COMPUTERIZATION OF SALES AND STOCK RECORDS

A CASE STUDY OF ZAGBAYI PHARMACEUTICAL LIMITED, MINNA, NIGER STATE

BY

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BEING A PROJECT WORK SUBMITED TO THE DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGER STATE IN PARTIAL FULFILLMENT OF THE AWARD OF POST GRADUATE DIPLOMA (PGD) IN COMPUTER SCIENCE

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DEDICATION

This project work is dedicated to Almighty Allah , The maker and sustainer of all that is in heaven and the earth for his protection over me throughout the course.

I also dedicated the project work to the memory of Sheikh Luqman (1973-1999), a graduate of Psychology from University of Ado-Ekiti and a dear friend.

CERTIFICATION

This is to certify that the project titled Computerization of sales and Stock Records A case study of Zagbayi Pharmaceutical , Limited Minna is an original work undertake by Ologunde Saeeduddin *(PGD/MCS/2001/2002/1069)* of THE DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE, FUT MINNA

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I give glory, honour and praise to the Almighty Allah, the possessor of all wisdoms and understanding and the creator of heavens and earth, for making this project work and postgraduate programme as a whole an accomplished and successful exercise for me. I thank and glorify Allah whose air, time and other natural facilities I used to complete this project. Without his permission and acceptance, this project could have been something forgotten and out of sight.

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Finally, special thanks to brothers and sisters at home and abroad for they have contributed immensely to the successful completion of my course here.

May the Lord be with all of us forever.

Ologunde Saeeduddin

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ABSTRACT

This study addresses itself to finding out the problems facing the sales and stock Records in Zagbayi pharmaceutical Limited and how to use computer system in solving the problems.

Computerization of sales and stock records deal with the use of computer in carrying out various activities in the sales and store departments of Zagbayi Pharmaceutical Limited.

The aim of this project work is to computerize various activities performed in the sales and store department of the Zagbayi Pharmaceutical Limited, Minna, Niger State.

Chapter one of the project work contains preamble and brief introduction, the aims and objectives of the project, the scope of study, the methodology, choice of programming language, relevance of the project work and definition of terms, etc.

In chapter two, analysis, problems and benefits of the existing system, functions of stores and the need for computerization are enumerated.

Chapter three explains the system design such as Input, Screen, Control, Output, Data entry and File Design, etc.

In Chapter four, we explained the development and implementation of the new system, in the form of maintenance of the system, change over procedures, implementation requirements of the system and the actual installation of the system, operation manual/Users' guide, System testing, Scope and Limitation of the system,etc

In Chapter five , the summary and conclusion to the problem facing the existing system of sales and stock records keeping are stated with useful suggestions and recommendation on how these problems could be solved and how to ensure the longevity of the new system.

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CHAPTER ONE

INTRODUCTION

1.1 PREAMBLE/BRIEF INTRODUCTION

The Primary function of sales and stock records is to provide for efficient storage and handing of goods to be redistributed to the ultimate consumer/units. Store management must take into consideration the purpose for which a store operation functions, that is, holding area of drugs until redistributed.

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 to all other areas of stock records keeping.

Store management is closely linked with stock and inventory control.

An inventory consists of usable but idle resources. The resources may be of any type: men, materials, machines or money. When the resources involved is material or goods; inventory is usually referred to as stock.

In stock and inventory control, the variables to be controlled are the quantity acquired (by purchase, production or some other means) i.e. how much? , the frequency or timing of acquisition i.e. how often or when? , and the stage of completion of stocked items.

Computerized inventory and stock control system has to do with the use of computer in the control of stock of goods. The inventory database will store product information, information about buying and selling inventory, purchase order information, categories, information about employees, company information and suppliers information.

The case study for this project work is Zagbayi Pharmaceutical, Limited.

Zagbayi Pharmaceutical Limited, owned by Dr Shem Nuhu Zagbayi was established in 1994. It has two branches ;one is in Shop No 2 Addis Ababa Crescent, Wuse Zone 4, Abuja and the other in 105Y Bosso Road, Beside Habib Bank Plc, Minna. The headquarter of the Pharmaceutical company is in SW 307, hospital Road, Minna. Niger State.

1.2 AIMS AND OBJECTIVES

This project work aim at computerizing the buying and selling of drugs of the Zagbayi Pharmaceutical Limited.

This computerization will also ensure reduction in the time spent in processing

Order, stock and sales of stock items. Thus it will also ensure fast, adequate and confidential record of Customers and Suppliers.

Objective of computerizing the sales and storage of records of Zagbayi pharmaceutical limited can be highlighted as follows.

(a) To establish the most desirable distribution of data, services and equipment throughout the pharmaceutical company.

(b) To keep proper records on every items supplied, purchased to issued to various departments and staff

(c) To ensure that items requested by the various departments are made available at the right time and at the right place.

(d) To prevent or minimize under stocking of items (drugs, beverages, etc).

(e) To reduce losses resulting from over stocking of store.

(f) To make available a balance flow of raw material, drugs, tools, etc and other commodities necessary to meet day - to - day running of the company.

(g) To demonstrate the computer capability of solving problems related to store management

(h) To provide responsive service to meet user and departmental needs

(i) To enable the most efficient handling of data and provide management with timely information.

(k) The use of automated system of storing information is aimed at keeping proper records on every items supplied, issued to staff, etc.

To achieve the set aims, the following has to be done

(a) The mode of operation of the existing system, which is manual, will be studied.

(b) The existing system will be analyzed to know how the processing is carried out manually.

(c) Better storage of information will be ensured

(d) Easier way of keeping records will be produced.

(e) The problems encountered by the sales personnel in keeping and maintaining their file will be known.

(f) Confidential record of sales order and stock item will be ensured.

(g) The speed of processing and handling of sales, order and stock item will be increased

(h) Quick reference to saved information will be ensured

1.3 CASE STUDY/SCOPE OF STUDY

The study cover almost all the operations performed in the sales and account department of Zagbayi Pharmaceutical Limited.

The Computerization of sales and store records will cover buying and selling of drugs, record maintenance (sales, stock, employee, order and supplier deletion and editing, etc) and drugs updating (addition of new stock, sales, order, supplier and employee records) However, the system does not have ability to collect data from source. There is still need for human operator and expert in the field.

1.4 RELEVANCE OF THE STUDY

The benefits, of an effective system of store management in Zagbayi Pharmaceutical Company are as follows:

(a) It increases efficiency

(b) To generate a procedure for an orderly flow of relevant information for use in the store.

(c) The rate of operation will be faster, effective and accurate.

(d) Better management control.

(e) Establishment of accurate store management system

1.5 METHODOLOGY

There are many method which can be used to collect data from a given establishment or organization.

For example, it may be through the use of Questionnaire, Oral interview, Surveying, Personal observation, etc.

However, because of the advantage of personal observation and oral interview, the method to be used for collecting data for this project is both

Oral interview and personal observation

The staff especially the key staff like sales manager, chief accountant, auditor, accounting officer / clerks are to be interviewed.

This will be supplemented with the personal observation of the document of the organization such as stock card, sales invoice and order form, etc.

1.6 CHOICE OF PROGRAMMING LANGUAGE AND SYSTEM SUPPORT

The programming language to be used for this project is Visual FoxPro because of the following reasons:

1. It is user friendly and highly interactive.
2. It gives room for easy accessing and retrieval of information
3. Provision of the custom screen through a set of command, providing window entry, pop-up menu and pull-down menu, etc.
4. It is easy to understand and read with provision for code optimization and data validation.
5. It is readily available and require less memory space.
6. It has the ability to create and maintain both sequential file and offer easy report generation.

1.7 DEFINITION OF TERMS

The following terms need to be defined for the proper understanding of this project

COMPUTER

Computer is an electronic device that works under the control of stored programs, automatically accepting data, process it store it and display information that is the result of processing.

DATA

Data is defined as basic or raw facts

INFORMATION

Information is processed data. When data is presented in a meaningful form it becomes information.

PURCHASE REQUISITION

Store department issues this when it is felt that order should be placed for such items

PURCHASE ORDER

The purchasing department raises this

DELIVERY NOTE

When suppliers deliver consignment it is accompanied with delivery note. The storekeeper signs the delivery note when he is satisfied with the goods supplied.

GOOD RECEIPTNOTE

The storekeeper prepares this after accepting the goods and a copy of this will be sent to account department. The goods are now put into the store along with the goods receipt note. Each item of good has a Bin Card.

BIN-CARD

A Bin Card shows level of stock of each item in a Bin (stock location). It records all the receipts and issued and returns to and from stores.

MINIMUM STOCK LEVEL

This is the lowest level below which material must not fall; the quantity at this level is called the buffer or safety stock.

MAXIMUM STOCK LEVEL

This is the level at which the stock of material should not allow to exceed or else too much capital would be tied down and apart from this there would be risk of loss of stock material through deterioration and obsolescence.

RE ORDER LEVEL

This is a level of stock of material situated between minimum and maximum stock level. When material usage reaches this level order will normally be sent to the level is usually set after taken into account maximum usage within the maximum delivery period

RE ORDER QUANTITY

This is the economical quantity to order each time order is placed for replenishment of stock. It is the most economical because it minimizes the ordering cost and carrying cost such as storage, interest our capital tied down in stock.

INVENTORY

This consists of usable but idle resources. The resources may be of any type men, materials, machines or money. When the resources involved is material or goods; inventory is usually referred to as stock.

STOCK

The total accumulated goods held by a company, whether already made or in the process of manufacture, may be termed its stock. The capital stock of a company or country is its total quantity of material capital.

PURCHASE PRICE OR UNIT COST

This is the cost of individual item of stock.

STOCK VALUE

To obtain stock value for an item, we multiply unit cost by the quantity in stock.

TOTAL STOCK VALUE

To obtain the total stock value, we add all the stock values for the individual stock items.

STOCK LEVEL

This is total number of items of stock remaining.

AMOUNT DELIVERED

Under normal condition, quantity of goods delivered is usually equal to the quantity ordered but base on certain constraint the two may not be equal

STOCK CONTROL

The two principal functions of stock control is to enable the product to be produced or procured in economic quantities and to act as a buffer against an unpredictably high rate of use stock and certain other functions at a price that equals the cost of holding stock. The objective of stock control is to ensure a correct balance between the cost of stock holding and the benefits from stock holding.

ORDER QUANTITY

This is total number of items ordered.

ECONOMIC BATCH QUANTITY (EBQ)

These are certain advantages to be gained from buying goods in large quantities.

PASSWORD

A unique string of characters that a program must supply to meet security requirement before gaining access to data.

CHAPTER TWO

SYSTEM INVESTIGATIONS AND ANALYSIS

2.1 INTRODUCTION

A system could be defined as a collection of interrelated elements and procedures that work together to accomplish a task or solve problem of given nature.

System investigation is the process of making a careful study of a system or a thing in order to discover the facts about it.

Investigation was conducted to expose the strength and the weaknesses of the present system so as to allow the weak points to be eliminated by adopting the use of computer.

During investigation a good working relationship was established with the staff in the sales and account department of the organization, since much of the information about the present system were collected from them.

The investigation carried out revealed that the existing system of Zagbayi Pharmaceutical Limited is manual.

System analysis could be defined as a careful way of studying a problem and finding a justified solution to the said problem. The person or people responsible for system Analysis is called a System Analyst.

A System Analyst should be capable of solving a wide range of complex and sophisticated business and scientific problems.

2.2. FUNCTIONS OF STORE

The primary functions of store(s) is to provide for storage and handing of goods to be redistributed to the ultimate consumer or user's department. It is particularly important that in any organization the stores division and purchasing department work closely together since their combine efforts are essential for keeping stores inventory at the most economical level. The purchasing department on the basis of the information from the stores division purchases the entire inventories in the stores stock. The stores division should furnish information regarding inventory on stock, the rate of use, maximum and minimum stocking quantities, and estimated future requirements.

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

2.3 STORES ORGANIZATION AND MATERIAL VALUATION

Stock keeping involves two things:

(i) Physical task of handling material

(ii) Clerical task of keeping records.

The process of ordering and receiving raw materials involve one or all of the following items: purchase requisition, purchase order delivery note, Good receipt note and Bin-Card. Issue of materials is done with the use of a document called material requisition –Note or store issuer Note. This document should disclose quantity of goods, cost of the goods (done by costing department) and the cost center or the job number where the material should be charged.

2.4 SALES AND STORE DEPARTMENT PERSONNEL

With the research made, it was discovered that the existing system is manual and most of the work are done individually. The pharmaceutical Company has several personnel such as sales clerk, store officer, accountant, etc who performs specific functions

2.4.1 Duties and responsibility of purchasing officer

(i) Determine the material needs of the pharmaceutical Company

(ii) Assists in the selection of suppliers

(iii) Assists in the determination of proper price items and conditions of contract of sales

(iv) Taking receipt of materials purchased and issuing delivery orders

(v) Writing, of Local Purchase Order, LPO

2.4.2 Duties and responsibility of store officer

The running of the store has to be seen being more closely allied to pharmaceutical industry than any other activity.

The duties of the store officer are

(i) Taking charge of store

(ii) Safe keeping of stocks

(iii) Receiving and issuing materials and concluding periodic surveys and checking of stocks

(iv) Preparation of reports on the state of stores.

2.4.3 Duties & Responsibilities of Manager

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

The manager must be aware of what the business is therefore, and should know exactly where his unit stands in relation the rent of the organization. He has to make decisions and put in system, which makes his unit efficient. He must be constantly appraising himself and his subordinates. The manager should ensure that statistics of records are kept. He must keep records 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 taken to process order and and soon.

The manger should ensure that proper checking and control over the affair of the store is general

Some of such checking should include surprise checks, periodical checks, and annual production audit.

Surprise Checks: The manager should make it 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 also 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 inwards, as well as all expense invoices. He must make sure that someone should be made personally responsible for keys for proper security.

Periodical Checks: The manager should make it a practice to check the inventory and at the same time to see not only that these items are serviceable, but that they are safe to use

He should lay out a proper parking and reliable movement system. He should inspect all outside walls, check on all fencing and all common walls with neighbours. He must have the roofs and gutters inspected. All contacts should be properly looked at and brought up to date. Fire alarms and sprinkler system should be regularly checked

Annual Production Audit: It cannot be said too often that it pays to make it an established part of weeks work to have a discursion meeting because it breaks the

monotony of routine work. Over haul filing system at least once in every twelve months is desirable. 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 a year, to ensure that all proper signs and notices are still where they should be. He should constantly review insurance controls. Even though this may not be specific providence of store officer, he should know that the company covers the department and the cover is adequate.

2.5 STOCK CONTROL:

The total accumulated goods held by a company, whether already made or in the process of manufacture, may be termed its stock. The capital stock of a company or country is its total quantity of material capital.

