

**A MANAGEMENT INFORMATION SYSTEM FOR
IMPORT OPERATIONS IN PATED (NIGERIA) LIMITED
ABUJA, NIGERIA**

BY

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A PROJECT SUBMITTED TO THE

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POST-GRADUATE DIPLOMA IN COMPUTER SCIENCE**

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DEDICATION

**TO GOD ALMIGHTY, HIS SON JESUS CHRIST WHO SAVES ME, MY
HUSBAND,BELOVED PARENTS,BROTHERS AND SISTERS AND THE ENTIRE FAMILY
OF SAMPSON AKPADIAHKA AKANEKPO**

CERTIFICATION

This is to certify that this work was carried out by AKPAN, OFONFON JUSTINA of the Department of Maths/Computer Science, Federal University of Technology, Minna, Niger State.

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Project Supervisor

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Date

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Dr. S.A. Reju
Head of Department

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Date

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External Examiner

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Date

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ABSTRACT

Pated marbles-Abuja dealing with Italian and International high quality building materials of various categories; encountered problem of managing their records on import operation within the company; so the recent development in computer technology especially its application to solving human problems was introduce for implementation. And this has generated more significant impact on management functions.

This project has succeeded in establishing the need for computerized information system for Pated Nig. Ltd-Abuja, through a systematic development of computer-based program written in D baseIV

CHAPTER ONE

1.0 INTRODUCTION TO IMPORT OPERATIONS

1.1 INTRODUCTION

An import operation is a form of international trade which entails a lot of principles to be fulfilled before accomplishing each importation such as balance of payment, import principles, composition, trend and direction.

The importation of goods between countries can either be an inter-continental or regional business on a large scale. Certain principles of comparative cost is encountered during an import operation, in that countries gain from international trade by specializing in those commodities in the production of which they have the greatest comparative cost advantage over other countries or otherwise a cost disadvantage. So comparative cost are not static, in that factor endowments change as capital is accumulated, labour acquires more skills, and more natural resources are discovered. These will alter the comparative costs position of various countries and therefore the pattern of importation will change.

1.2 FEATURES OF IMPORT OPERATIONS

CURRENCY: Trade between two towns in the same country is going to involve only one currency, while that of different countries will require exchange of currency.

So generally in inter-continental or regional trade, there is requirement of some means of exchanging the currencies which is as a result of the establishment of separate monetary systems

in each territory and is normally done through the banking system where as in days of West African Currency Board (W.A.C.B.), this exchange of currencies was not applied to trade.

Here, on currency exchange, there is exchange control which is indirect but very effective imposed by Central Bank and implemented by the Commercial Banks; in that all the importers will have to make applications for foreign currency with which to buy imports and also a system of import licensing is useful for proper importation.

PROBLEMS OF TRADE IMBALANCE: This is different base on country's foreign trade. If there is imbalance in the trade between areas within a country, then the purchasing power will accumulate in the surplus area and this will lead to a shift of productive resources to one area because of the higher incomes there, while those in the other area will be discouraged and may have to contract their activities. Thus, the company will get of resources. Also if one country is buying more from others than it is selling, it will find it difficult to pay for the imports; and reserves of foreign currency will fall, and if the imbalance persists, the country with a deficit will have to introduce measures to eliminate it; while the country with surplus will simply accumulate foreign currency reserves.

ARTIFICIAL BARRIERS: Goods which goes to other countries will usually have to pass through some artificial barriers such as customs restrictions and other security check-points. During importation of goods, it is usually accompany by restrictions of various forms such as prohibition, quota, taxes on goods, subsidies, exchange control and other restriction.

These restrictions are carry out by Customs Department in that this could be apply to import as well as exports; the goods can be out rightly restricted or limit to volume, period or

number base on their agreement. Most of the time, since all goods are subject to checking by Customs goods are taxed base on the weight measure, on each unit imported, simply counted as well as assessment according to the value of the goods imported.

LANGUAGE: Importation of foreign goods is often complicated by having different language spoken and used in the trading countries.

Even through this is not always the case and different languages for different countries and at least an international importer has to be a lingua Franca, even it it is pidgin English.

