COMPUTER APPROACH TO PROCUREMENT AND CONTROL OF GOODS IN AN ORGANISATION. (A CASE STUDY OF NIGER STATE, MINISTRY OF FINANCE, MINNA).

BY

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PGD/MCS/2000/2001/986

DEPARTMENT OF MATHEMATICS/COMPUTER SCIENCE FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.

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A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS/COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE POSTGRADUATE DIPLOMA IN COMPUTER SCIENCE.

APRIL, 2002.

CERTIFICATION

This Project work has been read and certified by the undersigned as meeting the requirements of the Department of Mathematics/Computer Science, Federal University of Technology, Minna.

_____   _____
MALLAM ISAH AUDU   **DATE**
PROJECT SUPERVSOR

_____   _____
MR. L.N EZEAKO   **DATE**
HEAD OF DEPARTMENT

_____   _____
EXTERNAL EXAMINER   **DATE**

DEDICATION

This work is dedicated to the Almighty Allah and my immediate family for been Considerate and Caring during the Course of my Study.

ACKNOWEDGEMENT

Glory to the Almighty Allah for his blessings, guidance and protection over all of us. I am highly indebted to the good God for his concern.

I wish to place on record the concern, love and understanding of my project-supervisor-Mallam Isah Audu. He has been very Co-operative despite his other academic Schedules. He found time to make corrections the reality of the day.

To the Head of department, Mr. L.N Ezeako. We are indeed very blessed to have around. Your Support, concern and understanding are highly appreciated. To my various lecturers in the courses offered. We are grateful, may Allah bless you all.

To my family, thanks for your understanding and Support. To my employer, I am appreciative for the chance given to me to do the course.

To others not mentioned, your concern and efforts are appreciated.

ABSTRACT

The Procurement an Stock Control System of a big Government Organization like Ministry of Finance no doubt needs a Computerized System to meet up the modern standard demand and speed.

The system is designed to provide Management with timely information, and to ensure proper acceptability in the Ministry. The implementation of the proposed System will ensure improvement in procurement and stock control in terms of reliability, security and effectiveness.

A database Management System IV was developed for the work due to its vast features.

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CHAPTER ONE

GENERAL INTRODUCTION

INTRODUCTION

Computer are a fact of life. Whatever we do, where we go, we will encounter a computer or computer delivery service.

There is an old saying: "The only thing in life we cannot get away from are birth and death". To day there is another certainty as well: when we are born, when we die, a computer will be part of each event. Computer records the statistic of birth and death. Through computer, the key events in ones life become part of large bodies of information that, in turn, affects ones activities even further.

Today, however, events do not have to be special like birth and death for computer to be involved. Knowingly or not, we probably use or are served by computers dozen of time each day. A typical example is in inventory. Almost every time we buy something, a computer goes to work for us. This applies whether we are buying from a catalogue, being waited in a store, or selecting merchadise in a self-service outlet.

Sometimes we ask ourselves this question, "why has computer been so successfully applied to so many tasks." The attributes listed below provide the answer as it applied to the topic in question.

(a) **HIGH SPEED:** As electronic devices, computer are extremely fast. They can operate at the speed of electricity, Thus, computer can

carry out work much faster, usually, than peoplee. This means that computers are ideally, suited for applications in which work volumes are large. For example, obtaining an up-to-date inventory of stocks. Computer provides accelerated progress in virtually every field of endeavor.

(b) **ACCURACY:** If programmed correctly, computers are extremely accurate devices. For all practical purposes, computers do not make mistakes. Because computer can operate error free, they can bne trusted to provide accurate resultss in situations that require precise and reliable processing of data.

(c) **STORAGE CAPABILITY:** The memory of the machine enables a complete program of instruction to beheld in store, and this in turn makes the running of a program automatic. Secondary storage can be loaded to a computer system to enable information to be retained on a permanent basis.

This information can be retrieved and brought into the main memory when required.

1.1 PURCHASING ROLES

There are two basic types of purchasing in the business world. I.e. purchasing for resale and purchasing for consumption or conversion.

Purchasing for resale is performed by merchants and speculators. From the beginning of time, purchasing for resale has been the prime responsibility of merchants. Indeed, today's merchants ascertain what consumers want, buy it as a price to which they can add a profitable mark up, and sell it to the consumers' satisfaction as to quality and service.

Purchasing managers buying for consumption or conversion are faced with different problems. They participate in determining what products their company should make, what components or parts of these products the company should manufacture, and what should be purchased from outside suppliers. For optimum results, they integrate the efforts of their departments with those departments of the organisation.

1.2   OBJECTIVE OF PURCHASING

(1)   To support the government operations with an uninterrupted flow of materials and services.

(2)   To buy competitively and wisely.

(3)   To keep inventory investment losses (due to deterioration, obsolescence, and theft) at a practical minimum.

(4)   To achieve maximum integration with the other departments of the ministry.

(5) To develop policies and procedures with permit accomplishment of the preceding other mentioned objectives at the lowest reasonable operating cost.

(6) To train and develop highly competent personnel who are motivated to make the government as well as their department succeed.

1.3 OBJECTIVE OF THE STUDIES

a. To enable the state see at a glance the purchases made in any given time or period

b. To keep timely and to up to date record of item in stock at any given time

c. To computerized the purchases of the state

1.4 SCOPE AND LIMITATIONS OF THE STUDY

Computerization of this aspect of government functions span through vast areas, however, the focus will be limited to the ministry of finance store in which ideas generated can be applied to all the procurement pattern in the state.

Specifically, the major limitations are as follows:-

Non - availability of correct and sufficient records on items purchased and how they were utilised.

Lack of time as a work of this nature demands a long period of time

Problem of convincing the government to fully computerise the store section.

1.4   METHODOLOGY

The fact funding techniques employed for this project-work are:- Observation, interview and extraction of record

(1) **OBSERVATION:-**   This type of technique is carried our by personally watching most of the operations for a given period of time to see for oneself exactly what is happenirg.

It also gives a first hand information about how activities such as goods/documents and processes are being carried out, whether or not specified steps were actually followed.

(2) **INTEREVIEW:-**   This type of approach is most common, proved most satisfactory a way of collecting information from individuals or groups. The respondents here should be the current user of the existing system and should be the potential users of the proposed system when approved.

(3) **RECORD SEARCHING:-**   This gives an introductory knowledge and later acts as basis for comparing actual operation with where the records indicate.

1.5   DEFINITION OF TERMS

(1)   **INVENTORY** is the process of keeping records of things in the stores at every point in time.

(2) **PURCHASING** :- This refers to making available the required type and quantity of goods required at any point in time.

(3) **PROCUREMENT**:- The whole process whereby all classes of resources (people, materials, facilities, and services) required by any organisation.