The objectives of controlling stock are

(i) To maintain adequate stock so as to avoid production stoppage at consequent customer dissatisfaction, loss of revenue and increase cost of emergency action

(ii) To avoid excessive stock level and the consequent tied up of capital

(iii) To relief management of taking decision on every item of stock carried

(iv) It helps management to know when there is missing stocks.

2.5.1 Method of stock control

There are five methods of controlling stock:

(i) **Demand and supply method**: This involve the determination before hand (predetermination) of minimum stock level, maximum stock level, Re-order level and Re-order quantity or economic order quantity

(ii) **Perpetual inventory**: This is otherwise called continuous stocktaking or continuous inventory. This method involves no stock level at all time. It is a method, which involves knowing every report and every receipt of every issue into or from stock.

A record is kept for material showing receipt, issues and balances of stocks. A number of items are counted and checked daily or at frequent interval and compared with Bin Card record. The system involved the up keep of the two sets of records: Bin Card, which shows the physical balances, is a unit of stock at any time quantity and store ledger records which shows both the physical balances at any time and also their valuation stock.

The purpose of perpetual inventory is to ensure that physical number of unit held are accurately accounted for both on the Bin Card and store ledger records

(iii) **Order cycling**: This is done for low cost item. Under this method quantity on hand of each stock are reviewed periodically. A technique called 90,60,30 days technique is used so that when stock falls to 60 days supply a fresh order is placed for 30 days supply so as to boost to 90 days supply

(iv) **Two –Bin system**: Each store item is kept in two storage bins. When the first bin is empty an order must be placed for re-supply. The second Bin must contain sufficient quantity to last until the first delivery is received

(v) **Material classification**: Materials are classified as expensive, medium range cost and inexpensive. Expensive and medium range materials are subject to careful control process while less attention is based to control the storage of low cost item, hence it can be stored in large quantity. The aim here is to minimize the cost of stock holding. This method of control is also called the selective method or the ABC method.

2.5.2 Mathematical calculation of stock level:

The following mathematical formulas are useful in finding stock levels.

Assuming that EOQ is given

(i) Minimum stock= Re-order level-Average usage x average delivery period

i.e MS = Re-order level – (AU X ADP)

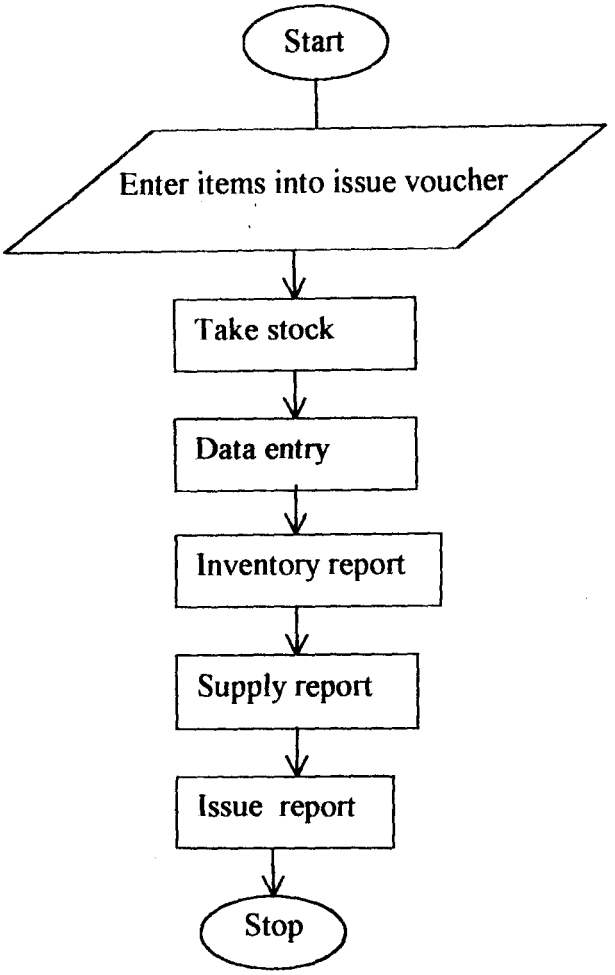
(ii) Maximum – stock level =Re-order level + Re-order Quantity – (minimum usage x minimum–delivery period)

2.6 ANALYSIS OF THE CURRENT SYSTEM.

2.6.1 Flowchart of the current system.

Flowchart is the diagrammatic representation of the sequence of instructions required to solve a problem or task.

The flowchart of the existing system is as shown below



SALES ANALYSIS

Whenever sale of drugs is made, an invoice receipt is usually issued to the customer, which contains sales, customer and company information.

Some of these facts are

i. Company Name

ii. Company Address (Contact and Postal Address)

iii. Telephone Number/Fax

iv. Receipt No.

v. Item details such as Quantity bought, item description, unit price and total sales value.

vi. Purchase Date

vii. Manager's sign

The sales value is usually obtained by multiplying Quantity bought by unit price of the item while Total sales value is obtained by adding the sales value of each individual item. In the stock section, stocktaking is achieved with the use of a stock card.

The stock card contains information such as delivery date, suppliers name, quantity sold, expire date, product description, unit cost, selling price, and remark.

There is an ordering form used for taking note of order information.

This order form contains items such as order date, delivery date, quantity ordered, suppliers' addresses, etc.

There is also suppliers form that contain the list of suppliers and their details such as suppliers number, suppliers name, contact address, telephone number, fax, etc.

2.6.3 STORAGE FACILITIES

In any store where goods are kept, there must be facilities that will ensure the safe keeping of items. In Zagbayi pharmaceutical limited, the following storage facilities and documents are available

i. Goods received note, GRN

ii. Storage ledger record

iii. Bin Card

iv. Internal store requisition record

v. Fire extinguisher

vi. Security guards

vii. Store issue voucher, SIV.

When items (materials are supplied or purchase) and brought to the company store by the contractor or purchasing officer or supplier, the supplier is notified that items / materials are to be inspected by the authorized official in the store.

The sample of the items supplied will be examined or tested by the Audit official (internal Audit or staff). For testing, the quality, making sure that it is measured to standard. If it is fire, than the items / goods are taken or the test will be received and entered into Goods received Note. 'In case, where items are not the right type in quality and quantity, they are immediately rejected. The sample method is also applied to beverages. It has to go through some series of quality control test in order to make sure or ascertain its fitness for consumption.

Store ledger is used to keep the proper account of all items in the store. These include those issued and those present.

Bin Card gives all the necessary information about a particular item in the store.

Fire extinguisher was provided in case of any fire outbreak in the store.

Security guards are provided to keep the store properly secured.

Store issue voucher, SIV is used for stock issue. It contains details about the person to whom issues are made.

2.7 PROBLEMS OF THE EXISTING SYSTEM

As earlier stated, the existing system of this stock and inventory control of the organization is manual. It should be noted that the existing system of the organization has the following problems

i. **Time Wastage**: A lot of time is wasted in stock taking and producing sales invoice.

ii. **Resources Wastage**: A lot of human resources were being wasted. Many workers are doing the work that can be done by the computer and an operator.

iii. **Inaccurracy**: Records cannot be properly kept manually. The present system is not accurate since it is manual and human beings are prone to error. They may even be tempted to falsify the record to satisfy or favour some fraudulent Customers.

iv. **Speed Of Operation**: The speed at which the records and files of sales and stock are being processed is relatively low at present since various operations are performed manually.

v. **Manually Based Record Keeping**: Manually based record keeping sometimes appear to be cumbersome because of the complex nature of data that are needed to be kept.

A lot of data may be lost by keeping them on paper because the paper may litter away.

vi. **In-Authentic Record And Information**: This mode of data processing does not allow change of product name, quantity in stock, re-order level, unit price, etc and wrong information are being used continuously, not knowing that these information are no longer correct. For example, when stock level changes as a result of sales, it will not reflect in the sales or stock file until three or four days latter when the items in stock are counted.

vii. **Poor Update And Maintenance**: The maintenance of stock records and files is poor since new files need to be created whenever there is sale or new stock items.

viii. **Fraud**: As a result of poor update and maintenance, this manual system made it easy for the sales and stock staff to steal.

2.8 ADVANTAGES OF THE EXISTING SYSTEM

There are still few advantages of existing system over the new system to be implemented. These advantages are discussed below

i. **Division Of Labour**: Every worker is assigned a portion of work to be done, which means many workers are employed to take care of various sections and divisions. The work of Accountants, Auditors, Pharmacist, etc do not overlap with the work of the Clerks.

ii. **Cost**: Computerization involves a lot of money since hardware and software need to be installed hence, manual method may be more cost effective.

iii. **Employment Opportunity**: A lot of people were employed in the various sections and departments but with the use of computers many of these workers will be relieved of their job

iv. **Skillfulness**: The employees are skillful since they are performing their duties monotonously; hence, it makes workers in the various departments to be independent of one another unlike when the computer is involved where the few workers employed will rely solely on the computer.

v. **Professionalism**: Most of the operations performed do not require much expertise but when the computer is involved, the knowledge of how to operate the computer machine would be required.

2.9 NEED FOR COMPUTERIZATION

This involves the solutions to the problem of the existing system using computer. The reasons for designing the new system are many. Some of these are

i. To minimize the time spent on data preparation, collection and processing.

ii. To ensure adequate use of human resources of the organization especially those in the sales department.

iii. To produce accurately and at the right time the required information concerning the stock items.

iv. To enhance accurate and safekeeping of stock details.

v. To enhance easy storage and retrieval of stock records

vi. To increase the speed with which stock records are being kept and retrieved

vii. To provide effective security control in the form of loss of data stored in various files and falsification of records.

CHAPTER THREE

SYSTEM DESIGN

The design of a new system of processing sales and stock record in Zagbayi Pharmaceutical Limited can be conveniently divided into Input Design, Output Design, Files Or Database Design, Procedures and Program Design, etc

The design is based on the satisfaction of the aims and objectives, which is specified in this study. The system is also designed in such a way that it could accommodate various problems both at present and in the future. The system is designed in order to make it objective, effective, efficient, accurate, economical, practical and secured.

3.1. INPUT DESIGN

The input stage makes provision for data collection and entry at the appropriate time. It is from this stage that we will know the required input to produce output.

3.2 OUTPUT DESIGN

The output is designed in such a way that it will meet the user's requirements since the output depends on input. The various data collected in the input stage will be used to generate the output.

It must be noted that the output is in the form of reports based on the input and processing of selected information.

(A) STOCK REPORT

NAME: STKREPORT.PRG

OUTPUT MEDIA: LINE PRINTER

STORAGE MEDIA: FLOPPY DISK

SOURCE: STOCK.DBF

PURPOSE: TO PRINT THE DETAILS OF ITEMS OF STOCK

NO	FIELD NAME	FROM	TO	LENGTH	TYPE
1	STOCK NO	2	8	6	C
2	SUPPLIER NAME	10	25	15	C
3	EXPIRE DATE	27	35	8	D
4	PRODUCT NAME	37	47	10	C
5	QUANTITY IN	50	53	3	N
6	QUANTITY OUT	55	58	3	N

7	UNIT COST	60	68	8	N
8	STOCK VALUE	70	79	9	N

(B) SALES REPORT

NAME:INVREP.PRG

OUTPUT MEDIA: LINE PRINTER

STORAGE MEDIA: FLOPPY DISK

SOURCE:INVOICE.DBF

PURPOSE: TO PRINT THE SALES INVOICE FOR A CUSTOMER

S/NO	FIELD NAME	FROM	TO	LENGTH	TYPE
1	PRODUCT NAME	2	14	12	C
2	QUANTITY	16	19	3	N
3	UNIT PRICE	21	29	8	N
4	PRICE	32	41	9	N
5	PURCHASE DATE	43	51	8	D

(C) SUPPLIERS REPORT

NAME: SUPPREP.PRG

OUTPUT MEDIA: LINE PRINTER

STORAGE MEDIA: FLOPPY DISK

SOURCE: SUPPLIER.DBF

PURPOSE: TO PRINT THE LIST OF SUPPLIERS OF DRUG AND THEIR DETAILS

NO	FIELD NAME	FROM	TO	LENGTH	TYPE
1	SUPPLIER NAME	2	20	18	C
2	CONTACT ADDRESS	22	42	20	C
3	TELNUM	44	52	8	C
4	POSTAL ADDRESS	54	64	10	C
5	E-MAIL	66	76	10	C

(D) ORDER REPORT

NAME: ORDERREP.PRG

OUTPUT MEDIA: LINE PRINTER

STORAGE MEDIA: FLOPPY DISK

SOURCE: ORDER.DBF

PURPOSE: TO PRINT THE LIST OF ORDER DETAILS

NO	FIELD NAME	FROM	TO	LENGTH	TYPE
1	PRODUCT NAME	2	14	12	C
2	QUANTITY	16	19	3	C
3	ORDERDATE	22	30	8	D
4	DELIVERY DATE	32	40	8	D
5	SUPPLIER NAME	42	57	15	C
6	ADDRESS	60	75	15	C

(E) EMPLOYEE REPORT

NAME: EMPREP.PRG

OUTPUT MEDIA: LINE PRINTER

STORAGE MEDIA: FLOPPY DISK

SOURCE: EMPLOYEE.DBF

PURPOSE: TO PRINT THE LIST OF EMPLOYEE AND THEIR DETAILS

NO	FIELD NAME	FROM	TO	LENGTH	TYPE
1	EMP NAME	2	15	13	C
2	DEPT	17	23	6	C
3	QUALIFICATION	25	28	3	C
4	ADDRESS	30	45	15	C
5	TELNUM	47	67	10	C
6	NEXT OF KIN	57	67	10	C
7	ADDRESS OF NEXT OF KIN	69	79	10	C

3.3 **SCREEN DESGN**

The screen is designed using the pull-down menu system with pad menus such as Data Entry, Maintenance, Report, Utilities, Quit, etc.

Whenever any of these menus is selected, the submenu will be displayed and the user can specify the operation he wants to perform by selecting the appropriate menu option.

3.4 DATA ENTRY DESIGN

The system is designed to accept input data from the screen and transfer it into various files for further accessing. For example

ZAGBAYI PHARMACEUTICAL LIMITED
STOCK DATA ENTRY SCREEN

PRODUCT CODE	
PRODUCT NAME	
UNIT COST	
SELLING PRICE	
QUANTITY IN	
QUANTITY OUT	
EXPIRE DATE	

SAVE DATA ENTRY (Y/N)?