DISTANCE: International trade will usually involved greater distances, though not always and sometimes it may be caused by wrong geographical location. Different parts of the country are differently endowed with resources, where some areas have different factors endowments and trades which enable a country to obtained goods which it cannot produce or produce very well.

Other difficulties being encountered during importation are the problem of securing market where foreign market are not sure which may be due to some political or economic measures; increasing the cost of importation of goods such as distributing of goods to their destination are high as well as the placing of ordered items and cost of packing, transportation and securing orders for goods needed.

TYPES OF TRADE

The operation of goods importation are of two parts, the current and capital account.

The current account consist of goods services buys for current use, when the transactors are in different countries and are of two types - visible and invisible trade.

Visible trade involved balance of payment which leads to actual movement of goods into and out of a country, while invisible trade means payment for goods and services which do not enter the country, and then necessitate the payment of foreign currencies in which currencies will be achieved from the sale of services and such goods.

These goods are called invisible items and include; shipping by sea, air, insurance, financial services, interest, profit and dividends, tourism, government expenditure and other items.

The capital account involves investment undertaken in other countries as well as loans, and these include net investment abroad, long-term lending and borrowing, short-term loans and reserves.

The method of obtaining overseas orders are firstly, an order can be obtained by advertising their goods in trade Journals which are currently in circulation in other countries, thereby some circulars and catalogues will be sent to foreign firms and individuals that indicated their interest. Secondly, representatives can be sent to both new and old customers in foreign countries; thirdly, the representatives of foreign firms can be asked to visit the country in order to enable them to see the goods which the merchants and manufacturers have for sale; fourthly, the opening of the foreign depots which will serve as a place for keeping stocks of goods.

Orders can be obtain through trade-fair whereby the manufacturers seize the advantage of taking part in international and joint trade-fair to advertise their goods and business interactions, thereby distributing their brochures and catalogues which lead to orders to be receive later from foreign countries.

When goods arrive at the port of entry, they have their value charges for insurance and freight that were incurred in transporting and the imports are valued C.I.F. (Cost, Insurance and Freight) at the point of entry while that of export valued (F.O.B.) at the port of exit and are valued A Free on Board.

1.6 AIRPORT PROCEDURE IN CLEARANCE OF GOODS

There are so many laid down procedures (laws and acts) for the clearance of imported goods from the airport depending on what categories such imported goods fall into:-

Types or categories of goods which are imported and cleared through the airport:- these include trade goods imported for commercial or trade purposes, personal effects, temporarily imported goods, samples - commercial or promotional, transit/transshipment goods, Diplomatic goods, motor vehicle (mainly personal effect), special cargoes/goods and corpse.

1.7.1 STEPS IN CLEARANCE OF THESE GOODS

Under the law, an importer must complete and submit a written declaration with regards to his imported goods in order to effect the clearance of such goods from the airport. Such declaration in the form of a legal document (Bill of Entry, P.U.B.D. and consignment note - C/note are always processed through the Long Room where they are accepted and treated by proper officers of the department. This is referred to as the Long Room procedure.

1.7.2 METHODS AND WAYS OF EFFECTING CLEARANCE OF THESE GOODS

Depending on what type of cargo/consignment that is imported into the country, any one or a combination of the under listed methods are usually employed in the clearance of goods from the airport:- The use of a proper perfect Bill of Entry such as entry for home use, warehousing, motor vehicle and transit; the use of a consignment note, temporary importation forms, P.U.B.D. (Passengers Unaccompanied Baggage Declaration), bill of sight and special clearance. The detailed explanation of how the above listed methods are employed in the clearance of good from the airport are below:-

- a). **The Clearance of Trade goods:-** Goods of these categories imported into the country on commercial basis and intend for sale for profit include motor vehicle spare parts, building materials and electronic products. They are cleared through the airport using import entry for home use, warehousing and consignment where the weight of the consignment to be cleared is not more than 100 kg.
- b). **The Clearance of Personal Effects:-** These are the bona-fide personal properties, mostly Nigerian who had stayed outside Nigeria for a minimum period of time or years, foreigners in Nigeria and Temporary visitors to the country has the content of their baggage regarded as a personal effect so far it has been seen that it does not contain goods with any commercial value. This category of good is cleared through the use of a P.U.B.D. (Passenger Unaccompanied Baggage Declaration).
- c). **The Clearance of Temporary Imported Goods:-** When goods are temporary imported into the country through the airport, such goods are subject to immediate exportation after the

expiry of the period allowed by the Board of Customs & Excise; such goods as goods for renovation and repair, motor vehicle, goods for exhibition purposes and goods imported by persons not normally resident in the country. The method used for clearance is the used of the temporary importation forms.