(4) **QUALITY**:- It is defined as fitness, merit and excellence. It must relate to function and ultimate cost.

(5) **SPECIFICATIONS**:-   These are detailed descriptions of the materials, parts, and components used in making a product.

(6) **STANDARDIZATION**:- This could refer to items interms of their size, shape, colour, physical properties, performance characteristics. On the other hand, it could on things such as operating practices, procedures and systems.

(7) **DEMAND**:- This is the actual amount of items required per period because some demand may go unfulfilled due to shortages.

(8) **STORAGE PENALTY COST**: - This is the cost incurred when an item requested for is not available in stock.

(9) **INVENTORY POLICY:-** This is the organisation stock holding policy represented as a series of rules and regulation governing the inventory control.

(10) **LEAD TIME:-** This is the time laps between the time of ordering and the actual arrival time of the order.

(11) **HANDLING COST:-** This comprises of the cost of labour to move stock and equipment from one point to the other.

(12) **BIN CARDS:-** Serve as a first hand information not during any inventory transaction.

CHAPTER TWO

RECEIPTS AND INSPECTION OF GOODS.

2.0   INTRODUCTION

Goods may be received into the storehouse from outside suppliers. from production shops or from others storehouses within the organization. These goods must be properly looked after when they arrive. The stock records and stores account must also be kept properly and that documentary evidence of satisfactory receipt is required before suppliers' invoices are paid.

2.1   RECEIPTS FROM OUTSIDE SUPPLIERS

The suppliers must be kept informed of the days and times the storehouses will be opened for business. It is to enable the suppliers to know the exact time or days they can deliver their goods to the storehouses.

Whenever orders are place, the storekeeper must be informed about what he is expected to receive and when it is likely to arrive. This is usually done by sending him a copy of the local purchase order form.

The supplier on his own part will prepare advise note and send it to his customer. The advice note will give a description of the goods, the quantity involved, the method, the method of transport and the date of

dispatch. The intention is that the advice note should get to the receiving storekeeper before the arrival of the goods.

(a) CHECKING FOR QUANTITY - GOODS RECEIVED NOTES

When goods finally arrive the storekeeper makes sure that the quantity and description correspond with what has been advised. This is done by weighing, counting or measuring. If the quantity or weight of delivery correspond with that on the advice note, and the goods are not damaged, their storekeeper signs the document to confirm receipt of the goods and returns it to the supplier either by post or to his representative by hand if he is available.

Where goods received are damaged or incomplete, it is necessary to inform the supplier immediately.

When the storekeeper is satisfied with the delivery, he now prepares a separate goods-received note for each delivery,. The goods received note consist of the following information:-

i.   Date of receipt

ii.   Consignor

iii. Consignor's advice note number

iv.   Order number

v.   Description

vi.   Quantity received, undamaged

vii.   Number and types of packages

viii. Storekeeper's signature e.t.c.

The goods received note is made in duplicate, the original will be sent to the office to support payment while the second copy will be retained in the storehouse. It is sometimes necessary to have additional copies to notify the user department about receipt of special items or to inform the inspection department.

2.2 SOURCES OF SUPPLY

Selecting capable suppliers is one of a purchasing manager's most important responsibilities.   If the right supplier is selected, then competitive pricing, reliable quality, on-time delivery, good technical services, and other goals of goods purchasing arc more likely to be achieved than if only a mediocre supplier were selected.

A company's purchasing departments should motivate its suppliers to participate in a mutually profitable buyer-seller relationship.

FACTORS IN SUPPLIER SELECTION

A buyer must consider many factors in selecting sources of supply.

(a) ASSURANCE OF SUPPLY

Reliability of supply is becoming increasingly important to both buyers and suppliers. Hence, suppliers who suffer recurring shortage themselves must be used with great care, regardless of their other desirable capabilities.

Suppliers who have assured, long term sources of their raw materials and component parts should be favoured and developed.

(b) SIZE OF SUPPLIERS

Some purchasing authorities theorize that the size of an order should correlate with the size of the supplier receiving the order.

(c) NUMBER OF SUPPLIER

Should one supplier be used, or tow, or more than two? The argument for placing a firm's business with one supplier is that in times of shortage, knowing all the buyer's eggs are in one basket, this supplier will take better care of his special customer. Also, a single supplier can provide the best pricing because of an assured and continual sales volume. The argument is also advanced that if a company uses two or three suppliers, it will be protected in terms of shortage by having alternate sources of supply.

2.3 DAMAGES AND SHORTAGES

The officer - in-charge of store raises a serially damage / shortage report form in any of the following events:-

(a) If damaged goods are delivered

(b) If goods received show a shortage in comparison with the supplier's advice note or packing note.

(c) If goods have not arrived within the stipulated time.

This form is normally raised in three copies and it is distributed as follows:- One copy to the carrier of the goods, one copy to the supplier and the last copy is kept in the store for further use and reference.

2.4 RECEIPT OF CAPITAL ITEMS

This is applicable where a capital development program is going on. Under this arrangement, copy orders for the equipment or materials to be treated as capital should be indicated to the store officer. It may be necessary to have a special services of goods - received notes but if not, a relevant document should be specially marked "CAPITAL" As far as possible, all capital goods should be placed in a separate location and items associated with individual projects should be kept together.

2.5 METHOD OF ISSUE FOR INTERNAL USE.

The service given by the stores to other departments becomes effective when the store officer makes issues of goods to users and the users will judge the efficiency of the stores organisation by the standard of service provided to them.

Before goods are issued out of the storehouse, there must be some authority for the transaction. This authorization may be in a form of a signed document, a verbal instruction or a routine arrangement.

However, issues must be organised to correspond with the needs of the organisation and several different methods may be employed in one organisation at the same time for various kinds of store.

METHODS IN USE:-

(a)   Issue on Request:- This is the simplest method and there are three methods:-

(i)   Immediate issue on presentation of an issue note by hand.

(ii)   Immediate issue on verbal request only.

(iii)   Issues after receipt of an issue not by post.

2.6 STOCK TAKING (TYPES AND PURPOSES)

Physical stocktaking is the process of counting, weighing or otherwise measuring all items in stock and recording the results.

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PURPOSES OF STOCKTAKING

(a)   To verify the accuracy of stock records.

(b)   To support the value of stock shown in the balance sheet by physical verification

(c)   To disclose the possibility of fraud, theft or loss.

(d)   To reveal any weakness in the system for the custody and control of stock either procured or kept in the warehouse.

TYPES OF STOCKTAKING

There are two methods of stocktaking; periodic and continuous

2.6.1 PERIODIC STOCKTAKING

In periodic stocktaking, the whole of the stock is covered a the time at the end of a given period. Usually the end of the financial year. In theory, stock should be taken at the close of business on the balance-sheet day, but in a large organisation. It may quite impossible to do all the work in one day, and the operation has to be extended over several days. The stocktaking need to be done only once a year. It may be carried out as often as seems desirable.

