED"
@8,56 SAY "UNIT PRICE"
@8,68 SAY "DATE RECVD"
@9,01 SAY REPL('-',78)
L=10
ENDIF
@L,02 SAY CODE
@L,07 SAY DESC
*@L,30 SAY LPO_NO
@L,42 SAY QTY_REC
@L,54 SAY U_PRICE
@L,70 SAY CDATE
*SUBH=SUBH+S_BAL
*SUBS=SUBS+V
L=L+1
*IF L > 22
*  @L,01 SAY "SUB-TOTALS"
*  @L,50 SAY SUBH
*  @L,66 SAY SUBS
*ENDIF
SKIP
ENDDO
L=L+1
*IF L <=22
*   TOTH=TOTH+SUBH
*   TOTS=TOTS+SUBS
*ENDIF
*@L,01 SAY "GRAND TOTALS"
*@L,50 SAY TOTH
*@L,66 SAY TOTS
CLOSE DATABASE
```

```
*SET DEVICE TO SCREEN
RETURN
```

```
CH1=SPACE(1)
*DO WHILE CH1 <> "Y" .AND. CH1 <> "N"
*@23,20 SAY "IS THE PRINTER READY ? (Y/N)" GET CH1 PICT "!"
*READ
*ENDDO
*IF CH1="N"
*   RETURN
*ENDIF
CLEAR
STORE 0 TO SUBH,SUBS,P
STORE 0 TO TOTH,TOTS
STORE 60 TO L
USE COTTON
*SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
IF L > 22
*TOTH=TOTH+SUBH
*TOTS=TOTS+SUBS
*STORE 0 TO SUBH,SUBS
P=P+1
@1,25 SAY "        KATSINA OIL MILLS LIMITED"
@2,25 SAY "    I.B.B. WAY KOFAR NAURA, KATSINA"
@4,25 SAY "      RAW MATERIALS ISSUE REPORT"
@5,01 SAY "DATE :"
@5,08 SAY DATE()
@5,70 SAY "PAGE "+LTRIM(STR(P))
@7,01 SAY REPL('-',79)
@8,01 SAY "CODE"
@8,07 SAY "ITEM DESCRIPTION"
*@8,30 SAY "L.P.O.NO"
@8,42 SAY "QTY ISSUED"
@8,56 SAY "UNIT PRICE"
@8,68 SAY "ISSUE DATE"
@9,01 SAY REPL('-',79)
L=10
ENDIF
@L,01 SAY CODE
@L,07 SAY DESC
@L,42 SAY Q_ISS
@L,54 SAY U_PRICE
@L,70 SAY CDATE
*SUBH=SUBH+S_BAL
*SUBS=SUBS+V
L=L+1
*IF L > 22
*  @L,01 SAY "SUB-TOTALS"
*  @L,50 SAY SUBH
*  @L,66 SAY SUBS
*ENDIF
SKIP
ENDDO
L=L+1
*IF L <=22
*   TOTH=TOTH+SUBH
*   TOTS=TOTS+SUBS
*ENDIF
*@L,01 SAY "GRAND TOTALS"
*@L,50 SAY TOTH
*@L,66 SAY TOTS
CLOSE DATABASE
@L,1 SAY REPL('-',79)
```

```
WAIT
*SET DEVICE TO SCREEN
RETURN
```

```
CH1=SPACE(1)
*DO WHILE CH1 <> "Y" .AND. CH1 <> "N"
*@23,20 SAY "IS THE PRINTER READY ? (Y/N)" GET CH1 PICT "!"
*READ
*ENDDO
*IF CH1="N"
*   RETURN
*ENDIF
CLEAR
STORE 0 TO SUBH,SUBS,P
STORE 0 TO TOTH,TOTS
STORE 60 TO L
USE MASTFILE
*SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
IF L > 22
*TOTH=TOTH+SUBH
*TOTS=TOTS+SUBS
*STORE 0 TO SUBH,SUBS
P=P+1
@1,25 SAY "        KATSINA OIL MILLS LIMITED"
@2,25 SAY "     I.B.B. WAY KOFAR KAURA, KATSINA"
@4,25 SAY "             STOCK ITEMS LISTING"
@5,01 SAY "DATE :"
@5,08 SAY DATE()
@5,70 SAY "PAGE "+LTRIM(STR(P))
@7,01 SAY REPL('-',79)
@8,10 SAY "CODE"
@8,20 SAY "ITEM DESCRIPTION"
@8,60 SAY "RE-ORDER LEVEL"
@9,01 SAY REPL('-',79)
L=10
ENDIF
@L,10 SAY CODE
@L,20 SAY DESC
@L,60 SAY R_O_L
L=L+1
*IF L > 22
*  WAIT
*ENDIF
SKIP
ENDDO
L=L+1
@L,1 SAY REPL('-',79)
CLOSE DATABASE
WAIT
*SET DEVICE TO SCREEN
RETURN
```

```
@L,1 SAY REPL('-',79)
WAIT
*SET DEVICE TO SCREEN
RETURN
```

```
CH1=SPACE(1)
*DO WHILE CH1 <> "Y" .AND. CH1 <> "N"
*@23,20 SAY "IS THE PRINTER READY ? (Y/N)" GET CH1 PICT "!"
*READ
*ENDDO
*IF CH1="N"
*   RETURN
*ENDIF
CLEAR
STORE 0 TO TOTR,TOTI,TOTV,P,SV
STORE 60 TO L
USE MASTFILE
*SET DEVICE TO PRINT
DO WHILE .NOT. EOF()
IF L > 22
P=P+1
@1,25 SAY "        KATSINA OIL MILLS LIMITED"
@2,25 SAY "    I.B.B. WAY KOFAR KAURA, KATSINA"
@4,25 SAY "         STOCK VALUATION REPORT"
@5,01 SAY "DATE :"
@5,08 SAY DATE()
@5,70 SAY "PAGE "+LTRIM(STR(P))
@7,01 SAY REPL('-',79)
@8,01 SAY "CODE"
@8,07 SAY "ITEM DESCRIPTION"
@8,26 SAY "UNIT PRICE"
@8,37 SAY "QTY.RECVD"
@8,48 SAY "QTY.ISSD"
@8,60 SAY "BALANCE"
@8,69 SAY "STOCK VALUE"
@9,01 SAY REPL('-',79)
L=10
ENDIF

@L,01 SAY CODE
@L,07 SAY DESC
@L,27 SAY U_PRICE
@L,35 SAY Q_REC
@L,46 SAY Q_ISS
@L,55 SAY BAL
SV = U_PRICE*BAL
@L,67 SAY SV
TOTR=TOTR+Q_REC
TOTI=TOTI+Q_ISS
TOTV=TOTV+SV
L=L+1
*IF L > 22
*  @L,01 SAY "SUB-TOTALS"
*  @L,50 SAY SUBH
*  @L,66 SAY SUBS
*ENDIF
SKIP
ENDDO
L=L+1
*IF L <=22
*   TOTH=TOTH+SUBH
*   TOTS=TOTS+SUBS
*ENDIF
@L,1 SAY REPL('-',79)
@L+1,10 SAY "T O T A L S"
@L+1,47 SAY TOTR
```

```
@L+1,57 SAY TOT1
@L+1,67 SAY TOTV
CLOSE DATABASE
WAIT
*SET DEVICE TO SCREEN
RETURN
```