d). **The Clearance of Promotional Goods or Samples:-** Samples are small pieces or unit of goods imported into the country with no commercial value. They are usually supplied free of charge and are meant to be used for sales promotion or drive. These categories of goods are usually cleared through the use of a consignment note, after the proper officer has convinced himself that the goods are actually samples; and here no bill of entry is required.

e). **The Clearance of Transit Goods and Diplomatic Goods:-** Transit oods are imported goods which are always reported to be in transit at the approved port or point within Nigeria. Transit goods are supposed to be entered seven days prior to importation on form sale in quadruplicate, and processed through the Long Room. The owner or agent of transshipment goods must secure the duties and any other fees chargeable on transshipment goods by cash deposit to cover the transaction.

The only exception is when such transit goods is the property of the Government of the territory to which the goods are being carried to and in such case the transit entry is prepared and processed along with the cash deposit through the Long Room.

Diplomatic goods are goods belonging to the various Embassies or High Commissions and other similar international organisations in the country. When such goods are about to be cleared a request for diplomatic or special privilege clearance is submitted to the Department of

Customs and Excise through the Ministry of External Affairs. The goods are cleared from the airport through either of the following such as P.U.B.D., consignment note, warehousing entry, entry for home use, transit and temporary importation form.

f). **The Clearance of a Motor Vehicle and Special Cargoes:-** A Saloon Car is usually cleared through the airport either as a personal effect which P.U.B.D. is used or temporary importation forms is used.

The special cargoes are those that are either sensitive, dangerous or perishable in nature; they include Ammunitions and Fire arms belonging to the Federal Government or license firearms dealers, Bank notes, travellers cheques, money order, foreign money, and security equipment, W.A.E.C. or other examination materials, Live animals, sensitive drugs, chilled meat (perishable foods), Daily, weekly or periodic Newspapers and any other materials.

In general, the clearance of these goods involve what is referred to as special clearance and are therefore usually pre-released to the importer. The importer will at a later date (not more than 24 hrs after delivery), prepare and lodge the required documents through the Long Room.

g). **The Clearance of a Corpse:-** This is the remain of a dead person and is carried by an airplane as a cargo. It has to be cleared through Customs in which the relatives of the dead person to make sure that all Customs formalities and regulations are complied with.

h). **Examination of Goods:-** Generally, goods are not delivered to the owners or their agent unless proper examination of the goods have been performed by a proper officer of the department.

All bill of entries received into are registered in the various registers meant for such a purpose. This documents sent out and received into the various sheds and warehouses.

The officer performing and examination on any consignment is to ensure that correct duty have been paid, goods are properly entered, goods are not prohibited or restricted; but if so, he is to make sure that relevant permits or licences are attached, they should be seized and seizure report made, arrest and detention and prosecution of the offender would then follow. When the proper officer is satisfied after a thorough examination of goods, he authorises the release of the consignment by enclosing all the relevant sections of the bill of entry, connote, temporary importation forms or P.U.B.D.

The release copy of the signed document is dispatched to the airline representative as the Customs authority to release the consignment. On the basis of this authority, the goods are released to the importer or his agent.

Conclusively, international trade allow importer to enjoy the advantage of the division of labour, it create rooms to acquired skills from other countries ; thereby making the countries of the world interdependent.

Moreover, it provides employment for many inhabitant of the countries concerned, in that they are engaged in importation and exportation of goods which formed good sources of income. It provide revenue for countries as well as great percentage of the total revenue from taxes and opportunity cost which makes importation of goods beneficial.

CHAPTER TWO

2.0 FEASIBILITY STUDY OF IMPORT OPERATIONS IN PATED NIG. LIMITED

2.1 COMPANY BACKGROUND

The company was incorporated in 1993 but commenced full operation in 1995 with showrooms and warehouses at 13, Karimu Kotun Street, Victoria Island, Lagos, 1st Avenue Plot 642, Festac Town, Lagos and Plot 1344 Zone A3" Sheraton Junction, Off Herbert Marcusey Street, Abuja.