For a satisfactory stocktaking, a good deal of preparation is necessary. First of all, a programme should be drawn up and agreed with

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every department in the organisation, especially the finance department and the audit unit. Secondly, stocktaking sheets or cards must be prepared in advance and thirdly, all officers concerned must be instructed in their duties.

When the physical counting of the work has been completed, all stock sheets should be collected and arranged in classification order, in accordance with the value of each entry extended and a total shown. By adding up these totals, the value of stock in each classification can be obtained. The sum of these classification totals will give the grand total value of stock on hand as verified by physical examination. Precautions must be taken to ensure that all stock sheets are returned and that the calculation is checked. After the stock records are checked, the next step is to compare the individual entries on the stock sheets with the appropriate record cards and enter the actual quantity found at the stocktaking date on the records. Where this quantity does not agree with the balance shown on the record cards, then the balance on the stock record should be reconciled with the Tally card balance bearing in mind that the physical stocktaking is the factual one and therefore takes priority and the balance on the card must be amended. If there is a major discrepancy discovered, then investigation must be carried out to discover and find out why they have arisen. All surpluses and deficiencies established should be valued and written on or written off as the case may

be respectively. This is to ensure that the balances on the control accounts are adjusted so as to agree with the total value of stock verified by the physical stocktaking.

2.6.1 CONTINUOUS STOCKTAKING

Continuous stocktaking is the method whereby stock is taken continuously throughout the year in accordance with a pre-determined programme so that each item is physically verified at least once in the course of the year, or more frequently if required. This can be successfully carried out if complete detailed stock records are kept showing receipts, issues and balances on hand. This programme should be designed in such a way that a certain number of stock items are taken on every working day such as fast moving stocks. The methods of continuos stocktaking are the same with that of periodic stocktaking but there are some significant differences such as the following:-

i   There is no need to close down the stores or the works while stocktaking is in progress.

ii   The normal posting of receipts and issues on the stock record can continue without interruption.

iii   The work can be done by a few specially appointed experience and trained stock-takers who are completely independent of the storekeeping staff.

iv   Stocktaking results from days to day as they arise and any discrepancies disclosed should be thoroughly investigated in detail.

2.7   STOCK RECORDS.

It is necessary to decide how much information is to be shown on the records, where they are to be kept and whether they are to be entered by manual or electronic method. All these questions need to be properly checked because the number of transactions handle by the stores department is frequently very substantial.

It is important to examine every details very carefully so as to ensured that the entries to be made on the stock records are limited to what is required or essential for efficient working. Stock records are expected to show particulars of receipts, issues and balances remaining in stock for each individual item held in the storehouse from day to day.

REASONS FOR STOCK RECORDS KEEPING

(a)   To indicate the amount of stock of any item at any time without of being necessary for the stock to be counted physically.

(b)   To provide a means to determine how much should be ordered to maintain stock at the required level.

(c)   To establish a link between the physical stock and stores account.

(d) To provide a method of informing store officer of the location of goods purchased and very in the store.

(e) To supply information for stocktaking, where by the quality of all items in the storehouse ascertained by physical checking and compared with the balances on the records.

2.8 RELATIONSHIP WITH OTHER DEPARTMENTS/MINISTRIES

In order to discharge its responsibilities adequately, the procurement department must actively cooperate with other departments, not only to provide a service but to give and receive information so that the service is efficient. The nature of the other functions involved varies in different organizations, as does the scope and responsibility of the stores function. This makes it difficult to be precise about the relationships unless each case is considered separately.

Indeed, the purchasing department is the center of a large part of an organisation activity. By its very nature, purchasing has continuing relationships with all other departments in the government establishment as well as with the suppliers. Purchasing, operating cuta cross all departmental lines. Purchasing and other departments (production, finance, works) often view common problems differently.

This is a normal and health situation provided the departmental opinion are held objectively.

2.9   FORMS OF STOCKS

Forms of stock here simply referred to stock levels which is a means by which correct quantity of products are made available. It is also the methods of controlling or preventing excess and shortage of stocks in an organisation.

The four basic levels are:-

2.9.1 **MAXIMUM LEVEL:-** The maximum level of a given material is the maximum quantity that may be held in store or procured. It is essentially an upper most limit that the buyer/purchaser mush ensure is not exceeded. It is set after consideration of the following:-

(a)   Rate of consumption

(b)   Risks of obsolesce

(c)   Risks of deterioration

(d)   Storage space available.

2.9.2 **MINIMUM LEVEL:-**   This is the lowest level to which stock should fall. It is essentially a buffer stock which will not normally be touched. In the event of any item falling to its minimum level, management is immediately alerted and the acquisition of new supplies given top priority.

2.9.3 REORDER STOCK LEVEL:-The reorder level is the level at which a purchase requisition is made out . The level selected is such that, in the normal course of events, by reordering when the stock falls to the reorder level, new supplies will be received just before the minimum level is reached.

2.9.4 REORDER QUANTITY:-This is the quantity to be reorder in normal circumstances. By setting this quantity, the buyer is saved the task of recalculating the quantity to be purchased each time there is need to said order.

2.10 ASSESSMENT OF ITEMS HELD IN STOCK.

It is first of all necessary to consider what items are used and produced by the particular concern, and item to decide which of those should be stocked and purchased/procured.

We hold stock so as to provide a reservoir of materials to absorb the effects of variations in delivery and consumption and to maintain the ready availability of supplier within the organisation or parastal concerned. It is normally found necessary to used and also items which may be required at short notice.

Theoretically, if deliveries of materials from suppliers can be arranged exactly to meet operational demands from day to day, there will

be no need for stockholding. In practice, this arrangement can be applied satisfactorily to maintenance materials and general stores which are not operationally vital and used at irregular intervals.

2.11 REASONS FOR HOLDING STOCK.

In practice, every organisation whether private or public, undertakings have storehouses for good procured and storage purposes. Every organisation therefore finds it necessary to keep stores in stock for one or more of the following reasons:-

(a) Delivery cannot be exactly matched with usage day to day affair.

(b) Discounts or improved prices for bulk purchases more than offset the cost of storage.

(c) For finished products where the holding of a buffer stock between the manufacturer and customer is essential.

(d) Operational risks or possible changes in programme require the holding of stock as a precaution against serious breakdown or interruption of production or other activities.

(e) Some items appreciate in value during the time of storage.