3.5 FILE DESIGN

Six database files are used in this system and they are invoice.dbf, stock.dbf, order.dbf, supplier.dbf, employee.dbf and customer.dbf

(A)FILE NAME: INVOICE.DBF

INPUT MEDIA: KEYBOARD

STORAGE MEDIA: FLOPPY DISK

PURPOSE: TO STORE AND MAINTAIN SALES RECORD

FIELD NAME	TYPE	WIDTH	DEC
PCODE	C	6	
PNAME	C	12	
QUANTITY	N	3	
U_COST	N	7	2
PURCH_DATE	D	8	

(B) FILE NAME: STOCK.DBF

INPUT MEDIA: KEYBOARD

STORAGE MEDIA: FLOPPY DISK

PURPOSE: TO STORE AND MAINTAIN STOCK DETAILS

FIELD NAME	TYPE	WIDTH	DEC
PCODE	C	6	
PNAME	C	12	
QTY_IN	N	4	
QTY_OUT	N	7	2
UNIT _COST	N	7	
EXPIREDATE	D	8	

© FILE NAME: SUPPLIER.DBF

INPUT MEDIA: KEYBOARD

STORAGE MEDIA: FLOPPY DISK

PURPOSE: TO STORE AND MAINTAIN SUPPLIERS RECORD

FIELD NAME	TYPE	WIDTH	DEC
SNAME	C	15	
ADDRESS	C	15	
CITY	C	6	
STATE	C	6	
COUNTRY	C	8	
POSTAL_ADDR	C	8	
TELNUM	C	9	
E-MAIL	C	12	

(D) FILE NAME: ORDER.DBF

INPUT MEDIA: KEYBOARD

STORAGE MEDIA: FLOPPY DISK

PURPOSE: TO STORE AND MAINTAIN ORDER DETAILS

FIELD NAME	TYPE	WIDTH	DEC
PRODUCTNAME	C	12	
QUANTITY	N	3	
ORDERDATE	D	8	
DEL_DATE	D	8	
SUPP_NAME	C	15	
ADDRESS	C	15	

(E) FILE NAME: EMPLOYEE.DBF

INPUT MEDIA: KEYBOARD

STORAGE MEDIA: FLOPPY DISK

PURPOSE: TO STORE AND MAINTAIN EMPLOYEE'S RECORDS

FIELD NAME	TYPE	WIDTH	DEC
EMPNO	C	8	
EMPNAME	C	15	
DEPT	C	6	
QUALIFICATION	C	3	
ADDRESS	C	15	
TELNUM	C	9	
NEXTOFKIN	C	10	
K_ADDRESS	C	10	
MAR_STATUS	C	8	
DATE_EMP	D		
SEX	C	6	

3.6 CONTROL DESIGN

In this stage, there is an attempt towards restriction of access right and identification of the user will be taken care of. This is to be achieved through the use of password. The password is used to ensure that:

(i) Unauthorized user does not gain access to the package. The password, which the system demand will ensure this. The system will log-off after three attempts by the user to guess the password.

(ii) To ensure validation, the data used in this program were validated and the file is closed when there is no more operation to be performed on the sales or stock records.

3.7 **PROGRAM DESIGN**

Structured program design is used for this project work. The programs are broken down into a number of smaller tasks called modules. Each module performs a specific task. The computer system is expected to execute the first module and finish with it before passing control to all other modules before it reaches the final module.

CHAPTER FOUR

4.0 SYSTEM IMPLEMENTATION

4.1. INTRODUCTION

Implementation follows on from the detailed design stage. This involves the coordination of the efforts of the user department and data processing department in getting the new system into operation.

A coordinating committee is sometimes formed for this purpose, having as its members the managers of the departments concerned and a representative from the Computer department. The Analyst who is responsible for the design of the new system will be an important member because of his thorough knowledge of the system.

There are two methods of changing over from old system to new system, which are Parallel, and Direct Change over.

In parallel conversion, the old and new systems are run concurrently, using the same inputs. The outputs are compared and reasons for differences are resolved. Outputs from the old system continue to be distributed until the new system has proved satisfactory. At this point, the old system is discontinued and the new one takes its place.

In direct conversion, the old system is discontinued altogether and the new system becomes operational immediately.

A variation of either of the two basic methods is the so-called "pilot" change over. A pilot change over involves changing over of part of the system, either in parallel or directly.

4.2 IMPLEMENTATION REQUIREMENT

This phase involves preparing the building where the computer will be installed, and providing the necessary hardware and software required.

4.2.1 PRE-INSTALLATION REQUIREMENT

(i) Building a false floor

(ii) Cover the floor with rug to prevent dust

(iii) Installation of air conditioner to cool down the Computer because the Computer usually generates a lot of heat.

(iv) Window blind is needed to guide against dust and rays of the sun.

(v) An uninterrupted power supply (UPS) with minimum of 600volts capacity is recommended to guide against loss of data.

4.2.2 HARDWARE REQUIREMENTS

The various hardware resources required are as follows

(i) A computer either mini or micro with minimum of 640KB and 20MB had disk

(ii) A coloured VGA/EGA MONITOR

(iii) An on-line connector to the printer

(iv) A simple enhanced keyboard

(v) A 120 column dot matrix printer

(vi) 5.25" or 3.5" floppy disk for back-up

4.2.3 SOFTWARE REQUIREMENT

The software resources required for this package to function efficiently and effectively are

(i) MSDOS operating system (version 5.5 or above) for initializing the Computer i.e. booting the Computer

(ii) Dbase iv Compiler

(iii) All the Computer must also be supplied with anti-virus software e.g. Norton disk Anti-Virus (NDD)

4.3 MAINTENANCE OF THE SYSTEM

When it comes to Computer system, proper maintenance both preventive and corrective must be provided to enhance better performance of the system. Most maintenance of Computer and its peripherals are done on contract basis usually though Computer Vendors and Engineers but in this situation the Computer Engineer or Technician will carry out the maintenance. Therefore, in order to enjoy the benefits of Computerization at Zagbayi Pharmaceutical Nigeria, Limited the following are essential.

First, extra spare parts should be readily available in case of system breakdown.

Second, parts that are faulty should carefully sorted out and necessary maintenance taken.

Third, various preventive maintenance such as cleaning the drive head should be carried out regularly.

4.4 INSTALLATION OF THE SYSTEM

The requirement for installing the system includes preparing a site where the Computer equipment will be placed i.e. equipment such as VDU (Visual Display Unit), CPU (Central Processing Unit), Keyboard, printer, mouse, etc.

Visual FoxPro Compiler should be installed as well.

Similarly, the package can be implemented on any IBM Compatible personal Computer with the following facilities

(i) Memory capacity of about 567KB
(ii) Hard disk of about 80MB of disk space
(iii) A line printer or a dot matrix printer
(iv) A coloured monitor monochrome
(v) A UPS (Uninterrupted Power Supply) of about 600volts capacity.

4.5 OPERATION MANUAL/USER'S GUIDE

This is designed to ensure that the users easily understand the new package. This is a medium, which allows users to enter the package with little or no difficulties. The Computerized Stock and Inventory Control is menu-driven, this means for a particular task to be initiated, a menu bar must be selected.

The system makes use of pull-down menu, which means whenever a pad menu is selected; the corresponding pop-up menu will be automatically activated where the user can now select the place where he wants to work.

On completion of every selected option, the user will be taken back to the main menu.

In this newly developed system, all the items provided on the pop-up and pad menu bar are self-explanatory i.e. the system is users friendly to the extent that a novice to the Computer field can use the package without much problem.

The steps involved in using the system are as follows

Step 1:Switch on the system by following the sequence, which is main sources, Printer, VDU and CPU.

Step 2:Click the Start button on the task bar

Step 3:Point to programs

Step 4:Click Visual FoxPro

Step 5: On getting to the dot prompt of Visual FoxPro, type DO mainmenu.

The system will ask for your password. The password for this project work is "sa'eed" or "SA'EED"

This step is taken in order to make the system secured and out of reach of unauthorized users.

If wrong password is given to the system, the system will give the user three chances before it will log off the user.

Step 6: At this stage, the main menu will be displayed for the user to select. The main menu is as follows

DATA ENTRY EDIT VIEW UTILITIES REPORT QUIT

DATA ENTRY: This contains the various modules that deal with data entry.

It has the following submenu

Stock Sales Order Suppliers Customer Employee

Stock: This is the module that deals with the stock data entry. In this, stock details such as Stock number, Group Code, Product Code, Product Name, Unit Cost, Selling Price, Expire Date, Quantity in Stock, Quantity Sold, etc are stored.

Sales: This contains Sales data such as Product Code, Product Name, Quantity Bought, Unit Price, etc.

Order: This is the module that deals with the details data entry such as Suppliers Name, Product Name, Date Ordered, Delivery Date, Quantity Ordered, etc

Suppliers: This module deals with storing suppliers' details such as Supplier Name, Address, City, State, Country, Telephone Number, E-mail Address, etc.

Customer: Customer details such as Customer Name, Contact Address, Postal Address, Telephone Number, etc are stored.

Employee: This module deal with the entry of Employee details such as Employee Name, Department, Contact Address. Postal Address, Qualification, Grade, Name of next of kin, etc.

EDIT: this contains module that deals with editing operations that can be done to a database file or records. It has the following submenu

Stock Sales Order Suppliers Customer Employee

Stock: This is used for editing stock records

Sales: For editing sales records

Order: To modify order records to reflect the current order details.

Supplier: To modify suppliers' record

Customer: For editing Customers' record

Employee: To modify employees record

VIEW: With the use of this module, the user can have a listing of the records of the Stock details, Sales invoice, Supplier details, Customer details, Employee details, Order details, etc. It has the following sub-menu

Stock Sales Order Supplier Customer Employee

UTILITIES: This consists of the following sub-menu.

Format Backup Security

Format: This module is used when the user wants to format new diskette.

Backup: It is useful for backing up or making a duplicate copy of the database files the user has worked with.

Security: This is used for chai 25 assword.

REPORT: This is useful for directing the result of processing to the printer. It has six submenus, which are

Stock Invoice Order Supplier Customer Employee

Stock: This provides a listing of the Stock details.

Invoice: This contains a listing of the sales data entry for Customers.

Order: This provides a listing of order details.

Supplier: For displaying Suppliers information on the screen of a monitor or printer.

Customer: This provides a listing of Customer details.

Employee: This provides a listing of Employee records.

4.6 SYSTEM TESTING

There is a need to ensure that both the individual programs have been written correctly and that the system as a whole will work i.e. the link between the programs in a suite.

There must also be coordination with clerical procedures involved.

To this end, the System Analyst must provide the necessary test data as and when needed.

(a) Program Testing: The system Analyst will need to supply test data designed to ensure that all possible contingencies (as specified in the system specification) have in fact been

catered for by the programmer. Expected results of the test data must be worked out beforehand for comparison purposes.

(b) Procedure Testing: The aim of procedure testing will be to ensure that the whole system fits together as planned. This will involve the clerical procedures that precede input; the actual machine processes themselves, and the output procedures that follow.

Overall timings and the ability of staff to handle the anticipated volumes will be under scrutiny.

The newly developed system for Zagbayi Pharmaceutical, Limited was tested against the old system. The old system was tested against the new system until it has fully met the requirement of the user. Each module was tested separately before all the programs were run and tested together to ensure that all fit together.

4.7 SCOPE AND LIMITATION OF THE EXISTING SYSTEM

The scope of this project connotes the extent of involvement in computerization of the sales and stock records of Zagbayi Pharmaceutical Limited.

The various operations and their benefits are covered under the scope of the new system while the limitation of the newly developed system connotes the expected problem to be faced when using the new system.

As explained in the first chapter of this pro 26 ork that the aim of embarking on the system is to develop an automated, efficient, cost effective, reliable system and a system that will process the inventory and stock of Zagbayi Pharmaceutical, Limited at high speed. It must be noted that the new system takes care of buying and selling of drugs, records maintenance (sales, stock, employee, order and suppliers record deletion, editing, etc) and drugs updating (adding of new stock, sales, order, suppliers and employee records, etc)

The new system has the following benefits

(i) It allows easy generation of reports through the use of various database files.

(ii) The storage and retrieval of records is much faster than that of the existing system.

(iii) The new system is cost effective and beneficial in the sense that the manual system at Zagbayi Pharmaceutical Limited, involve a lot of personnel (Accountants, Auditors, Sales Clerks, etc) while that of the new system requires a computer system and an operator.

(vi) Safe keeping of records

(v) The system makes enquiries and references easier. Instead of keeping the records on the file cabinet, computer now keep it in its memory and it is easy to retrieve for reference purposes. The security is also enhanced using password.

(vi) The new system saves a lot of users and workers time

(vii) All the calculations are done accurately with low degree of errors.

Though the system has been able to solve most of the problems of the existing system, it is still with the following limitations

(i) There is no provision for on-line stock taking

(ii) Training Services (i.e. providing information about training staff on stocktaking, sales, etc and maintaining records) cannot be done with this system.

(iii) There is no provision for staff job evaluation services. The system deals mainly with controlling stock of goods and not human resources.

(vi) Appraisal procedures (i.e. appraisal forms, timetable for appraisals, etc) are not available.

(v) There is no provision for calculating Economic Batch Quantity (EBQ), Economic Order Quantity (EOQ) and other technical aspects of Stock and Inventory Control.

(vi) The system cannot be used for forecasting and modeling (i.e. what-if-analysis).

CHAPTER FIVE

5.0 SUMMARY, RECOMMENDATION AND CONCLUSION

5.1 SUMMARY

Various steps required in achieving the aims of Computerizing the Stock and Inventory of Zagbayi Pharmaceutical Limited, Minna, Niger State have been followed carefully.

It is required that the Company should change over from the old system, which is manual to the new, which is the use of Computer system in handling sales and inventory of goods.

In this new system, Computer is required to take over the work of the staff in the account and sales department. The system was designed in such a way that the user will not encounter much problem, provided the user enters the data as expected.

However, adequate care must be taken when entering data so that there is one way in and out of the system, which is through main menu.

The program has been documented in such a way that the various operations that can be performed by each module are properly explained.

In fact, the new system is highly interactive and users friendly because of this.

Not only that; adequate protection and security is enhanced through the use of the password to prevent unauthorized users from accessing the system.

5.2 RECOMMENDATION

For the proper utilization of this newly developed system, the following are recommended.

First, the various required resources stated in chapter four should be provided.

Second, the system should be implemented on a microcomputer.

There are many factors for selecting a computer system to be used. Some of these factors are memory size, Cost, ease of maintenance, portability, etc.

As far as this system is concerned, the best computer to be used is microcomputer.

The reasons for recommending microcomputer are

(i) **Cost:** The microcomputer is not as expensive as other computer types such as mini and mainframe. Mainframe and mini computers cost up to twenty million naira base on the current market value whereas with hundred thousands naira, one can get a standard microcomputer.