The company's success within its short life span is thanks to a team of active, dedicated staff who are experts in their respective fields, with Mr. Teddy Luttwak (Italian) as the Chief Executive and Mrs. Patience Etuk-Luttwak, (Nigerian) Managing Director. Mr Luttwak has a reputable working experience in the marketing of marbles, and other building materials.

Pated marbles for Italian and International high quality building material and this company's passion for high quality is internationally recognised. Pated Nig. Limited has introduced various types, sizes and colour of Italian building materials. The Chief Executives of Pated Nig. Limited portray the main objectives of the company which is the procurement of goods and delivery of the purchase goods to customs and various organisations, within and outside Nigeria.

The company with affiliation of Lagos Head Office, arrange for the movement of goods from suppliers both locally made goods and foreign goods and they monitor them to destination. The product is exclusively made of high quality raw materials; we can therefore guarantee very high quality products and functionality of it; all at a very, very competitive prices.

With this information system and decision taken, there will be responses to changes in the needs of the customers through the effort of Sale Representatives, Sale forecasts, and future interest rates using a Decision Support System (DSS).

Each functional area of this company such as marketing, personnel, accounting, sales stocking etc. needs its own information sub-system in order to carry out its operations, such that in marketing area, a computer-based information system is very useful for managing lists of active and potential customers, in managing inventories and scheduling; while in the account section, computer information system is use for managing daily sales record, cost analysis, Receipt and Payment as well as interpretation of financial statements.

The Management information system in Pated marbles provide standard for communication, documentation, project development and job evaluation.