2.12. THE BENEFITS OF COMPUTERIZATION

The benefits to be derived in computerizing this aspect of the ministry cannot be measured in any form. however, the benefits to gain include:-

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a. Accurate and timely information to the management

b. Removal of Labour redundancy

c. Increase speed and reliability

d. Maximise profits

e. Saves time interm of over time payment

f. Serves as an encouragement to staff to become computer literate.

g. No lost of Information.

CHAPTER THREE

3.0 SYSTEMS ANALYSIS AND DESIGN

3.1 INTRODUCTION

The System Analysis and design stage involves analysis of the existing system in order to aid the designing of the proposed system.

The analysis is considered important because the design of the new system is dependent on whatever information that is gathered during the analysis stage.

3.1 PROBLEM IDENTIFICATION AND DEFINITION

The introduction of computer in the present day world is expected to replace manual operations. This is considered necessary due to increased activities in our present day life. However, in areas where manual system is still in place, there exist various problems such as loss of vital information, insecurity of data, late retrieval of necessary details which lead to inefficiency in the general operations of the system. Specifically, the problems observed are as stated below:-

i   The existing system allows for fraudulent practices by the staff of the ministry.

ii   There is a waste of time in retrieving information about stock position.

iii   The system of control is poor and as such the information retrieved are inaccurate.

iv   There exists the problem of loss of data especially the detail records of items received and issued.

3.2   FEASIBILITY STUDY

The essence of a feasibility study is to find out how the solution being proffered will fit in and how workable it will be in the new environment.   Feasibility study is very necessary because it helps to prevent wasting time, efforts and other resources.

3.4   PROBLEM WITH THE EXISTING SYSTEM

In studying the existing system, it was discovered that manual method is predominantly in use.   Indeed, manual method has the following defects.

a.   It does not allow for easy and quick gathering of information

b.   There is no clear or well defined line of authority and performances of specific duties.

c   Errors and omission may occur in manual methods, thereby create imbalance in stock level.

3.4 BENEFITS OF THE PROPOSED SYSTEM

Inview of the various disadvantages identified in the existing system (i.e manual method) computerization holds the following advantages. This therefore answer the question why it is necessary to computerize.

1   Data will be more reliable, since errors and omissions will be at the minimum.

2   It will lead to easy storage and retrieval of data thereby eliminating misplacements.

3   It will facilitate easy data interaction between and within various levels of government since every member of staff at a defined level will have easy access to their units / departments.

4   It will enhance efficient and effective handling of data.

3.5 TESTING PROJECT FEASIBILITY

Testing or a review of the method and procedure of the present project feasibility is necessary. The purpose of such a test is to verify that the outlined benefits are infact, being achieved.

1   **OPERATIONAL FEASIBILITY:-** This is concerned with the workability of the proposed system. When developed and installed

generally what is considered is that, the project has received the support of the management and users.

2.   **TECHNICAL FEASIBILITY:-** This seeks to clarify if the proposed project can be done with the current equipment, existing software and personnel.

3.   **ECONOMICAL FEASIBILITY:-** This aspect is taken into consideration to access cost of implementing a proposed project along side with the benefits to be derived from implementing it.

3.6   ELEMENTS OF DESIGN

The computer application to procurement and control system of goods in government establishment is tend to reduce, if not eliminate all problems associated with the previous method.

The output produce could either be in hard copies or kept in the storage medium by the organisation for record purposes and decision-making.

The hard copy can also be issued to various departments or functionaries for personal use or governmental use for further transaction.

(a)   **Input:-** This is the process of obtaining or capturing the original data and placing it into the data processing system. In the proposed system, the user will work with a screen based data entry form. Since it is menu-driven, the computer will ask question for the user by the needs

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of output taking into consideration the types of input media needed, data collection method used, and volume of input documents needed.

(b) **Output:-** It is necessary to consider what is required from the system before deciding how to set about producing it. Since the output needed will be required mostly in the printed form (or hard copies) both within and without the organisation, a printer must be needed.

(c) **Files:-** This element is very linked to input and output. Input is processed against the files to produce the necessary output. Consideration have been given to the following viz:-

File organisation and Access:- Due to the large records and data involved, the file will be organised and accessed randomly using database management system.

Security of the files:- Considering the importance of the various files of the proposed system, a user's password could be needed to avoid unnecessary infiltrating into such files and to protect the secret of the government.

Record layout:- Provision are made for the database structure so that similar records can be distinguished and accessed easily.

3.7 CHANGE OVER PROCEDURES

The following approaches could be used during conversion / change-over.

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(1) **PARALLEL APPROACH:-** This is a method whereby the old method is operated simultaneously for sometime with the old system to make sure that the new system meets the requirements that the old system has been meeting all along and to determine whether the new system will be able to stand the test of time.

(2) **DIRECT APPROACH:-** This is a method where the old system is discontinued and the new system becomes operations immediately.

(3) **PIECEMEAL APPROACH:-** This is a method whereby changing to a system is done gradually until the desired result is installed in other parts of the ministry gradually.

3.8 COST ANALYSIS

(A) HARDWARE PROCUREMENT

(2 Nos)	486Dx 2/66/MHZ Processor	-	300,000.00
	2 sets of 14" Monitor	-	120,000.00
	CPU (2 Sets)	-	160,000.00
	102, UK Keyboard	-	40,000.00
	Deskjet (2 Nos)	-	150,000.00
	UPS (1000 KVA)	-	60,000.00
	Mouse Pad	-	5,000.00
	Miscellaneous Expenses	-	25,000.00
	TOTAL =	-	N860,000.00

(B)   DEVELOPMENT COST

Systems Analysis & Design (3 wks)	-	30,000.00
Software Dev. For 3wks	-	30,000.00
Personnel Training (Staff)	-	100,000.00
2 Store Officers	-	80,000.00
Utilities	-	50,000.00
Miscellaneous Expenses	-	50,000.00
TOTAL =	-	**N340,000.00**

OVERALL COST => N860,000+N340,000.00=N1,200,000.00

CHAPTER FOUR

SOFTWARE DEVELOPMENT AND IMPLEMENTATION

4.0   INTRODUCTION:-

This chapter focuses on providing the user with the necessary information needed on how to install and run the system effectively and efficiently. Indeed, all aspects of the system were operationally tested prior to their use. This, thereby allows the software designed to be accepted.

4.1   CHOICE OF LANGUAGE

In development of this system, Dbase IV programming language was used. It is a software which is accessible to authorized managers and other personnel for various purposes and in decision making process. Dbase IV is so powerful and flexible such that it is being used in finance, business, and accounting applications.

4.2   FEATURES OF PROGRAMMING CHOSEN

To meet the needs for the computer application, the dbase iv have been chosen. It is effective because its facilities has easy manipulation of files and records. It is also easy to process the files, either for insertion, deletion, searching or any other process.