(ii) **Userfriendliness:** Microcomputer is highly interactive and user friendly.

(iii) **Portability:** It can easily be transferred or moved from one place to another.

(iv) **Memory capacity:** Microcomputer has low memory capacity and this suits our need since not much memory is required. There is no need to waste the memory of computer by buying large and expensive computer. Microcomputer has good internal storage capacity. Its Random Access Memory (RAM) is not less than 256kilo bytes, which allow more record to be entered before the memory of the computer is exhausted.

(v) **Single-User-System**: With the nature of the task to be performed, the single-user system (microcomputer) is more appropriate.

(vi) **Maintenance**: Microcomputer is easy to maintain. Whenever the system develop fault, it is easy to repair it.

5.3 CONCLUSION

With the various benefits of adopting the use of computer in handling sales and stock records of Zagabayi Pharmaceutical Limited, the problems with the existing system have been solved using this system. The sales and stock records of Zagbayi Pharmaceutical Limited should now be handled with computer.

The list of employee of the organization should be compiled and the necessary information relating to buying and selling of inventory should be stored in the computer for reference purposes among other reasons.

In fact, the test performed on the just completed project work has shown that using computer for handling buying and selling of inventory of Zagbayi Pharmaceutical Limited will be beneficial.

In addition, the company should not relent its effort in computerizing all other sections of the organization, which has not been computerized.

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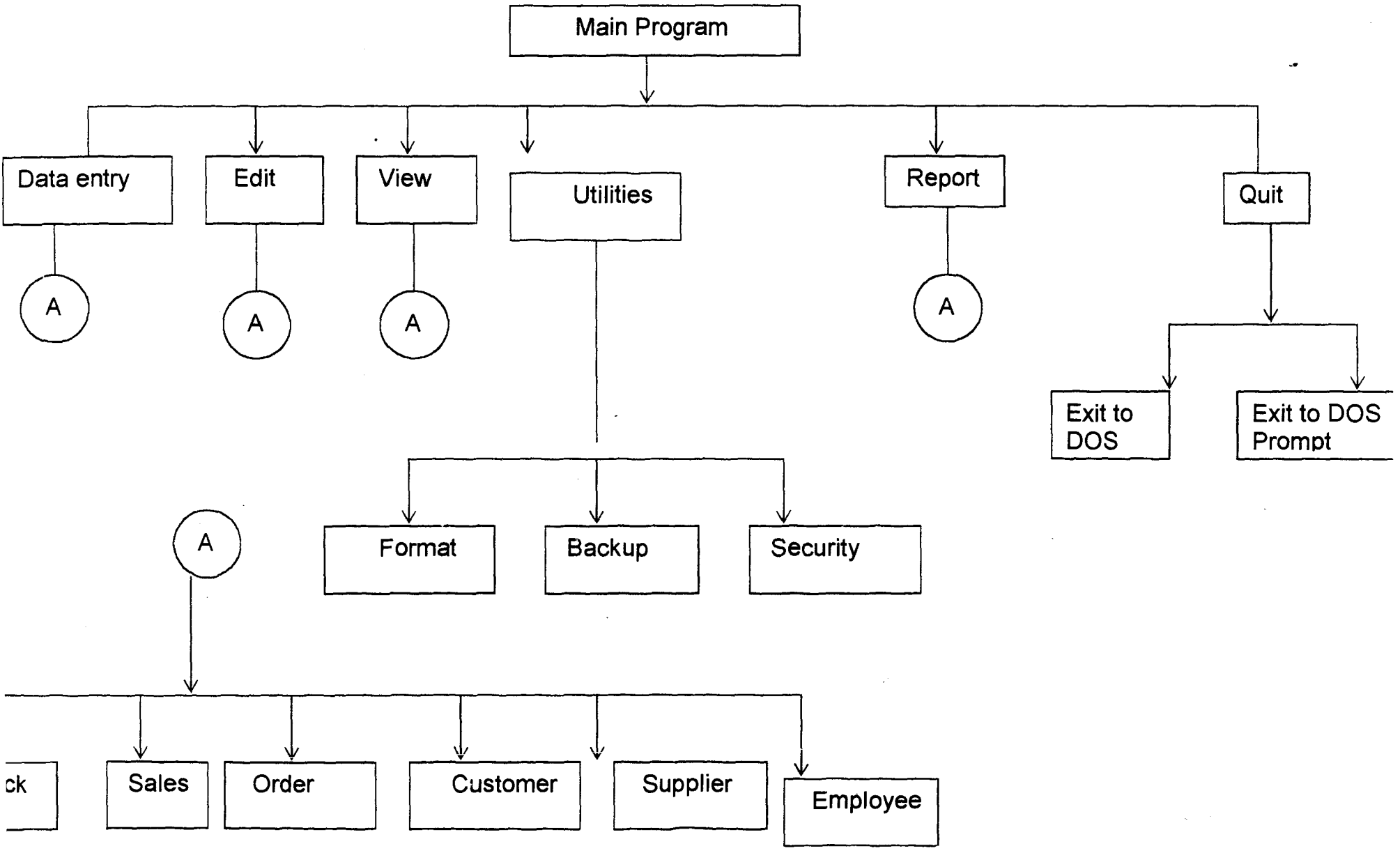
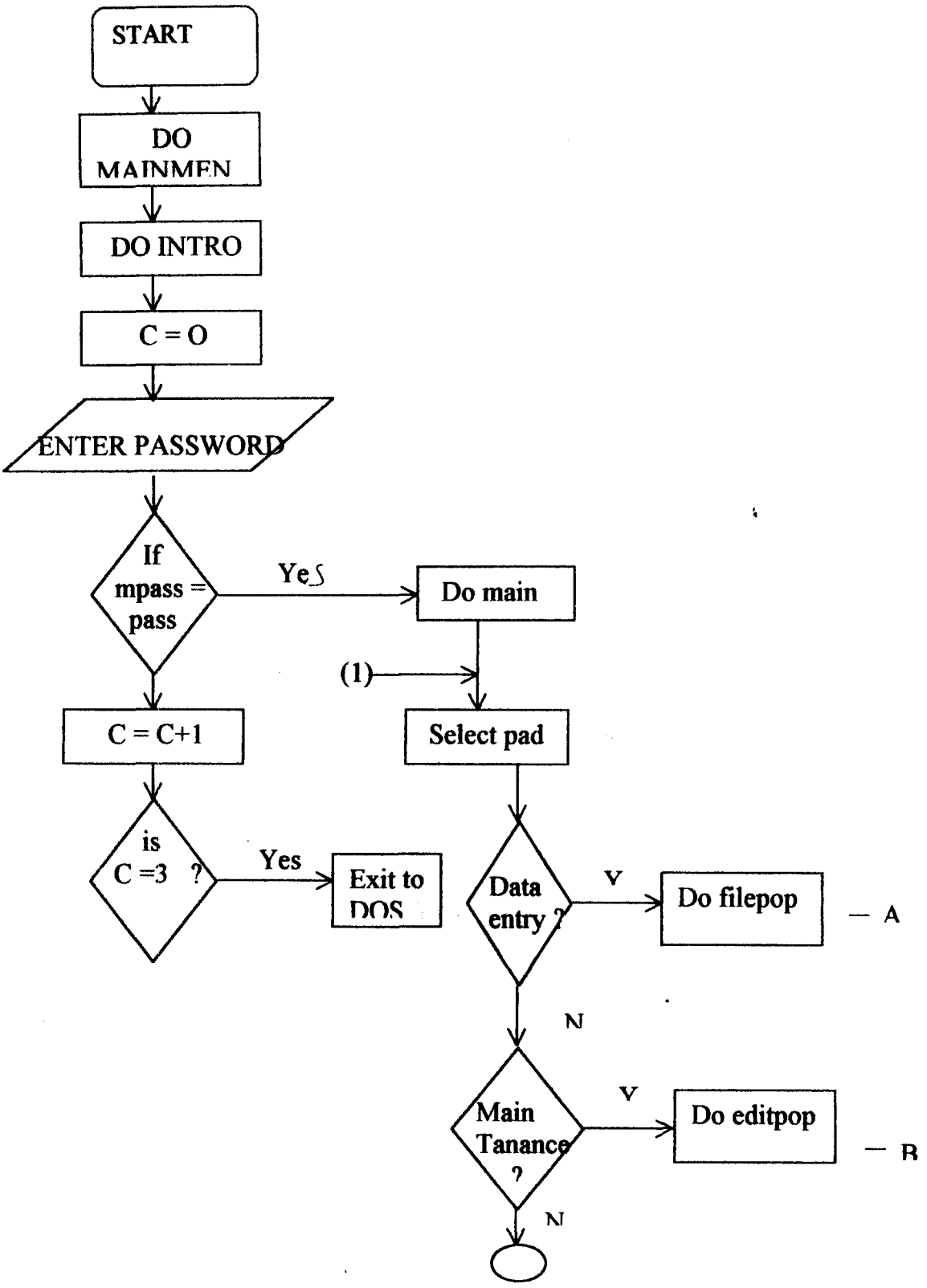
APPENDICES