2.3 ORGANISATIONAL CHART OF THE COMPANY

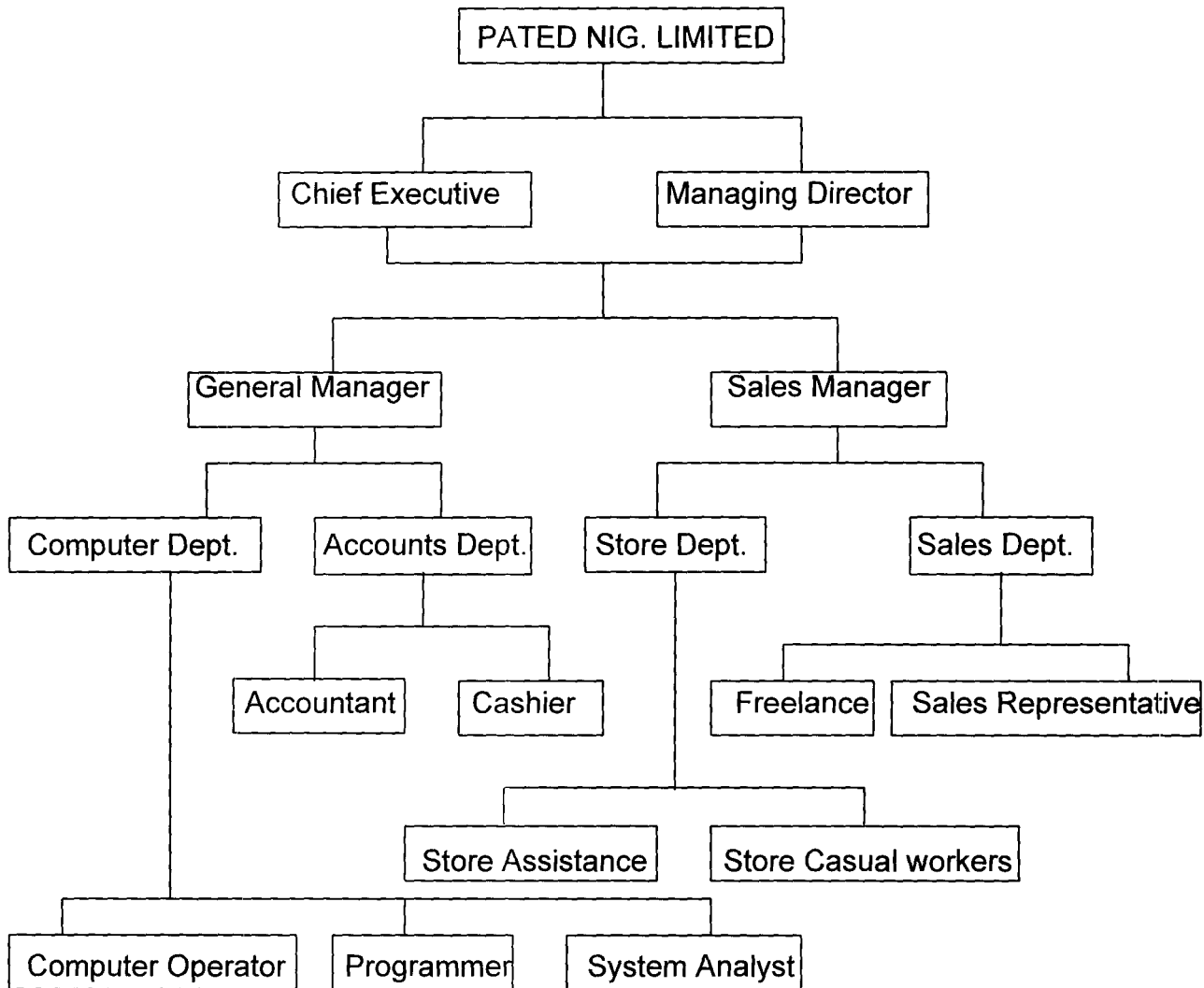


FIG. 2.3.1

2.4 OUTPUT OF MANAGEMENT INFORMATION SYSTEM

In Pated Nig. Limited, there are always an output of Management Information System derive from various reports and these include:

- Schedule report:** Are produce peridically or on a schedule such as weekly and monthly base on teams; whereby the managers will use the report to control

2.4 OUTPUT OF MANAGEMENT INFORMATION SYSTEM

In Pated Nig. Limited, there are always an output of Management Information System derive from various reports and these include:

- a). **Schedule report:** Are produce periodically or on a schedule such as weekly and monthly base on teams; whereby the managers will use the report to control labour, job costs, customers credits, the performance of sales representatives, inventory level etc..
- b). **A Key-Indicator report:** This is base on previous day's critical activities and is the first thing in the morning of each workday - this will summerise the inventory level, sales volume etc..

The Managers and Chief Executives usually uses this report to take quick, corrective action on the key areas of business in the company.

- c). **Demand Report:** The top executives do request for a report any time, in that the sales manager may want to know the inventory level for a particular item, to show the hours work by a particular employee e.g. loaders and casual workers, as well as total sales for a product in a week, month and year. So a demand report will be generated to the requested information.
- d). **Exception Report:** This is automatically produce when a situation is unusual or requires management action; such as the report of all employees who have work for more than 40 hours, for the week as well as those that are absent from duty for three (3) times in a month without genuine correspondence are exempted from full payment of salary.

In general, within this company, when an exception report is produce, the Managers and the Chief Executive will take action.

2.5 **Pated Stocks and Sells:-**

The various products imported by Pated Nig. Limited include Mirror Polished granites and marbles; washable, superior, gloss, emulsions and textured paints; ceramic wall and floor, mosaic and ceiling tiles; Quartz chemical RIV paint;

Air conditioners: window, split and Packaged Units, Doors: security, bullet proof, wooden, flush and panel; High class leather settees and wooden furniture; Bath sets: Jacuzzi, whirlpool and luxury accessories.

2.6 **Activities carry out within the company:**

a). **Planning and Budgeting:-** Planning is carry out to provide or create conditions favourable for economic growth of the company and as well as deciding on the best alternative for available development. As budgeting within the company, it is base on the expenditure plan drawn up by the accounting department.

The budget will then be presented to the company management, possibly together with an appraisal of the results of the previous budget.

b). **Cost Analysis and Job Evaluation:-** Ease on the cost analysis, difference types of costing are being look into and at the end, the cheapest cost is consider.

Job evaluation is being carry out by assigning a particular type of job to individual within the company which are capable of accomplishing the job.