Other important advantages of using the dbase iv are as follows:

a. Inconsistency can be avoided

b. Security restriction can be applied

c. Integrity can be maintained

d. The data can be shared.

e. Drudgery is removed.

4.3 HARDWARE REQUIREMENTS

The proposed system requires the following:-

(a) personal computer 836 main processor.

(b) Ram 64 MB

(c) Floppy Disk Drive - 3.5

(d) Colour monitor

(e) Laserjet printer (6L model)

(f) Stabilizer (1000 KVA)

(g) U.P.S (2000 KVA).

(2) SOFTWARE REQUIREMENTS

- MS - DOS 6.0 Version

- WINDOW 2000 Version

DBASE IV / FOX PRO.

4.4   TRAINING OF PERSONNEL

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

The training should be comprehensive enough to provide a good understanding of all operational techniques of the system. The amount and period of training for their system will depend upon its complexity and the available skills on the ground presently.

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

The training will cover areas like Basic Computing and operation guideline.

4.5   SYSTEM TESTING

System testing is a stage in System implementation. It involves the use of test data on the new system in order to ensure that the system work accurately and efficiently before live operation commences. At this stage, the logical and the physical design are throughly examined to ensure its workability. Therefore, the system testing stage serves as a confirmation that all is correct and an opportunity to show the users that the system works as required.

4.6 STARTING THE PROGRAM

A computer program was developed to keep track of the goods procured and inventory of stock level. The program was written in Dbase Iv. To execute the program, the user must run the Dbase programe i.e

C:/ CD Dbase then press ENTER

C:/Dbase/Dbase then press ENTER

After getting to **DOS PROMPT** in the Dbase IV environment, then the user can now execute the program by typing thus:-

. DO PROCUREMENT

When the program starts executing, the MAIN MENU is displayed. The MENU consists of the following:-

(a)   ADD RECORDS

(b)   DELETE RECORDS

(c)   MODIFY RECORDS

(d)   PROCUREMENT REPORT

(e)   STOCK ANALYSIS REPORT

(f)   EXIT

(a) **ADD RECORDS:-** The Add record option is used to add new records to the database file. The user is prompted for the operation code. When these data are supplied the record is added to the database.

(b) **DELETE RECORDS:** This is used to remove records from the database file. When a user wants to remove a particular record, he simply chooses the delete option then enters the operation code of the record to be deleted.

(c) **MODIFY RECORDS** This option is selected whenever the user wishes to make an amendment to already existing records in the database. The user Supplies the operation code and the record is displayed on the Screen to allow the user make necessary amendments.

(d) **PROCUMENT REPORT:-** When this option is selected, the various items procured are generated. Also new purchased stocks could be viewed.

(e) **STOCK ANALYSIS REPORT** This option gives the total stock level of items available in the store. Each item of the stock can be verified to give the general stock available and those that are short in the store.

(f) **EXIT** The Exit option is used to close the program.

CHAPTER FIVE

5.0   CONCLUSION

5.1   DOCUMENTATION

Developing a new system is not an easy task particularly as it affects government parastals.

This procurement and stock control system of a big governmental organization like the ministry of finance no doubt needs a computerized system to meet up the modern standard, demand and speed.

The system is designed to provide the management with timely information, and to ensure proper accountability in the said ministry.

The system is enhanced with a timely reports generated for all transactions in the stores.

The implementation of the proposed system will ensure improvement in stock control in terms of reliability, security and effectiveness.

It is therefore hoped that this project will go a long way in enhancing efficiency and profitability in the Ministry.

5.2   RECOMMENDATION

Based on the findings in this project, the following recommendations are made.

1.   Since the primary purpose of having inventories is to meet the demand of the users (particularly the various departments in the Ministry): The Purchasing officer should ensure that stock is being replenished constantly.

2.   It is recommended that stock taking should be carried out at least once in a month to avoid running out of stock and also to avoid waste and theft while in storage.

3.   A constant review of Inventory is recommended. All items procured should be properly marked to avoid fraud.

4.   Finally, data processing staff should be trained for the maintenance of the system and for smooth and efficient running of the system.

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3. **Bailey P. & Travenier. G** (1984) Stcok Control Systems and Records Gower Publishing Co. Ltd USA.

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```
************************************************************************
* PROJECT TOPIC : COMPUTER APPLICATION TO PROCUREMENT OF
*            GOODS IN AN ORGANISATION
*            A Case Study of Central Store, Minna
*
************************************************************************
SET DISPLAY TO EGA25
SET SPACE OFF
SET CONSOLE ON
SET DELETED OFF
SET BELL OFF
SET ECHO OFF
SET TALK OFF
SET PRINT OFF
SET CLOCK OFF
SET SAFETY OFF
SET SCORE OFF
SET CONFIRM ON
SET DATE TO BRIT
SET CARRY OFF
SET CENTURY ON
SET INSTRUCT OFF
SET DELIMITERS OFF
SET ESCAPE ON
SET MESSAGE TO ""
SET DEVICE TO SCREEN
SET STATUS OFF
CLEA ALL
SET COLOR TO GR+, G, G
CLEAR
DO FIRST
DO MAINPROG
sele a
use procure
sele b
use dispatch
ABORT = 'END'
DO WHILE ABORT = 'END'
DO SETUP
DO MAIN
CLEAR
ENDDO
CLOSE DATA
RETURN

PROCEDURE SETUP
IF ISCOLOR()
   SET COLOR OF BOX TO GR+/BG
   SET COLOR OF NORMAL TO W+/B
   SET COLOR OF HIGHLIGHT TO GR+/BG
   SET COLOR OF MESSAGES TO W+/N
```

```
        SET COLOR OF TITLES TO W/B
        SET COLOR OF FIELDS TO N/BG
        SET COLOR OF INFORMATION TO B/W
    ENDIF

    SET BORDER TO DOUBLE

    *  SET BORDER TO DOUBLE
    DEFINE POPUP SUBMENU1 FROM 3,25
    DEFINE BAR 1 OF SUBMENU1 PROMPT "  PROCUREMENT MENU  " SKIP
    DEFINE BAR 2 OF SUBMENU1 PROMPT "====================" SKIP
    DEFINE BAR 3 OF SUBMENU1 PROMPT "ADD RECORD(s)";
        MESSAGE "Addition of record(s) to the database file"
    DEFINE BAR 4 OF SUBMENU1 PROMPT "DELETE RECORD(s)";
        MESSAGE "This option allows deletion of record(s)"
    DEFINE BAR 5 OF SUBMENU1 PROMPT "MODIFY RECORD(s)";
        MESSAGE "This option allows modification of record(s)"
    DEFINE BAR 6 OF SUBMENU1 PROMPT "PROCUREMENT REPORT";
        MESSAGE "This option allows Generation of Procurement report"
    ON SELECTION POPUP SUBMENU1 DO SUB1_PARA