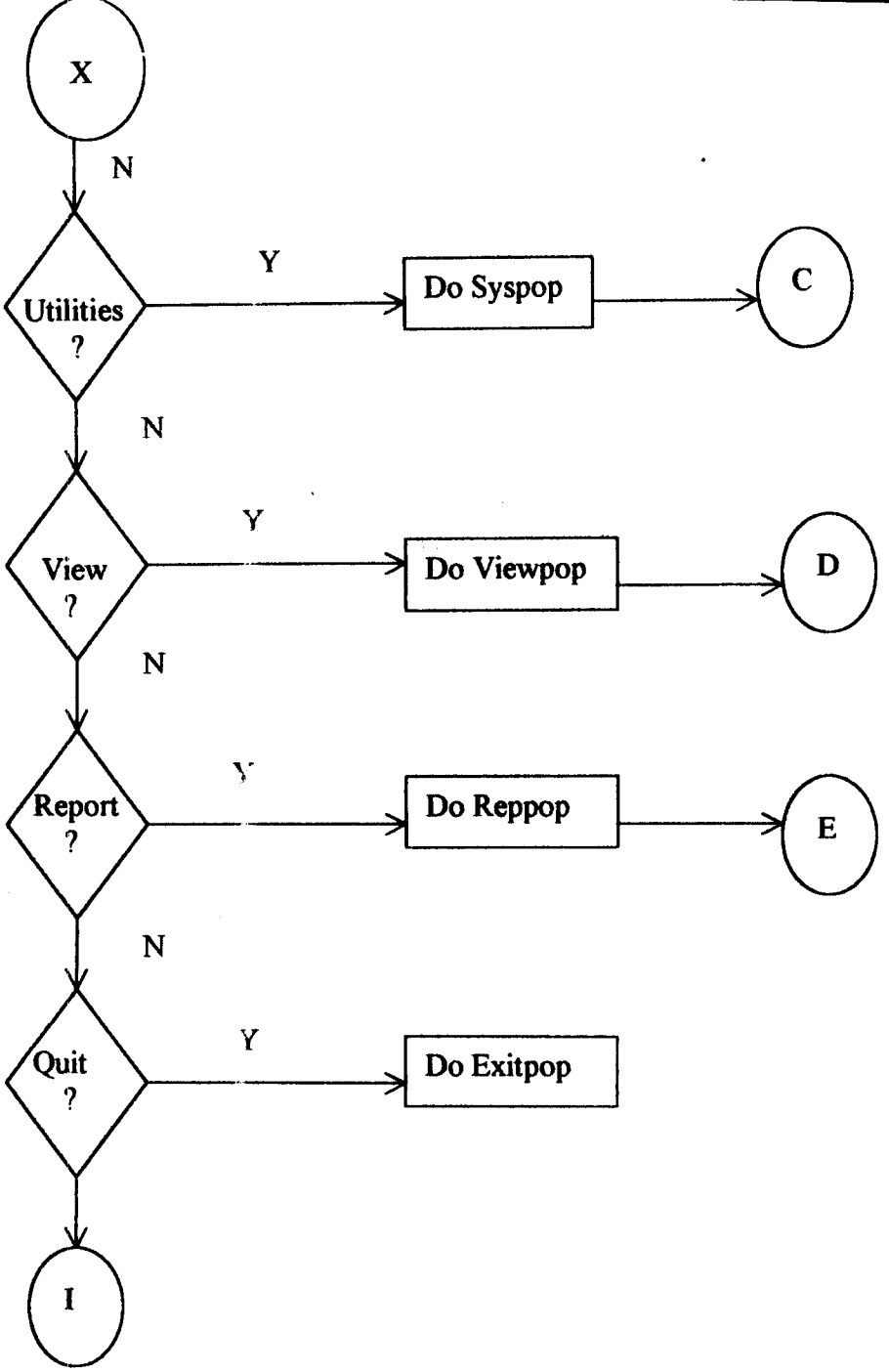
SYSTEM FLOW CHART

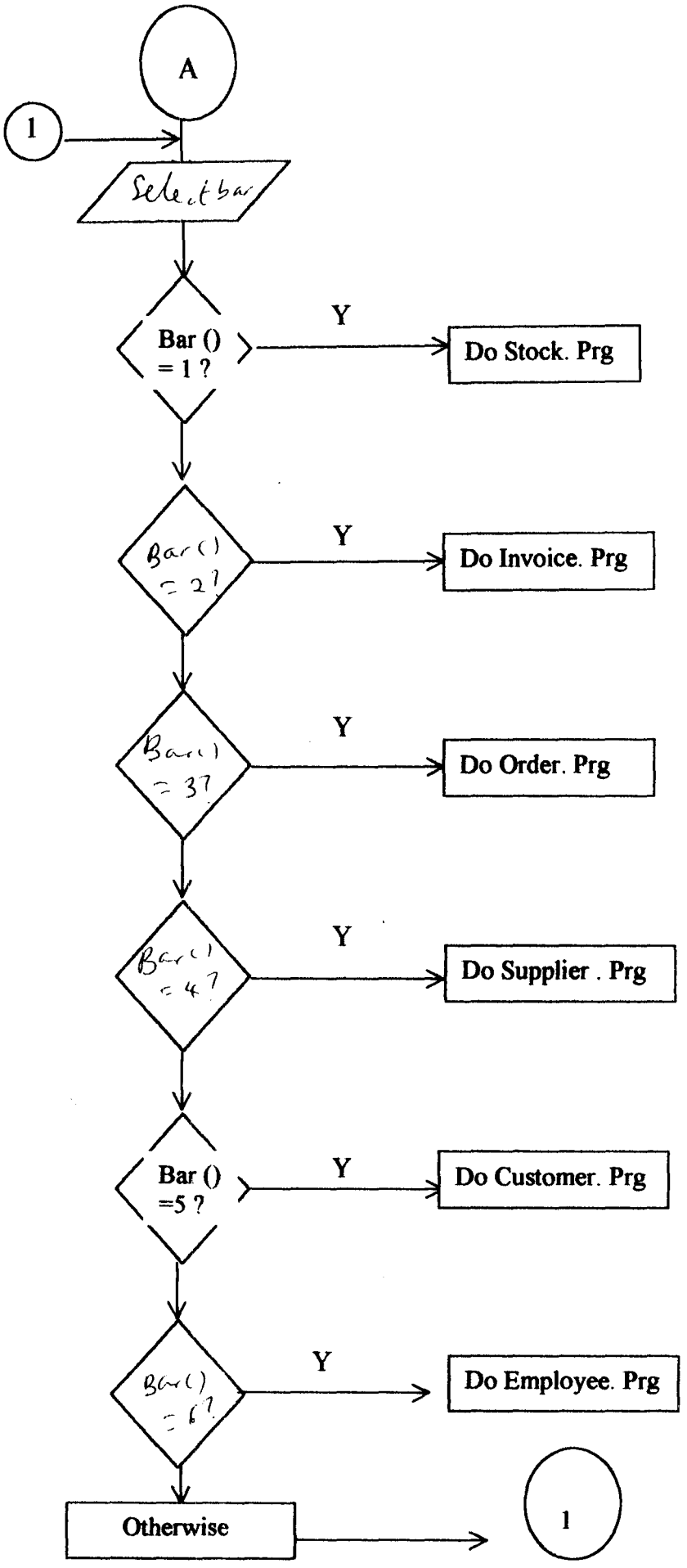


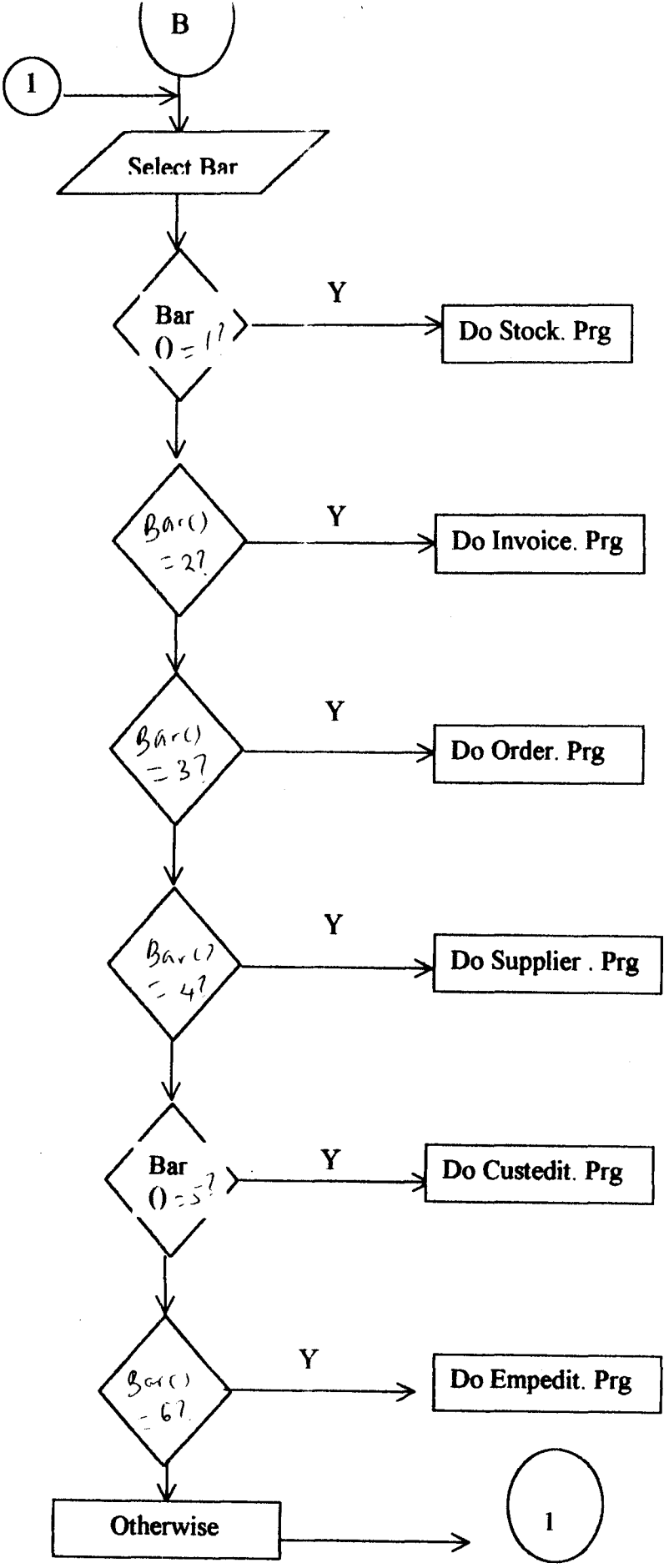
PROGRAM FLOWCHART

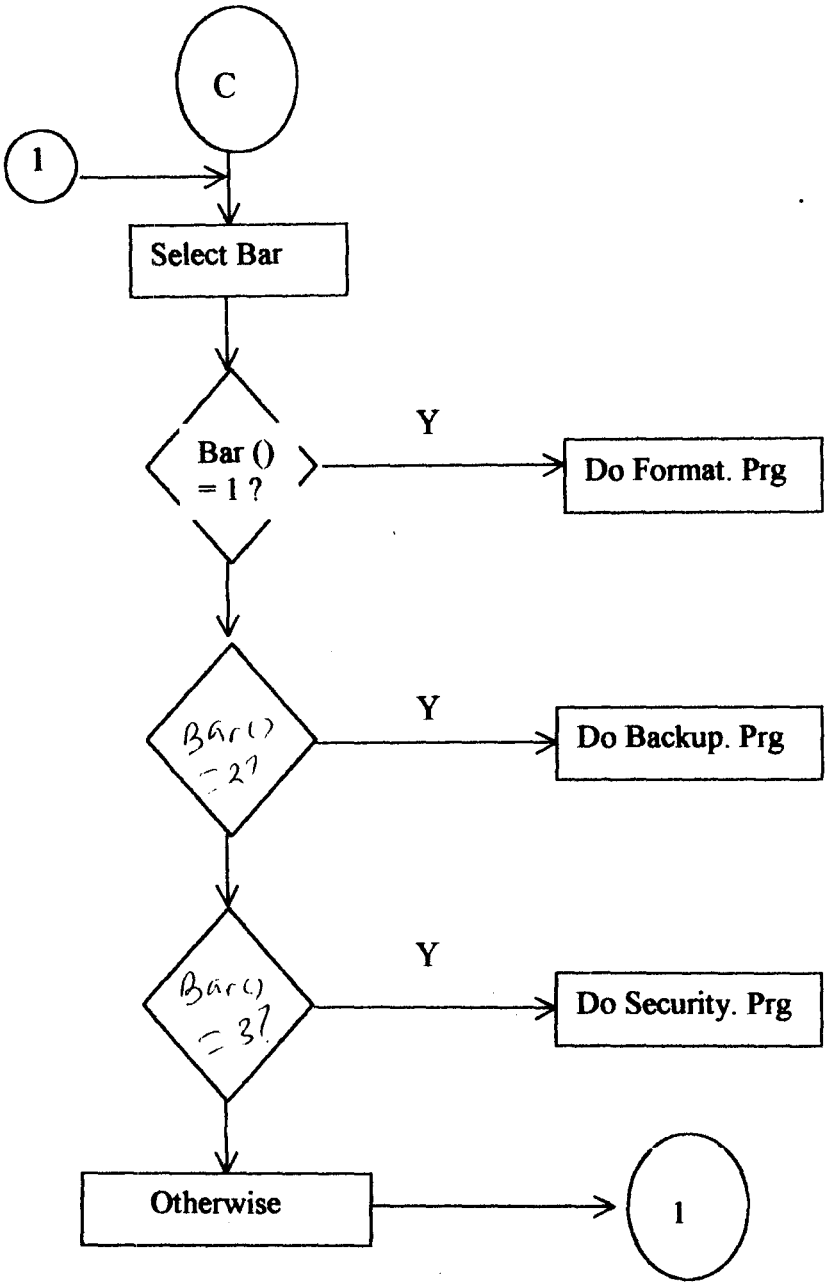
PROGRAM FLOWCHART

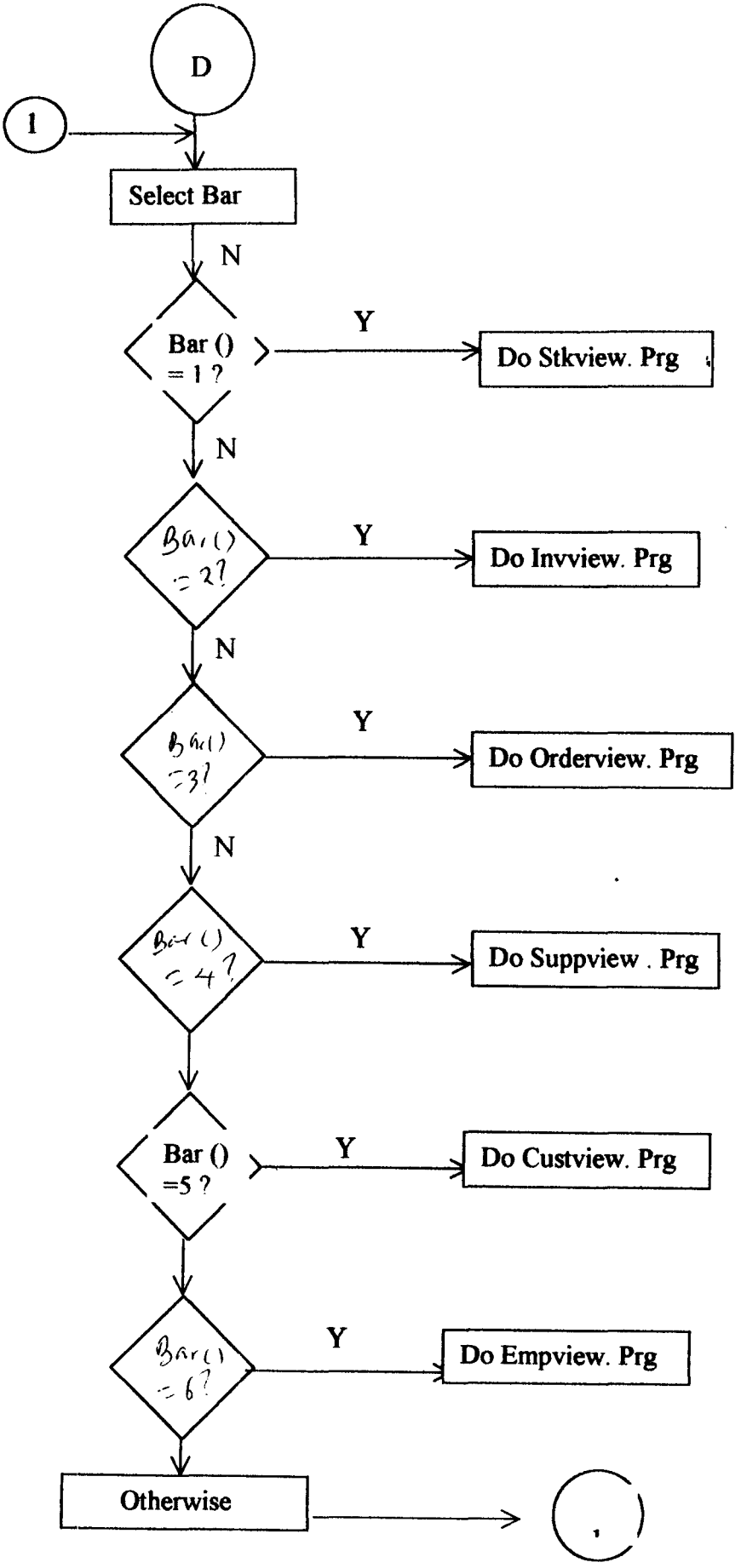


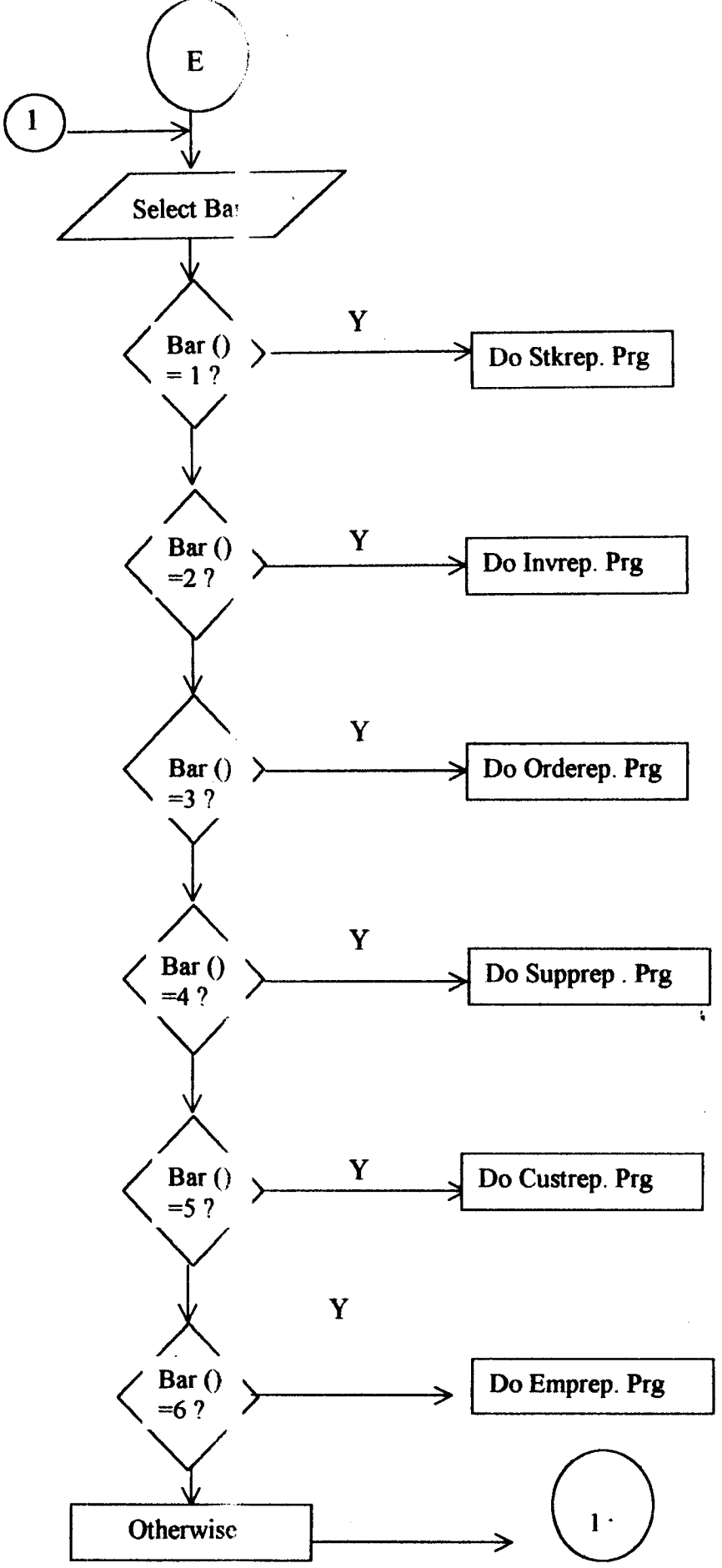

X
N
Utilities ?
Y
Do Syspop
C
N
View ?
Y
Do Viewpop
D
N
Report ?
Y
Do Reppop
E
N
Quit ?
Y
Do Exitpop
I