- c). **Stock Record and Keeping:-** the recording of stocks is usually carry out immediately the truck arrive at the company; the store keeper first checked the in-coming way bills from Lagos and Cross-check the various products that are being sent in weekly and monthly according to the record of various sizes, colour, types, model and ranges. There after, they are doing off-loading mostly by the loaders and casual workers to their respective positions and samples of each will be display at the show room for cross-examination by customers, and representative of various business organisations; while others are pack to the warehouse. The safe keeping of the stock items is monitor by the store keeper who is the in-charge of store while the sales manager supervise the stock level base on stock issueing and that at hand.
- d). **Receipt and Payment:-** The accountant receive cash and cheques from customers in respect of what they purchase from the company; while the receipt of payment will be issue to the customer. The payment is made in respect of money that will be issue to the bank for safe-keeping. We pay companies and individuals that we procure materials from locally; also pay our local suppliers and contractors as well as making sales refunds and pay staff salary and wages.
- e). **Daily Sales Records:-** The record of daily sales of each items purchase by individual and companies from Pated Nig. Limited is a vital record book for references and confirmation;

with the indication of date of payment proforma number, invoice number, the name of the customers, items with range, sizes, model and manufacturer name that is procure and the stipulated amount.

In the daily sales record book, totals of income sales to the company from the customers and various organisations will be calculated weekly as well as monthly, for periodic returns to the head office at Lagos.

- f). **Interpretation of Financial Statment:-** This is a system whereby the company accounting department brief the shareholders and the management about the day-to-day activities of the business of the organisation.

2.7 **The Procedure in Transacting Goods to the Customers:-**

- a). **Distribution of Catalogues:-** The brochures will be distributed to the client or the site Engineers or the buyers as the first stage in a transaction within this company for the introduction of the goods to our customers. This will give the details of the items offer for sale, including their prices, description and the term of trade or by advertising.
- b). **Placing of an order:-** The prospective customers will then decide on what goods to buy; and is to place an order. This order gives the quantity and price of the goods ordered, the means of payment time of delivery and all necessary details about the package of the goods; all included in the proforma.
- c). **Acceptance of Contract for the Sale of Goods:-** This indicate the agreement by this company to transfer the property or goods to the customer for money consideration called

the price and information include are quantity, quality and price of goods ordered, means of payment well as other relevant details regarding to the packing of the goods.

- d). **The making of an Inquiry:-** immediately the company receives the order, copies will be sent to the Sales Department for filling, the Account Department and the good outward section for security checking of the advice, way bill and delivery note against the order. After this, the company will despatch the goods immediately to the customers after making inquiries regarding the financial status of the customer.

This inquiries note is to find out information about the financial status of the customer before the items order for is sent to him or release.

- e). **Advice Note:-** Here in the company, the despatch department (store) arranges the despatch of the goods to the customers with the inspection of the Sales Manager. The delivery of the advice note to the customer is to inform him that the goods order for has been despatch to him either in part or the whole with date, signature and company stamp endorse.

- f). **Despatch of Delivery Note:-** The company always sent the delivery note to the customer for signature and date; when the goods are safely delivered.

- g). **Issue of an invoice:-** The Account Department of this company always prepares an invoice for any sale made and is given to customers; to give him the idea of the amount owing for the goods that each customer and various business organisations buys from Pated Nig. Limited.

- h). **Issue of Credit Note:-** This is usually made to correct errors in the invoice sent to the customers and the correction of entries that is made already.
- i). **Issue of Debit Note:-** Within this company debit note is made to make additional entries in the invoice in order to sent it to the customer as well as to supplement any invoice from which an item is omitted or on which an error of under charge is made.
- j). **Interpretation of Statement of Account:-** This is sent by the company Management to they various customers periodically to inform the customers of all the transaction they have made with the company during a period and the amount due for payment.
- k). **Issue of Receipt:-** This will be the last document which passes between the company and the customers; which is to acknowledge the receipt of money from the customers by the company.

2.8 **Method of facts finding:-** Based on the purpose of this project, a feasibility study was carried out using the following methods of fact finding.

- a). **Document Review:-** This involved an investigation so as to have sufficient information about the management information system in Pated Marbles.
It also involve the review of various records in each of the company department following the organisational chart of the company. This enabled me to know how the various units or departments of Pated Nig. Limited relate to each other.

b). **Interview:-** This was used to collect information from the various individuals in each respective department of the company especially from the Chief Executive and Managing Director.