    DEFINE POPUP SUBMENU2 FROM 4,25
    DEFINE BAR 1 OF SUBMENU2 PROMPT "   DISPATCH MENU   " SKIP
    DEFINE BAR 2 OF SUBMENU2 PROMPT "===================" SKIP
    DEFINE BAR 3 OF SUBMENU2 PROMPT "ADD RECORD(s)";
        MESSAGE "Addition of record(s) to the database file"
    DEFINE BAR 4 OF SUBMENU2 PROMPT "DELETE RECORD(s)";
        MESSAGE "This option allows deletion of record(s)"
    DEFINE BAR 5 OF SUBMENU2 PROMPT "MODIFY RECORD(s)";
        MESSAGE "This option allows modification of record(s)"
    DEFINE BAR 6 OF SUBMENU2 PROMPT "DISPATCH REPORT";
        MESSAGE "This option allows Generation of Dispatch report"
    ON SELECTION POPUP SUBMENU2 DO SUB2_PARA

    *-----------> Popup for Mainmenu
    DEFINE POPUP MAINMENU FROM 1,10
    DEFINE BAR 1 OF MAINMENU PROMPT " M A I N     M E N U" SKIP
    DEFINE BAR 2 OF MAINMENU PROMPT "======================" SKIP
    DEFINE BAR 3 OF MAINMENU PROMPT "GOODS PROCUREMENT ";
        MESSAGE "Goods Procurement Processes   "
    DEFINE BAR 4 OF MAINMENU PROMPT "GOODS DISPATCH ";
        MESSAGE "Goods Dispatch Processes "
    DEFINE BAR 5 OF MAINMENU PROMPT "STOCK ANALYSIS REPORT";
        MESSAGE "Generate Stock Analysis report"
    DEFINE BAR 6 OF MAINMENU PROMPT "E X I T ";
        MESSAGE "You want to Shutdown"
    ON SELECTION POPUP MAINMENU DO MAIN_PARA

    *-----------> Popup for Exit
    DEFINE POPUP EXITM FROM 7,45
    DEFINE BAR 1 OF EXITM PROMPT " E X I T   M E N U" SKIP
```

```
DEFINE BAR 2 OF EXITM PROMPT "===================" SKIP
DEFINE BAR 3 OF EXITM PROMPT "EXIT TO PROMPT";
    MESSAGE "Return to the Dbase Prompt"
DEFINE BAR 4 OF EXITM PROMPT "EXIT TO DOS ";
    MESSAGE "Shutdown and return to DOS"
ON SELECTION POPUP EXITM DO EXIT_PARA

PROCEDURE MAINPROG
* ----------------> This section design the screen
HEAD1 = "*****************************************************"
HEAD2 = " PROCUREMENT OF ESSENTIAL GOODS IN AN ORGANISATION "
HEAD3 = "    (A Case Study of Central Store, Minna)       "
HEAD4 = "*****************************************************"
@0,0 TO 23,79 DOUBLE COLOR W+
DEFINE WINDOW MAINSC FROM 1,1 TO 22,78 NONE COLOR W+/B
DEFINE WINDOW WORK_IN FROM 7,5 TO 21,75 DOUBLE COLOR W+/B
X1 = MAX(LEN(TRIM(HEAD1)), LEN(TRIM(HEAD2)))
X2 = MAX(LEN(TRIM(HEAD3)), LEN(TRIM(HEAD4)))
X  = INT((80-MAX(X1,X2))/2) - 1
Y  = X + MAX(X1,X2) + 1
DEFINE WINDOW HEADBK FROM 2,X-1 TO 6,Y-1 NONE COLOR
DEFINE WINDOW HEADSC FROM 1,X TO 6,Y+1 DOUBLE COLOR W+/G+
DO CASE
   CASE DAY(DATE()) = 1
      TH = "st "
  ·CASE DAY(DATE()) = 2
      TH = "nd "
   CASE DAY(DATE()) = 3
      TH = "rd "
   OTHERWISE
      TH = "th "
ENDCASE
@ 0,5 SAY CDOW(DATE())+", "+ STR(DAY(DATE()),2)+TH+CMONTH(DATE())+", "+
STR(YEAR(DATE()),4)+"."
SET CLOCK ON
SET CLOCK TO 0,60
ACTIVATE WINDOW MAINSC
ACTIVATE WINDOW HEADBK, HEADSC
@ 0,INT((Y-X-LEN(HEAD1))/2)+1 SAY HEAD1
@ 1,INT((Y-X-LEN(HEAD2))/2)+1 SAY HEAD2
@ 2,INT((Y-X-LEN(HEAD3))/2)+1 SAY HEAD3
@ 3,INT((Y-X-LEN(HEAD4))/2)+1 SAY HEAD4
ACTIVATE WINDOW WORK_IN
RETURN

PROCEDURE MAIN
ACTIVATE POPUP MAINMENU
RETURN


PROCEDURE MAIN_PARA
```

```
  DO CASE
    CASE BAR() = 3
       ACTIVATE POPUP SUBMENU1
       DEACTIVATE POPUP
    CASE BAR() = 4
       ACTIVATE POPUP SUBMENU2
       DEACTIVATE POPUP
    CASE BAR() = 5
       DO ANALREP
    CASE BAR() = 6
       ACTIVATE POPUP EXITM
       DEACTIVATE POPUP
  ENDCASE
  RETURN

  PROCEDURE SUB1_PARA
  SELE A
  DO CASE
    CASE BAR() = 3
       DO ADDREC1
    CASE BAR() = 4
       DO DELREC1
    CASE BAR() = 5
       DO MODREC1
    CASE BAR() = 6
       DO PROREP
  ENDCASE
  RETURN

  PROCEDURE SUB2_PARA
  SELE B
  DO CASE
    CASE BAR() = 3
       DO ADDREC2
    CASE BAR() = 4
       DO DELREC2
    CASE BAR() = 5
       DO MODREC2
    CASE BAR() = 6
       DO DISREP
  ENDCASE
  RETURN

  PROCEDURE EXIT_PARA
  DO CASE
    CASE BAR() = 3
       ABORT = 'Q'
       CANCEL
    CASE BAR() = 5
       QUIT
  ENDCASE
```