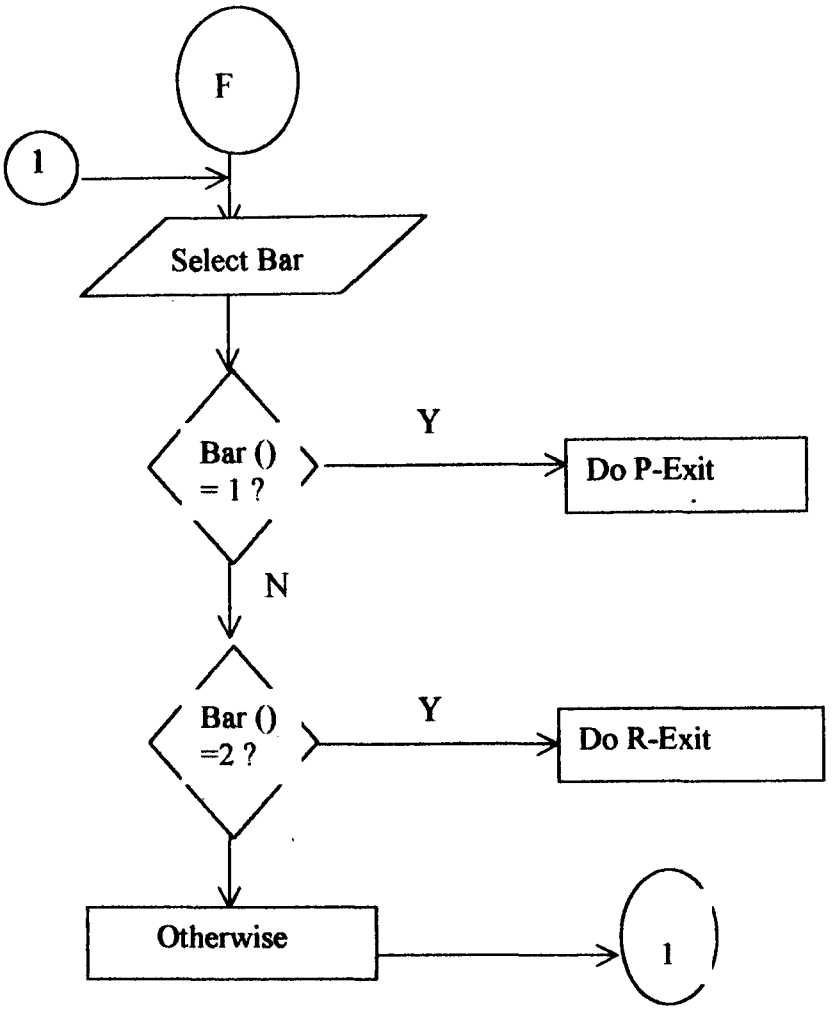

A
1
Select bar
Bar () = 1 ?
Y
Do Stock. Prg
Bar() = 2?
Y
Do Invoice. Prg
Bar() = 3?
Y
Do Order. Prg
Bar() = 4?
Y
Do Supplier . Prg
Bar () =5 ?
Y
Do Customer. Prg
Bar() = 6?
Y
Do Employee. Prg
Otherwise
1


B
1
Select Bar
Bar
() = 1?
Y
Do Stock. Prg
Bar()
= 2?
Y
Do Invoice. Prg
Bar()
= 3?
Y
Do Order. Prg
Bar()
= 4?
Y
Do Supplier . Prg
Bar
() = 5?
Y
Do Custedit. Prg
Bar()
= 6?
Y
Do Empedit. Prg
Otherwise
1


C
1
Select Bar
Bar ()
= 1 ?
Y
Do Format. Prg
Bar()
= 2?
Y
Do Backup. Prg
Bar()
= 3?
Y
Do Security. Prg
Otherwise
1


D
1
Select Bar
N
Bar ()
= 1 ?
Y
Do Stkview. Prg
N
Bar()
= 2?
Y
Do Invview. Prg
N
Bar()
= 3?
Y
Do Orderview. Prg
N
Bar()
= 4?
Y
Do Suppview . Prg
Bar ()
=5 ?
Y
Do Custview. Prg
Bar()
= 6?
Y
Do Empview. Prg
Otherwise


E
1
Select Ba
Bar ()
= 1 ?
Y
Do Stkrep. Prg
Bar ()
=2 ?
Y
Do Invrep. Prg
Bar ()
=3 ?
Y
Do Orderep. Prg
Bar ()
=4 ?
Y
Do Supprep . Prg
Bar ()
=5 ?
Y
Do Custrep. Prg
Y
Bar ()
=6 ?
Do Emprep. Prg
Otherwise
1


F
1
Select Bar
Bar ()
= 1 ?
Y
Do P-Exit
N
Bar ()
=2 ?
Y
Do R-Exit
Otherwise
1

PROGRAM LISTING

```
*****************************************************
 * program identity                                  *
 * title:intro.prg                                        *
 * purpose:for intoductory screen                    *
 *****************************************************
 procedure intro
 clea
 set talk off
 set scoreb off
 set cursor off
 set stat off
 store space(2) to m_mm
 store 0 to m_meme.m_mem
 store memory() to m_meme
 store m_meme to m_mem
 *do screen1
 set colo to w+/b
 @8.15 clea to 18.65
 set colo to w+/rb
 @3.1 say "Free pool of memory=:"
 @3.23 say m_mem
 set colo to w+/b
 @8.15 say "The program to run successfully requires"
 @9.15 say "=========================================="
 @12.15 say "1-at least 8mb ram memory space"
 @14.15 say "2-color (vga) monitor"
 @18.15 say "Do you want to continue(y/n)?"get m_mm pict "!"
 read
 if m_mm="Y"
 do proc0
 set cursor off
 clea
 endif
 if m_mm="N"
 clea
 quit
 endif
 set cursor on
 return
 procedure proc0
 clea
 set colo to w+/n...
 clear
 set scoreb off
 store 21 to jk
 store 7 to kj
 store 150 to count
 @2.1 to 22.75 double colo w+/n
 do whil jk<71
 @4.jk say "-" color w+/n
 do delay
 store jk+1 to jk
 enddo
 store 150 to count
 do whil kj<21
 @kj.3 say "Inv" colo g+/n
```

```
do delay
@3,49 say "o" colo g+/n*
do delay
@3,51 say "m" colo gr+/n*
do delay
@3,53 say "e" colo gr+/n*
do delay
@3,55 say "." colo gr+/n*
do delay
@3,57 say "." colo g+/n
do delay
@3,59 say "." colo gr+/n
do delay
@3,61 say "!" colo g+/n
do delay
@3,63 say "!" colo gr+/n
do delay
@3,65 say "!" colo g+/n
do delay
@9,30 say "Computerization Of Sales and Stock Records" colo gr+/n
@11,30 say "In partial fulfilment of the award of " colo g+/n
@12,30 say "Post Graduate Diploma in Computer Science" colo r+/n
@13,30 say "Federal University of Technology,Minna" colo rg+/n
@14,30 say "            (November 2004)" colo g+/n
@17,30 say "Supervisor:-" colo w+/n
@17,43 say "Dr. N.I Akinwande" colo gr+/n
@23,1
wait "press any key to continue....."
return
Procedure delay
store 1 to xx
do whil xx < count
store xx+1 to xx
enddo
return
```

```
@kj,6 say "ent" colo r+/n
@kj,9 say "ory" colo gr+/n
@kj,13 say  "&" colo b+/n
@kj,15 say "Stock" color rb+/n
@kj,21 say "Control" colo w+/n
store kj+1 to kj
do delay
enddo && kj<21
@21,30 say "Author:-" colo w+/n
store 1000 to count
@21,39 say "O" colo g+/n
do delay
@21,40 say "l" colo gr+/n
do delay
@21,41 say "o" colo r+/n
do delay
@21,42 say "g" colo gr+/n
do delay
@21,43 say "u" colo g+/n
do delay
@21,44 say "n" colo r+/n
do delay
@21,45 say "d" colo g+/n
do delay
@21,46 say "e" colo g+/n
do delay
@21,48 say "S" colo gr+/n
do delay
@21,49 say "a" colo gr+/n
do delay
@21,50 say "" colo gr+/n
do delay
@21,51 say "e" colo gr+/n
do delay
@21,52 say "e" colo g+/n
do delay
@21,53 say "d" colo g+/n
do delay
@21,55 say "2003" colo r/n
store 500 to count
@3,25 say "Y" colo g+/n*
do delay
@3,27 say "o" colo gr+/n*
do delay
@3,29 say "u" colo g+/n*
do delay
@3,33 say "a" colo gr+/n
do delay
@3,35 say "r" colo gr+/n*
do delay
@3,37 say "e" colo gr+/n
do delay
@3,41 say "w" colo g+/n*
do delay
@3,43  say "e" colo gr+/n*
do delay
```

```
do delay
@3,49 say "o" colo g+/n*
do delay
@3,51 say "m" colo gr+/n*
do delay
@3,53 say "e" colo gr+/n*
do delay
@3,55 say "." colo gr+/n*
do delay
@3,57 say "." colo g+/n
do delay
@3,59 say "." colo gr+/n
do delay
@3,61 say "!" colo g+/n
do delay
@3,63 say "!" colo gr+/n
do delay
@3,65 say "!" colo g+/n
do delay
@9,30 say "Computerization Of Sales and Stock Records" colo gr+/n
@11,30 say "In partial fulfilment of the award of " colo g+/n
@12,30 say "Post Graduate Diploma in Computer Science" colo r+/n
@13,30 say "Federal University of Technology,Minna" colo rg+/n
@14,30 say "            (November 2004)" colo g+/n
@17,30 say "Supervisor:-" colo w+/n
@17,43 say "Dr. N.I Akinwande" colo gr+/n
@23,1
wait "press any key to continue....."
return
Procedure delay
store 1 to xx
do whil xx < count
store xx+1 to xx
enddo
return
```

```
if m_rl
do tmenu
endif
if .not. m_rl
quit
endif
enddo
set bell on
set talk on
close databases
release all like m_rl
proc passwd
m_esc=12
use password
go top
store 1 to times
do whil times <=3
mpasswd=space(8)
set confirm on
set exact on
set colo to w+/b
@0,0 clea to 0,79
set colo to w+/rb
@1,0 clea to 23,79
set colo to w+/b
@24,0 clea to 24,79
set colo to w+/b
@8,10 clea to 14,70
@8,10 to 14,70
set colo to w+/b
@11,22 say "Enter your password or esc"
set colo to w/w,n/n
@11,col()+2 get mpasswd pict "@x"
read
set conf off
set colo to
set colo to w+/rb
if readkey()=m_esc
@24,0 clea to 24,79
set colo to w+/b
@24,30 say "Terminated with Esc key"
wait ' '
quit
endif
go top
loca for passwd=mpasswd
if .not. found()
??chr(7)
??chr(7)
@24,30 clea to 24,79
set colo to w+/b
@24,30 say "Invalid password...press any key to continue"
times=times+1
wait ' '
if times>3
@24,0 clea to 24,79
```

```
loca for passwd=mpasswd
if .not. found()
??chr(7)
??chr(7)
@24,30 clea to 24,79
set colo to w+/b
@24,30 say "Invalid password...press any key to continue"
times=times+1
wait ' '
if times>3
@24,0 clea to 24,79
set colo to w+/b
@24,30 say "Program will terminate now"
quit
endif
loop
endif
exit
*if the password is in the database
enddo
close database
return
Procedure tmenu
set colo to gr+/b+
clea
*set typehead to 1
do refresh
do popdef
defi menu main
defi pad file of main prompt "Data Entry" at 1,0
defi pad update of main prompt "Edit" at 1,15
defi pad maint of main prompt "View" at 1,30
defi pad util of main prompt "Utilities" at 1,45
defi pad report of main prompt "Reports" at 1,60
define pad mexit of main prompt "Quit" at 1,75
on pad file of main activ popup filepop
on pad update of main activ popup editpop
on pad maint of main activ popup viewpop
on pad util of main activ popup utilpop
on pad report of main activ popup reppop
on selection pad mexit of main do p_exit
do whil .T.
   do refresh2
   activa menu main
enddo
proc popdef
```

```
set colo to w+/b
@24,30 say "Program will terminate now"
&&!OS
```

```
defi popup filepop from 5,1
defi bar 1 of filepop prompt "New Stock "
defi bar 2 of filepop prompt "Sales Data"
defi bar 3 of filepop prompt "Suppliers Data "
defi bar 4 of filepop prompt "Customer Data"
defi bar 5 of filepop prompt "Order Details"
defi bar 6 of filepop prompt "Employee Data"
on selection popup filepop do fileproc
defi popup editpop from 5,16
defi bar 1 of editpop prompt " Stock Entry"
defi bar 2 of editpop prompt "Sales Entry"
defi bar 3 of editpop prompt "Suppliers data"
defi bar 4 of editpop prompt "Customers Data"
defi bar 5 of editpop prompt "Order details"
defi bar 6 of editPop prompt "Employee Data"
on selection popup editpop do editproc
defi popup viewpop  from 5,36
defi bar 1 of viewpop prompt "Stock Record(s)"
defi bar 2 of viewpop prompt "Sales Record(s)"
defi bar 3 of viewpop prompt "Suppliers Record(s)"
defi bar 4 of viewpop prompt "Order Details"
defi bar 5 of viewpop prompt "Customer Details"
on selection popup viewpop do viewproc
defi popup utilpop from 5,50
defi bar 1 of utilpop prompt "Format Diskettes"
defi bar 2 of utilpop prompt "Backup Diskettes"
defi bar 3 of utilpop prompt "Security"
on selection popup utilpop do sysproc
defi popup reppop from 5,65
defi bar 1 of reppop prompt "Sales Report"
defi bar 2 of  reppop prompt "Stock Report"
defi bar 3 of  reppop prompt "Suppliers Report"
defi bar 4 of reppop prompt "order report"
defi bar 5 of reppop prompt "Employee Report"
on selection popup reppop do repproc
proc fileproc
 do case
    case bar()=1
    do stock
    case bar()=2
    do invoice
    case bar()=3
    do supplier
    case bar()=4
    do customer
    case bar()=5
```

```
    do order
    case bar()=6
    do employee
endcase
do refresh
return
proc editproc
 do case
  case bar()=1
   do stkedit
  case bar()=2
   do invedit
  case bar()=3
   do suppedit
   case bar()=4
   do custedit
   case bar()=5
   do ordedit
   case bar()=6
   do empedit
endcase
do refresh
return
proc viewproc
  do case
 case bar()=1
  do stkview
case bar()=2
do invview
case bar()=3
do suppview
case bar()=4
do orderview
case bar()=5
do custview
endcase
do refresh
return
proc sysproc
 do case
   case bar()=1
    do format
    case bar()=2
     do backup
    case bar()=3
         do security
```

```
endcase
        do refresh
        return
proc repproc
  do case
   case bar()=1
   do invreport
   case bar()=2
    do stkreport
   case bar()=3
     do suppreport
   case bar()=4
      do orderrep
    case bar()=5
       do empreport
   endcase
     do refresh
  return
 proc refresh
 set colo of high to w/n
 set colo of mess to n/w+
 set colo of box to w+/w
 set colo to r/w+
 @0,0 clear to 0,79
 set clock to 0,69
 set colo to gr+/b+
 @1,0 clea to 23,79
 set border to double
 c=23
 do whil c>=2
 @c,0 say repl(chr(177),80)
 c=c-1
 enddo
 retu
 proc refresh2
 @2,0 clea to 23,79
 c=23
 do whil c>=2
 @c,0 say repl(chr(177),80)
 c=c-1
 enddo
 return
 procedure p_exit
 close all
 release all
 deactiv menu
```