There is need for this purpose, since the individuals are the top-executives and current workers or personnel in each respective department in this company and they interact with various customers and business organisations.

c). **Observation:-** The observation tool enable the interaction with the individuals of these departments by observing the various activities carry out by them.

Also, as a staff of Pated Nig. Limited, this offer me, a better chance to carry out the observation of the various steps taken, as per transaction and other activity for the satisfaction of our active and potential customers as well as the various business organisations.

2.9 **FORMS USED FOR KEEPING RECORDS OF GOODS:**

The various forms used for keeping records of goods include the following with their relative purpose; where information such as form numbers, customer's name, address, item description, quantity, unit price, date, VAT of 5% and the total amount are stipulated within each form for easy clarification of transaction.

a). **Proforma Invoice:-** This is used for the description of order that is place by our customers and various business organisation that transact business with the company. Also invoice form can also be use in place of proforma invoice.

- b). **Return Inwards and Outwards:-** The Return Inward form is use for the sending of goods from the Head Office at Lagos to Abuja Office with the in-coming way bill to be deliver to the customers concern while Return Outwards form is use for the returning of goods from Abuja Office back to the Head Office at Lagos for proper delivery; and will be sign by the despatch officer, the driver as well as the receiver, stating that the goods are in good order and condition and date of despatch and receive.
- c). **Way-Bill and Receipt:-** Way Bill is usually accompany the goods despatch with all the conditions fulfill for the customer's goods to be taken to their destination. Other information such as the driver's name, lorry number, date of despatch and driver's signature are within the form.
- The receipt of payment be in cheque or cash for the purchase of goods will be issue to the customer and the Security Department will check properly and duely sign for departure.
- d). **Account Detail:-** Is use for the proper interpretation of the financial statement of account of each of the customer transacting with the company, stating the debit, credit and balance of payment.

PATED (NIG.) LTD.

Cor-Polished Granite and Marbles, Superior Quality Paints: Gloss, Textured, Emulsion, Ceramic
Mosaic and Ceiling Tiles, Bath Sets, Sanitary Wares and Air Conditioners

: 13, Karimu Kotin Str., P. O. Box 72547 Victoria Island, Lagos. Tel: (01) 610735, 2611704 Fax: (01) 2646788

: 4B, Casamance Cresc., Herbert Macaulay Str., Sheraton Junction, P. O. Box 8449, Wuse Zone 3 Abuja. Tel/Fax: (09) 42380

INVOICE A No 000100

Order No. _____

ISS _____

Date _____

QTY	DESCRIPTIONS	WAY BILL NO	UNIT PRICE	AMOUNT

Add: VAT 5%

TOTAL N

Amount in words _____

Please note that goods collected are not VAT

Received by: _____
Whom that the above goods were collected by me in good condition.

Authorised Signature _____

To: _____

Tab. 1b

PATED (NIG.) LTD.

Mirror-Polished Granite and Marbles, Superior Quality Paints: Gloss, Textured, Emulsion, Ceramic Wall - Floor, Mosaic and Ceiling Tiles, Bath Sets, Sanitary Wares and Air Conditioners

Lagos: 13, Karimu Kotun Street, P. O. Box 72547 Victoria Island, Lagos. Tel: (01) 610735, 2611704, 2646788
Abuja: Plot 1344 Wuse Zone "A2" Sheraton Junction, Habert Macaulay Street, Abuja.

RETURN INWARDS

A **NO** 0000055

To: _____

Address: _____

Driver's Name _____ Factory No. _____

Quantity	Description	Remarks/Weight

Date: _____

Despatched by: _____

Driver's Signature

TABLE 20

Received _____

good order and condition

Date: _____

PATED (NIG.) LTD.

Mirror-Polished Granite and Marbles, Superior Quality Paints: Gloss, Textured, Emulsion, Ceramic Wall-Floor, Mosaic and Ceiling Tiles, Bath Sets, Sanitary Wares and Air Conditioners

LAGOS: 13, Karimu Kotun Street, P. O. Box 72547 Victoria Island, Lagos. Tel: (01) 610735, 2611704 Fax: (01) 2646788
 ABUJA: 4B, Casamance Crescent, Herbert Macaulay Str., Sheraton Junction, P. O. Box 8449, Wuse Zone 3 Abuja. Tel/Fax: (09) 5236028

WAY BILL

A No **001267**

To: _____
 Address: _____
 Driver's Name _____ By Lorry No. _____

Quantity	Description	Remarks/Weight

SECURITY CHECKED
 DATE: _____

Date: _____
 Dispatched by: _____

Received by: _____

In good order and condition

TABLE 39 Driver's Signature _____

Date: _____

PATED (NIG.) LTD.