```
RETURN


Procedure ADDREC1
 store 'Y' to ans
 set stat off
 sele a
 do while ans ='Y'
  clear
  store space(6) to mitm_code
  store space(25) to mitm_name
  store 0 to mitm_price, mitm_qty
  store "99/99/9999" to mdate_pur
  @2,5 Say "Enter Item Code: " get mitm_code Pict "!!-999"
  read
  locate for mitm_code = itm_code
  if found()
  @ 8,20 say "Item Code Already Exist"
  else
   DO GETDATA1
   READ
   clear
   append blank
   replace itm_code with mitm_code
   replace itm_name with mitm_name
   replace itm_qty with mitm_qty
   replace itm_price with mitm_price
   replace date_pur with mdate_pur
 endif
 @10,10 to 12,50
 store 'N' to ans
 @11,12 say 'Are there more records? (Y/N)' get ans pict '!';
        valid ans $ 'YN' error 'Invalid entry !!!'
 read
enddo
CLEAR
return


Procedure DELREC1
 store 'Y' to ans
 sele a
 do while ans= 'Y'
  clea
  @2,15 to 4,55
  @3,20 say 'Deletion of record'
 store space(6) to mitm_code
 @2,5 Say "Enter Item Code: " get mitm_code Pict "9999"
 read
  locate all for  itm_code = mitm_code
  if found()
```

```
        @10,10 to 12,50
         store 'N' to reply
        @11,12 say 'Are you sure? (Y/N)' get reply pict '!';
             valid reply $ 'YN' error 'Invalid entry!!!'
        read
        if reply = 'Y'
           dele
           pack
        endif
     else
        @8,20 say 'Item Code does not exist'
        endif
        @10,10 clea to 12,50
        @10,10 to 12,50
        store 'N' to ans
        @11,12 say 'Delete more records? (Y/N)' get ans pict '!'
        read
     enddo
     CLEAR
     return


Procedure MODREC1
   sele a
   store 'Y' to ans
   do while ans = 'Y'
     clea
     store space(6) to mitm_code
     @2,5 Say "Enter Item Code: " get mitm_code Pict "9999"
     read
        locate all for itm_code = mitm_code
        if found()
        store itm_code to mitm_code
        store itm_name to mitm_name
        store itm_qty to mitm_qty
        store itm_price to mitm_price
        store date_pur to mdate_pur
     DO GETDATA1
     READ
     clear
        replace itm_code with mitm_code
        replace itm_name with mitm_name
        replace itm_qty with mitm_qty
        replace itm_price with mitm_price
        replace date_pur with mdate_pur
     else
        @8,20 say 'Record does not exist'
     endif
        @10,10 to 12,50
        store 'N' to ans
        @11,12 say 'Modify more record? (Y/N)' get ans pict '!';
```

```
                    valid ans $ 'Y/N' error 'Invalid entry!!!'
       read
enddo
CLEAR
return

Procedure ADDREC2
 store 'Y' to ans
 set stat off
 sele b
 do while ans ='Y'
  clear
  store space(6) to mitm_code
  store space(25) to mitm_name
  store space(30) to mdestine
  store 0 to mitm_qty
  store "99/99/9999" to mdate_dis
  @2,5 Say "Enter Item Code: " get mitm_code Pict "!!-999"
  read
  sele a
  locate for mitm_code = itm_code
  if .not. found()
  @ 8,20 say "Invalid Item Code "
  else
   store itm_name to mitm_name
   sele b
   DO GETDATA2
   READ
    clear
    append blank
    replace itm_code with mitm_code
    replace itm_name with mitm_name
    replace itm_qty with mitm_qty
    replace destine with mdestine
    replace date_dis with mdate_dis
 endif
  @10,10 to 12,50
  store 'N' to ans
  @11,12 say 'Are there more records? (Y/N)' get ans pict '!';
          valid ans $ 'YN' error 'Invalid entry !!!'
  read
 enddo
CLEAR
return


Procedure DELREC2
 store 'Y' to ans
 sele b
 do while ans= 'Y'
  clea
```

```
      @2,15 to 4,55
      @3,20 say 'Deletion of record'
   store space(6) to mitm_code
   @2,5 Say "Enter Item Code: " get mitm_code Pict "9999"
   read
     locate all for  itm_code = mitm_code
     if found()
   @10,10 to 12,50
     store 'N' to reply
   @11,12 say 'Are you sure? (Y/N)' get reply pict '!';
       valid reply $ 'YN' error 'Invalid entry!!!'
   read
   if reply = 'Y'
      dele
      pack
   endif
 else
   @8,20 say 'Item Code does not exist'
   endif
   @10,10 clea to 12,50
   @10,10 to 12,50
   store 'N' to ans
   @11,12 say 'Delete more records? (Y/N)' get ans pict '!'
   read
 enddo
 CLEAR
 return


 Procedure MODREC2
  sele b
  store 'Y' to ans
  do while ans = 'Y'
   clea
  store space(6) to mitm_code
  @2,5 Say "Enter Item Code: " get mitm_code Pict "9999"
  read
    locate all for itm_code = mitm_code
    if found()
    store itm_code to mitm_code
    store itm_name to mitm_name
    store itm_qty to mitm_qty
    store destine to mdestine
    store date_dis to mdate_dis
  DO GETDATA2
  READ
  clear
   replace itm_code with mitm_code
   replace itm_name with mitm_name
   replace itm_qty with mitm_qty
   replace destine with mdestine
```

```
        replace date_dis with mdate_dis
    else
        @8,20 say 'Record does not exist'
    endif
        @10,10 to 12,50
        store 'N' to ans
        @11,12 say 'Modify more record? (Y/N)' get ans pict '!';
            valid ans $ 'Y/N' error 'Invalid entry!!!'
        read
    enddo
    CLEAR
    return

    Procedure PROREP
    define window user from 1,1 to 22,78 none color W+,B
    activate window user
    set stat off
    set alternate to 'prorep.out'
    set device to screen
    set alternate on
    set space on
    DO TOPCOMM1 with 1
    store 1 to couter                    `
    sele a
    go top
    store 0 to msum
    do while .not. eof()
        ? '|',str(couter,2),'| ',itm_code,' |',itm_name,'|  '
        ?? str(itm_price,10,2),' | ',str(itm_qty,6),' |',date_pur,'|'
        couter = couter + 1
        msum = msum + itm_price
        ? replicate ('-',84)
        skip
    enddo
    ?
    ? "Total Cost of Goods Procured    : " + str(msum,13,2)
    ?
    set alternate off
    wait
    deactivate window user
    return

    Procedure DISREP
    define window user from 1,1 to 22,78 none color W+,B
    activate window user
    set stat off
    set alternate to 'disrep.out'
    set device to screen
    set alternate on
    set space on
    DO TOPCOMM1 with 2
```

```
    store 1 to couter
    sele b
    go top
    do while .not. eof()
      ? '|',str(couter,2),'| ',itm_code,' |',itm_name,'| '
      ?? destine,'|',str(itm_qty,6),'|',date_dis,'|'
      couter = couter + 1
      ? replicate ('-',100)
      skip
    enddo
    set alternate off
    wait
    deactivate window user
    return