release menu main
quit
return

```
*program name:backup.prg
*called from :utilities
set talk off
set scoreb off
set stat off
set colo to w+/rb
clea
m_scream=chr(7)+chr(7)
m_for=.T.
m_ans=' '
do whil m_for
m_for=.F.
m_drive=' '
do whil .not. m_drive $'AaBb'
*do screen1
set colo to w+/b
@8,10 clea to 16,70
@8,10 to 16,70 doub
@12,15 say "Enter drive to backup (a,b or (i)gnore"
@12,col()+2 get m_drive
read
do case
case m_drive $'Aa'
    run copy stock.* a:
    run copy company.* a:
    run copy invoice.* a:
    run copy password.* a:
    run copy supplier.* a:
    run copy customers.* a:
case m_drive $ 'Bb'
    run copy stock.* b:
    run copy company.* b:
    run copy invoice.* b:
    run copy password.* b:
    run copy suppliers.* b:
    run copy customers.* b:
case m_drive $"Ii"
     exit
     otherwise
     ?m_scream
     m_for=.T.
     set colo to w+/b
     @24,30 say "Invalid drive..enter a,b,or <i>gnore"
     endcase
     @24,30 clea to 24,60
     set colo to w+/b
     set colo to w+/b
     @24,30 say "Backup another(y/n)"
     m_ans=' '
     @24,col()+2 get m_ans pict 'Y'
     read
     m_ans=' '
```

```
        @24,col()+2 get m_ans pict 'Y'
        read
        m_ans=upper(m_ans)
        if m_ans='Y'
        m_for=.T.
        endif
        enddo
        enddo
        return

*program name:custedit.prg
set talk off
set stat off
set colo to w+/rb
set scoreb off
use customer
sort on cname to customer2
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_cno=space(6)
m_cname=space(12)
m_address=space(10)
m_city=space(8)
m_pc=space(12)
m_state=space(8)
m_country=space(10)
m_phone=space(11)
m_fax=space(11)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Customer Number"
@7,37 say "Customer Name "
@9,2 say "Address "
@9,37 say "City"
@11,2 say "State/Province"
@11,37 say "Postal Code "
@13,2 say "Country"
@13,37 say "Phone Number"
@15,2 say "Fax Number"
@7,20 get m_cno
read
res=' '
if m_cno=space(6)
set colo to w+/b
@24,30 say "Stop Data Entry(y/n)"
```

```
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
endif
locate for cno=upper(m_cno)
if  found()
store cname to m_cname
store address to m_address
store city to m_city
store state to m_state
store pc to m_pc
store country to m_country
store phone to m_phone
store fax to m_fax
set colo to w+/rb
@7,50 get  m_cname
@9,20 get m_address
@9,50 get m_city
@11,20 get m_state
@11,50 get m_pc
@13,20 get m_country
@13,50 get m_phone
@15,20 get m_fax
read
clea gets
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for cno=upper(m_cno)
repl cno with m_cno
repl cname with m_cname
repl address with m_address
repl city with m_city
repl state with m_state
repl pc with m_pc
repl country with m_country
repl phone with m_phone
repl fax with m_fax
endif
endif
enddo


      set talk off
```

```
set stat off
set colo to w+/rb
set scoreb off
use customer
sort on cname to customer2
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_cno=space(6)
m_cname=space(12)
m_address=space(10)
m_city=space(8)
m_pc=space(12)
m_state=space(8)
m_country=space(10)
m_phone=space(11)
m_fax=space(11)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Customer Number"
@7,37 say "Customer Name "
@9,2 say "Address "
@9,37 say "City"
@11,2 say "State/Province"
@11,37 say "Postal Code "
@13,2 say "Country"
@13,37 say "Phone Number"
@15,2 say "Fax Number"
@7,20 get m_cno
read
res=' '
if m_cno=space(6)
set colo to w+/b
@24,30 say "Stop Data Entry(y/n)"
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
endif
```

```
m_country=space(10)
m_phone=space(11)
m_fax=space(11)
m_wait=' '
@11,50 say m_pc
set colo to w+/b
@24,30 say "Save Customer details (y/n)"
@24,60 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for cno=upper(m_cno)
repl cno with m_cno
repl cname with m_cname
repl address with m_address
repl city with m_city
repl state with m_state
repl pc with m_pc
repl country with m_country
repl phone with m_phone
repl fax with m_fax
endif
endif
enddo
```

```
set talk off
set stat off
set colo to w+/rb
set scoreb off
use employee
m_fin=.T.
do whil m_fin
clea
do screen1
inkey=' '
m_empno=space(6)
m_empname=space(15)
m_address=space(20)
m_phone =space(11)
m_dept=space(12)
m_qual=space(3)
m_nextkin=space(15)
m_anextkin=space(20)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
```

```
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Employee Number"
@7,37 say "Employee Name "
@9,2 say "Contact Address "
@9,37 say "Home Phone "
@11,2 say "Department"
@11,37 say "Qualification"
@13,2 say "Next Of Kin"
@13,37 say "Address of Next Of Kin"
@7,20 get m_empno
read
res=' '
if m_empno=space(6)
set colo to w+/b
@24,30 say "Stop Record Editing(y/n)"
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
endif
go top
locate for empno=upper(m_empno)
if  found()
set colo to w+/rb
store empname to m_empname
store address to m_address
store phone to m_phone
store dept to m_dept
store nextkin to m_nextkin
store anextkin to m_anextkin
@7,50 get  m_empname
@9,20 get m_address
@9,50 get m_phone
@11,20 get m_dept
@11,50 get m_qual
@13,20 get m_nextkin
@13,60 get m_anextkin
read
clea gets
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
```

```
go top
locate for empno=m_empno
repl empno with m_empno
repl empname with m_empname
repl address with m_address
repl phone with m_phone
repl dept with m_dept
repl qual with m_qual
repl nextkin with m_nextkin
repl anextkin with m_anextkin
endif
endif
enddo

*Program name:employee.prg
set talk off
set stat off
set colo to w+/rb
set scoreb off
use employee
sort on empname to employee2
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_empno=space(6)
m_empname=space(15)
m_address=space(20)
m_phone =space(11)
m_dept=space(12)
m_qual=space(3)
m_nextkin=space(15)
m_anextkin=space(20)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Employee Number"
@7,37 say "Employee Name "
@9,2 say "Contact Address "
@9,37 say "Home Phone "
@11,2 say "Department"
@11,37 say "Qualification"
@13,2 say "Next Of Kin"
@13,37 say "Address of Next Of Kin"
@7,20 get m_empno
read
res=' '
if m_empno=space(6)
```

```
set colo to w+/b
@24,30 say "Stop Data Entry(y/n)"
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
endif
locate for empno=m_empno
if .not. found()
set colo to w+/rb
@7,50 get  m_empname
@9,20 get m_address
@9,50 get m_phone
@11,20 get m_dept
@11,50 get m_qual
@13,20 get m_nextkin
@13,60 get m_anextkin
read
clea gets
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
appe blank
repl empno with m_empno
repl empname with m_empname
repl address with m_address
repl phone with m_phone
repl dept with m_dept
repl qual with m_qual
repl nextkin with m_nextkin
repl anextkin with m_anextkin
endif
endif
enddo

*program name:empview.prg
set talk off
set stat off
set colo to w+/rb
set scoreb off
use employee
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
```

```
m_empno=space(6)
m_empname=space(15)
m_address=space(20)
```

```
store country to m_country
store phone to m_phone
store fax to m_fax
set colo to w+/rb
@7,52 say  m_cname
@9,20 say m_address
@9,50 say m_city
@11,20 say m_state
@11,50 say m_pc
@13,20 say m_country
@13,50 say m_phone
@15,20 say m_fax
res2=' '
set colo to w+/b
@24,30 say "Save Customer details (y/n)"
@24,60 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for cno=upper(m_cno)
repl cno with m_cno
repl cname with m_cname
repl address with m_address
repl city with m_city
repl state with m_state
repl pc with m_pc
repl country with m_country
repl phone with m_phone
repl fax with m_fax
endif
endif
enddo
```

```
set talk off
set stat off
set colo to w+/rb
set scoreb off
use employee
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_empno=space(6)
m_empname=space(15)
m_address=space(20)
m_phone =space(11)
m_dept=space(12)
```

```
m_qual=space(3)
m_nextkin=space(15)
m_anextkin=space(20)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Employee Number"
@7,37 say "Employee Name "
@9,2 say "Contact Address "
@9,37 say "Home Phone "
@11,2 say "Department"
@11,37 say "Qualification"
@13,2 say "Next Of Kin"
@13,37 say "Address of Next Of Kin"
@7,20 get m_empno
read
res=' '
if m_empno=space(6)
set colo to w+/b
@24,30 say "Stop Record Editing(y/n)"
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
endif
go top
locate for empno=upper(m_empno)
if  found()
set colo to w+/rb
store empname to m_empname
store address to m_address
store phone to m_phone
store dept to m_dept
store nextkin to m_nextkin
store anextkin to m_anextkin
@7,50 get  m_empname
@9,20 get m_address
@9,50 get m_phone
@11,20 get m_dept
@11,50 get m_qual
@13,20 get m_nextkin
```

```
@13,60 get m_anextkin
read
clea gets
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for empno=m_empno
repl empno with m_empno
repl empname with m_empname
repl address with m_address
repl phone with m_phone
repl dept with m_dept
repl qual with m_qual
repl nextkin with m_nextkin
repl anextkin with m_anextkin
endif
endif
enddo

*Program name:employee.prg
set talk off
set stat off
set colo to w+/rb
set scoreb off
use employee
sort on empname to employee2
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_empno=space(6)
m_empname=space(15)
m_address=space(20)
m_phone =space(11)
m_dept=space(12)
m_qual=space(3)
m_nextkin=space(15)
m_anextkin=space(20)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Employee Number"
```

```
@7,37 say "Employee Name "
@9,2 say "Contact Address "
@9,37 say "Home Phone "
@11,2 say "Department"
@11,37 say "Qualification"
@13,2 say "Next Of Kin"
@13,37 say "Address of Next Of Kin"
@7,20 get m_empno
read
res=' '
if m_empno=space(6)
set colo to w+/b
@24,30 say "Stop Data Entry(y/n)"
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
endif
locate for empno=m_empno
if .not. found()
set colo to w+/rb
@7,50 get  m_empname
@9,20 get m_address
@9,50 get m_phone
@11,20 get m_dept
@11,50 get m_qual
@13,20 get m_nextkin
@13,60 get m_anextkin
read
clea gets
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
appe blank
repl empno with m_empno
repl empname with m_empname
repl address with m_address
repl phone with m_phone
repl dept with m_dept
repl qual with m_qual
repl nextkin with m_nextkin
repl anextkin with m_anextkin
endif
endif
enddo
```

```
*program name:empview.prg
set talk off
set stat off
set colo to w+/rb
set scoreb off
use employee
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_empno=space(6)
m_empname=space(15)
m_address=space(20)
m_phone =space(11)
m_dept=space(12)
m_qual=space(3)
m_nextkin=space(15)
m_anextkin=space(20)
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Customer Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Employee Number"
@7,37 say "Employee Name "
@9,2 say "Contact Address "
@9,37 say "Home Phone "
@11,2 say "Department"
@11,37 say "Qualification"
@13,2 say "Next Of Kin"
@13,37 say "Address of Next Of Kin"
@7,20 get m_empno
read
res=' '
if m_empno=space(6)
set colo to w+/b
@24,30 say "Stop viewing Record(y/n)"
@24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,55
loop
endif
```

```
endif
go top
locate for empno=upper(m_empno)
if  found()
set colo to w+/rb
store empname to m_empname
store address to m_address
store phone to m_phone
store dept to m_dept
store qual to m_qual
store nextkin to m_nextkin
store anextkin to m_anexkin
@7,50 say  m_empname
@9,20 say m_address
@9,50 say m_phone
@11,20 say m_dept
@11,50 say m_qual
@13,20 say m_nextkin
@13,60 say m_anextkin
res2=' '
set colo to w+/b
@24,30 say "Save record details(y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for empno=m_empno
repl empno with m_empno
repl empname with m_empname
repl address with m_address
repl phone with m_phone
repl dept with m_dept
repl qual with m_qual
repl nextkin with m_nextkin
repl anextkin with m_anextkin
endif
endif
enddo


set bell off
set talk off
set scoreb off
clear
use employee2
@1,20 say "Zagbayi Pharmaceutical Nigeria Limited"
@2,20 say "          Employee Report"
@3,0 say "EmpNo."
@3,8 say "Employee Name"
@3,22 say "Contact Address"
@3,40 say "Home Phone"
@3,52 say "Department"
@3,66 say "Next Of kin"
@4,2 say repl("=",79)
r=5
```

```
do whil .not. eof()
@r,0 say empno
@r,8 say empname
@r,22 say address
@r,40 say trim(phone)
@r,52 say dept
@r,66 say nextkin
r=r+1
skip
enddo
return


*program name:format.prg
*called from :utilities
set talk off
set scoreb off
set stat off
set colo to w+/rb
clea
m_scream=chr(7)+chr(7)
m_for=.T.
m_ans=.F.
do whil m_for
m_for=.F.
m_drive=' '
m_spec=space(6)
do whil .not. m_drive $'AaBb'
*do screen1
set colo to w+/rb
@1,0 clea to 23,79
set colo to w+/r
@24,0 clea to 24,79
set colo to w+/b
@3,5 clea to 23,75
@3,5 to 23,75 doub
set colo to w+/b
@4,15 say "Enter 1.44,720 for high density diskette"
@6,15 say "Enter 1.2,360 for double density diskette"
@15,15 say "Enter drive to format (a,b or (i)gnore"
@15,col()+2 get m_drive
@17,15 say "Enter Disk Specification(720,360,1.2,1.44)"
@17,col()+2 get m_spec
read
do case
case m_drive $'Aa'
do case
  case ltrim(trim(m_spec))="1.44"
  run format a:/f:1.44
case ltrim(trim(m_spec))="720"
run format a:/f:720
case ltrim(trim(m_spec))="360"
run format a:/f:360
case ltrim(trim(m_spec))="1.2"
run format a:/f:1.2
otherwise
```

```
?m_scream
m_for=.T.
endcase
case m_drive $"Bb"
do case
case ltrim(trim(m_spec))="1.44"
run format b:/f:1.44
case ltrim(trim(m_spec))="720"
run format b:/f:360
case ltrim(trim(m_spec))="1.2"
run format b:/f:1.2
endcase
case m_drive $"Ii"
exit
otherwise
?m_scream
m_for=.T.
set colo to w+/r
@24,30 say "....invalid drive.....enter a,b or <i>gnore"
endcase
enddo
enddo
return

*program name: invoive.prg
set talk off
set stat off
set colo to w+/rb
set scoreb off
use invoice
sort on pcode to invoice2
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=''
m_pcode=space(6)
m_grpcode=space(8)
m_pname=space(15)
store 0 to m_unitprice,m_quantity
store date() to m_pdate
m_wait=''
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Sales Data Entry Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Product Code"
@7,37 say "Group Code "
@9,2 say "Product Name "
@9,37 say "Unit Price"
```

```
@ 11,2 say "Quantity Bought "
@ 11,37 say "Purchase Date"
@ 7,20 get m_pcode
read
res=' '
if m_pcode=space(6)
set colo to w+/b
@ 24,30 say "Stop Data Entry(y/n)"
@ 24,55 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@ 24,30 clea to 24,55
loop
endif
endif
*find "@m_pcode"
locate for pcode=m_pcode
if .not. found()
set colo to w+/rb
@ 7,50 get  m_grpcode
@ 9,20 get m_pname
@ 9,50 get m_unitprice
@ 11,20 get m_quantity
@ 11,50 get m_pdate
read
clea gets
res2=' '
set colo to w+/b
@ 24,30 say "Save Data entry (y/n)"
@ 24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
appe blank
repl pcode with m_pcode
repl grpcode with m_grpcode
repl pname with m_pname
repl unitprice with m_unitprice
repl quantity with m_quantity
repl pdate with m_pdate
endif
endif
enddo

*program name: invrep.prg
  set bell off
  set talk off
  set scoreb off
  clear
  use invoice2
  @ 1,20 say "Zagbayi Pharmaceutical Nigeria Limited"
```

```
 @2,20 say "          Sales Invoice"
 @3,2 say "Group Code"
 @3,18 say "Product Code"
 @3,32 say "Description"
 @3,47 say "Quantity"
 @3,57 say "Unit Price"
 @3,69 say "Price"
 @4,2 say repl("=",79)
 r=5
 store 0 to t_price
 do whil .not. eof()
 price=quantity*unitprice
 @r,2 say grpcode
 @r,18 say pcode
 @r,32 say pname
 @r,47 say quantity
 @r,57 say unitprice
  @r,69 say price
  r=r+1
  t_price=t_price+price
  skip
  enddo
  @24,30 say "Total Price "
  @24,69 say t_price
   return
set talk off
set stat off
set colo to w+/rb
set scoreb off
use invoice
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_pcode=space(6)
m_grpcode=space(8)
m_pname=space(15)
store 0 to m_unitprice,m_quantity
store ctod("  /  /  ") to m_pdate
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Sales Details"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Product Code"
@7,37 say "Group Code "
@9,2 say "Product Name "
@9,37 say "Unit Price"
@11,2 say "Quantity Bought "
```

```
@11,37 say "Purchase Date"
@7,20 get m_pcode
read
res=' '
if m_pcode=space(6)
set colo to w+/b
@24,30 say "Stop viewing record(y/n)"
@24,60 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,60
loop
endif
endif
go top
locate for pcode=upper(m_pcode)
if found()
set colo to w+/rb
store grpcode to m_grpcode
store pname to m_pname
store quantity to m_quantity
store pdate to m_pdate
store unitprice to m_unitprice
@7,50 say  m_grpcode
@9,20 say m_pname
@9,50 say m_unitprice
@11,20 say m_quantity
@11,52 say m_pdate
res2=' '
set colo to w+/b
@24,30 say "Save sales details (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for pcode=upper(m_pcode)
repl pcode with m_pcode
repl grpcode with m_grpcode
repl pname with m_pname
repl unitprice with m_unitprice
repl quantity with m_quantity
repl pdate with m_pdate
endif
endif
enddo
        set talk off
set stat off
set colo to w+/rb
set scoreb off
use order.dbf
```

```
set talk off
set stat off
set colo to w+/rb
set scoreb off
use stk
go top
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_dreceived=ctod("  /  /  ")
m_sname=space(15)
m_pname=space(10)
store 0 to m_sprice,m_qtyin,m_qtyout,m_ucost
store ctod("  /  /  ") to m_expdate
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Stock Modification  Form"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Product Name"
@7,37 say "Supplier Name "
@9,2 say "Date Received "
@9,37 say "Unit Cost"
@11,2 say "Selling Price"
@11,37 say "Quantity in "
@13,2 say "Quantity Out"
@13,37 say "Expire Date"
@7,20 get m_pname
read
res=' '
if m_pname=space(10)
set colo to w+/b
@24,30 say "Stop Record Editing(y/n)"
@24,58 get res
read
res=upper(res)
if res='Y'
release all
clea
return
else
@24,30 clea to 24,58
loop
endif
endif
set colo to w+/rb
locate for pname=upper(m_pname)
if found()
store s_name to m_sname
```

```
store d_received to m_dreceived
store u_cost to m_ucost
store s_price to m_sprice
store qty_in to m_qtyin
store qty_out to m_qtyout
store exp_date to m_expdate
@7,50 get  m_sname
@9,20 get m_dreceive
@9,50 get m_ucost
@11,20 get m_sprice
@11,55 get m_qtyin
@13,20 get m_qtyout
@13,55 get m_expdate
read
clea gets
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for pname=m_pname
repl d_received with m_dreceived
repl s_name with m_sname
repl pname with m_pname
repl s_price with m_sprice
repl u_cost with m_ucost
repl qty_in with m_qtyin
repl qty_out with m_qtyout
repl exp_date with m_expdate
endif
endif
enddo
            set bell off
      set talk off
      set scoreb off
      clear
      use stk2
      @1,20 say "Zagbayi Pharmaceutical Nigeria Limited"
      @2,20 say "           Stock Report"
      @3,2 say "Date"
      @3,14 say "Suplier's Name"
      @3,31 say "Description"
      @3,44 say "Stock Level"
      @3,59 say "Unit Price"
      @3,71 say "Stk Value"
      @4,2 say repl("=",79)
      r=5
      store 0 to t_sv,s_level,price
      do whil .not. eof()
      s_level=qty_in-qty_out
      price=s_level*u_cost
      @r,2 say d_received
      @r,13 say s_name
      @r,30 say pname
```

```
        @r,43 say s_level
        @r,60 say u_cost
        @r,69 say price
        r=r+1
        t_sv=t_sv+price
        skip
        enddo
        @24,30 say "Total Stock Value "
        @24,69 say t_sv
        return
              set talk off
set stat off
set colo to w+/rb
set scoreb off
use stk
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_dreceived=ctod("  /  /  ")
m_sname=space(15)
m_pname=space(10)
store 0 to m_sprice,m_qtyin,m_qtyout,m_ucost
store ctod("  /  /  ") to m_expdate
m_wait=' '
set colo to w+/rb
@0,0 clea to 5,79
@6,0 clea to 20,79
set colo to w+/rb
@0,0 to 4,79 doub
set colo to w+/rb
@1,21 say "Zagbayi Pharmaceutical Nigeria Limited"
@3,21 say "   Stock Details Screen"
set colo to w+/rb
@6,0 to 20,79 doub
@7,2 say "Product Name"
@7,37 say "Supplier Name "
@9,2 say "Date Received "
@9,37 say "Unit Cost"
@11,2 say "Selling Price"
@11,37 say "Quantity in "
@13,2 say "Quantity Out"
@13,37 say "Expire Date"
@7,20 get m_pname
read
res=' '
if m_pname=space(10)
set colo to w+/b
@24,30 say "Stop Record Viewing(y/n)"
@24,58 get res
read
res=upper(res)
if res='Y'
release all
clea
return
```

```
else
@24,30 clea to 24,58
loop
endif
endif
set colo to w+/rb
go top
locate for pname=upper(m_pname)
if found()
store s_name to m_sname
store d_received to m_dreceived
store u_cost to m_ucost
store s_price to m_sprice
store qty_in to m_qtyin
store qty_out to m_qtyout
store exp_date to m_expdate
@7,52 say  m_sname
@9,20 say m_dreceived
@9,50 say m_ucost
@11,20 say m_sprice
@11,55 say m_qtyin
@13,20 say m_qtyout
@13,55 say m_expdate
res2=' '
set colo to w+/b
@24,30 say "Save Data entry (y/n)"
@24,55 get res2 pict "!"
read
res2=uppe(res2)
if res2="Y"
go top
locate for pname=m_pname
repl d_received with m_dreceived
repl s_name with m_sname
repl pname with m_pname
repl s_price with m_sprice
repl u_cost with m_ucost
repl qty_in with m_qtyin
repl qty_out with m_qtyout
repl exp_date with m_expdate
endif
endif
enddo
      set talk off
set stat off
set colo to w+/rb
set scoreb off
use stk
sort on pname to stk2
m_fin=.T.
do whil m_fin
clea
*do screen1
inkey=' '
m_dreceived=ctod("  /  /  ")
m_sname=space(15)
m_pname=space(10)
```