    Procedure ANALREP
    define window user from 1,1 to 22,78 none color W+,B
    activate window user
    set stat off
    set alternate to 'prodis.out'
    set device to screen
    set alternate on
    set space on
    DO TOPCOMM1 with 3
    store 1 to couter
    sele a
    go top
    store 0 to msum
    do while .not. eof()
      store itm_code to mcode
      ? '|',str(couter,2),'| ',itm_code,' |',itm_name,'|  '
      ?? str(itm_price,10,2),' | ',str(itm_qty,6),' | '
      sele b
      sum all itm_qty for itm_code = mcode to msum
      ?? str(msum,6),'  |'
      couter = couter + 1
      ? replicate ('-',84)
      sele a
      skip
    enddo
    set alternate off
    wait
    deactivate window user
    return


    PROCEDURE FIRST
    CLEAR
    B = .T.
    DO WHILE B
    @4,6 TO 22,70 DOUBLE
```

```
@8,8 SAY "DATE      : 26/11/2001"
@10,8 SAY "TOPIC    :  COMPUTER APPLICATION TO PROCUREMENT OF"
@11,8 SAY "          GOODS IN AN ORGANISATION"
@13,8 SAY "CASE STUDY:  CENTRAL STORE, MINNA"
@21,8 SAY "PRESS ANY KEY TO CONTINUE---"
B = .F.
WAIT ""
ENDDO
CLEA ALL
RETURN


PROCEDURE GETDATA1
CLEAR
@ 4,5 say "Enter Item Name  : " get mitm_name pict "@!"
@ 6,5 say "Enter Item Price : " get mitm_price pict "9999999.99"
@ 8,5 say "Enter Item Qty   : " get mitm_qty pict "999999"
@ 10,5 say "Enter Date       : " get mdate_pur pict "99/99/9999"
RETURN


PROCEDURE GETDATA2
CLEAR
@ 4,5 say "Enter Destination : " get mdestine pict "@!"
@ 6,5 say "Enter Item Qty   : " get mitm_qty pict "999999"
@ 8,5 say "Enter Date       : " get mdate_dis pict "99/99/9999"
RETURN


PROCEDURE TOPCOMM1
parameter comin
if comin = 1
? space(21),"****************************************"
? space(21)," PROCUREMENT OF GOODS IN AN ORGANISATION "
? space(21)," (A Case Study of Central Store, Minna) "
? space(21),"****************************************"
?
? space(26),"***************************"
? space(26),"* SUMMARY OF GOODS PROCURED *"
? space(26),"***************************"
?
? REPLICATE("*",84)
? "*    *  ITEM  *                 *  ITEM   *  ITEM  *  DATE   *"
? "* SN *  CODE  *     ITEM NAME       *  PRICE   * QUANTITY *  PROCURED
*"
? REPLICATE("*",84)
ENDIF
IF comin = 2
? space(30),"****************************************"
? space(30)," PROCUREMENT OF GOODS IN AN ORGANISATION "
? space(30)," (A Case Study of Central Store, Minna) "
? space(30),"****************************************"
?
```

```
? space(35),"******************************"
? space(35),"* SUMMARY OF GOODS DISPATCHED *"
? space(35),"******************************"
?
? REPLICATE("*",100)
? "*   *  ITEM  *                    *                   *     * DATE  *"
? "* SN * CODE  *     ITEM NAME      *      DESTINATION      * QTY *
DISPATCHED *"
? REPLICATE("*",100)
endif
IF comin = 3
? space(21),"*******************************************"
? space(21)," PROCUREMENT OF GOODS IN AN ORGANISATION "
? space(21)," (A Case Study of Central Store, Minna) "
? space(21),"*******************************************"
?
? space(21),"*******************************************"
? space(21),"* ANALYSIS OF PROCUREMENT AND DISPATCH *"
? space(21),"*******************************************"
?
? REPLICATE("*",84)
? "*   *  ITEM  *               *  ITEM    * QUANTITY * QUANTITY *"
? "* SN * CODE  *    ITEM NAME      *  PRICE   * PROCURED *
DISPATCHED *"
? REPLICATE("*",84)
endif
RETURN
```

```
************************************************
           PROCUREMENT OF GOODS IN AN ORGANISATION
              (A Case Study of Central Store, Minna)
************************************************


           *********************************************
           *  ANALYSIS OF PROCUREMENT AND DISPATCH  *
           *********************************************
```

SN	ITEM CODE	ITEM NAME	ITEM PRICE	QUANTITY PROCURED	QUANTITY DISPATCHED
1	FN-101	OFFICE TABLE	5600.00	45	6
2	FN-102	OFFICE CHAIR	1200.00	56	8
3	MA-131	MANUAL TYPEWRITER	8550.00	5	2
4	MA-321	ELECTRONIC TYPEWRITER	22000.00	10	5
5	HO-121	CEILING FAN	2350.00	10	0
6	HO-311	TABLE FAN	3200.00	21	0
7	FN-142	EXECUTIVE CHAIR	5400.00	8	0

```
***********************************************
        PROCUREMENT OF GOODS IN AN ORGANISATION
          (A Case Study of Central Store, Minna)
***********************************************


        *******************************
        * SUMMARY OF GOODS DISPATCHED *
        *******************************
```

SN	ITEM CODE	ITEM NAME	DESTINATION	QTY	DATE DISPATCHED
1	FN-102	OFFICE CHAIR	MINISTRY OF WORKS	8	10/06/2001
2	FN-101	OFFICE TABLE	MINISTRY OF FINANCE	6	04/05/2001
3	MA-131	MANUAL TYPEWRITER	PERM. SEC. OFFICE	2	04/05/2001
4	MA-321	ELECTRONIC TYPEWRITER	MINISTRY OF EDUCATION	5	04/05/2001

```
***************************************************
    PROCUREMENT OF GOODS IN AN ORGANISATION
       (A Case Study of Central Store, Minna)
***************************************************


        *******************************
        *  SUMMARY OF GOODS PROCURED  *
        *******************************
```

SN	ITEM CODE	ITEM NAME	ITEM PRICE	ITEM QUANTITY	DATE PROCURED
1	FN-101	OFFICE TABLE	5600.00	45	10/03/2001
2	FN-102	OFFICE CHAIR	1200.00	56	13/03/2001
3	MA-131	MANUAL TYPEWRITER	8550.00	5	13/04/2001
4	MA-321	ELECTRONIC TYPEWRITER	22000.00	10	13/04/2001
5	HO-121	CEILING FAN	2350.00	10	23/05/2001
6	HO-311	TABLE FAN	3200.00	21	23/05/2001
7	FN-142	EXECUTIVE CHAIR	5400.00	8	11/06/2001

Total Cost of Goods Procured   :   48300.00