Zagbayi Pharmaceutical Limited

Sales Report

pcode	pdate	grpcode	pname	unitprice	quantity	Price
000002	07/10/03	A000002	MILO	800	45	36,000.00
A00003	01/07/03	8909	CONDOM	700	56	39,200.00
A00004	28/06/03	87999	PHENSIC	800	100	80,000.00
A00009	01/07/03	78900	ALAGBIN	750	35	26,250.00
a00001	01/01/03	DR000001	VITAMIN A	600	6	3,600.00
	Total Price					185,050.00

Zagbayi Pharmaceutical Limited

Suppliers Report

s_id	s_name	address	phone	fax
000994	MAY & BAKER	MARINA	79990990009	88777777777
004665	SHAJRAN LTD	POLICE RD	0239009456	908656655
879997	MAY &BAKER	WUSE	01234444909	05675775868
23454	MAY &BAKER	MARINA	01-5677880	01-46777689
7888	MAY & BAKER	SABO TASHA	01-788990	01-788899
908677	DOKO PHARMA	BELLO STR	01-8546565	01-668768
7899	LAWAL PHARMA	12,KAD. RD	09-8990076	09-978888
000001	SA'EED PHAR.	MARINA	01-78687	01-78078
00002	HENRY	MARINA	01-6777882	01-4456466
000012	DOKO	MINNA	066-9878877	066-986777
2344	DOKO	TUNGA	01-566677	01-566666

Zagabayi Pharmaceutical Ltd

Employee Report

empno	empname	address	phone	dept	quali.	next of kin	adress of kin
890900	David Naomi	MATORI LAGOS	01-56789067	ACCOUNTS	HND	DAVID JOY	AS ABOVE
8455	Lawal Sa'ed	12,OJO RD,MINNA	01-76880908	SALES	MSC	OJO DAUD	Florida,Usa
1002	Bala Jummai	ilobu	032-9988	computer	PGD	zainab	Atlanta,Usa

Zagbayi Pharmaceutcal Limited

Stock Card

s_name	s_price	s_quanti	d_received	u_price	pname	exp_date	Price
Doko Pharma	65	56	12/12/04	56	kunun	12/12/09	3,136.00
May & Baker	60	100	12/12/01	40	daga	12/12/09	4,000.00
Juliet phar	900	200	12/12/01	700	milo	12/12/04	140,000.00
Henry pharm	8700	800	12/12/19	790	phensic	12/12/07	632,000.00

Stock Value 779,136.00

Zagbayi Pharmaceutical Limited

Order Report

s_id	s_name	address	phone	Fax	pname	quantity	o_date	d_date
000994	MAY & BAKER	MARINA	79990990009	88777777777	MIGHTY POWER	900	03/03/03	05/05/03
879997	MAY &BAKER	WUSE	01234444909	05675775868	ALABUKUN	780	14/07/03	12/08/03
23454	MAY &BAKER	MARINA	01-5677880	01-46777689	PHENSIC	900	28/06/03	12/07/06
000001	OGO OLUWA	FAGBESA	036-6788989	036-7788890	VITAMIN C	6000	01/07/03	02/07/03
004665	SHAJRAN LTD	POLICE RD	0239009456	908656655	CONDOM	800	12/06/03	14/06/03

Zagbayi Pharmaceutical Limited

Sales Report

pcode	pdate	grpcode	pname	unitprice	quantity	Price
000002	07/10/03	A000002	MILO	800	45	36,000.00
A00003	01/07/03	8909	CONDOM	700	56	39,200.00
A00004	28/06/03	87999	PHENSIC	800	100	80,000.00
A00009	01/07/03	78900	ALAGBIN	750	35	26,250.00
a00001	01/01/03	DR000001	VITAMIN A	600	6	3,600.00
	Total Price					185,050.00