Mirror-Polished Granite and Marbles, Superior Quality Paints: Gloss, Textured, Emulsion, Ceramic Wall-Floor, Mosaic and Ceiling Tiles, Bath Sets, Sanitary Wares and Air Conditioners

CORPORATE HEADOFFICE: 13, Karimu Kotun Street, P. O. Box 72547, Victoria Island - Lagos.
Tel: (01) 2611704, 610735. Fax: 2646788

ABUJA OFFICE:

4B, Casamance Cresc., Herbert Macaulay Str., Sheraton Junction,
P. O. Box 8449, Wuse Zone 3 Abuja. Tel/Fax (09) 5236028

Receipt



NO. 0001001

Date _____

Received from _____

the sum of _____

Being _____

Cheque No. _____ of _____ Bank _____

CASH # _____

For PATED (NIG.) LTD.

Table 36

PATED (NIG.) LTD.

LAGOS: 13, Kaimu Kolun Street, P. O. Box 72547 Victoria Island, Lagos

Tel: (01) 610735, 2611704 FAX: (01) 2646788

ABUJA: Plot 1344 Wuse Zone "A2", Sheraton Junction, Herbert Macaulay Street,

Abuja. Tel: (09) 5236028

ACCOUNT NO.

ESS

CR

DATE	REF. NO.	DETAILS	DEBIT		CREDIT		BALANCE

TABLE 4.

2.9.1 TYPES OF GOODS WITH SOURCES AND EXCHANGE IMPORT RATES

TYPES OF GOODS SOURCES(COUNTRY) EXCHANGE IMPORT RATES

Marble and granites	Italy, Spain	5.8000, 3.5400
Paints	Italy	3.2200
Ceramics tiles	Italy, Brazillian	4.5000, 5.0000
Ceiling tiles	Italy	4.2423
A/C.	Italy, France	0.29799, 1.5559
Doors	Paris, Italy	0.6700, 0.7092
High Leather settles	Italy	1.0220
Wooden furniture	Italy	1.2350
Bath sets	Italy	2.0112

The above exchange import rates of goods imported by Pated Marbles do change, and the rates stipulated above are as at April, May and June, 1998; since not all the goods are being imported at the same time and month.

2.9.2 OTHER VALUABLE INFORMATION KEPT BY THE COMPANY

Pated Nig. Limited has successfully completed the supplies and installations marbles, granites, superior paints and other building materials to the following customers NAL merchant bank, SIO properties limited, FABCON construction company, Equatorial Trust Bank Branches, Stallion House, Basestar Engineering, Arbico Plc , Savannah ventures, Kano. Savannah Suites and restaurant and RCC Solel Boneh, all in Abuja .

The company depends on the kind patronage of architects , quantity surveyors, valuers, Civil engineers, Construction companies, property developers, Builders and all prospective customers.

CHAPTER THREE

3. INFORMATION SYSTEM DESIGN

3.1 What is System ?: This is a set of components or parts that interacts by responding to inputs to produce output in order to accomplish specific purpose. In this case, the system could be the computer hardware, the software and programs written that will make it work to achieve the desired goal of managing information system for import operation in Pated Nig. Limited.

This is for efficiency, profit as well as excellent availability; so import operation system is a form of interaction of elements that exist between the business transacting and its environments. Business as a system uses resources, such as people, capital, materials and profit.

Business procedures such as order handling marketing research, financial planning, and manufacturing, are the interactions that need to be managed to achieve this objectives.

All systems have a boundary that separates them from their environment; and thus defines the scope of activities to the supported by the system; and within this company; the sales manager is responsible for managing, motivating and evaluating the performance of a sales organisation.

System consist of numerous sub-systems, each of which has elements, interactions and objectives.

In order to work as an effective unit, the business has to make use of information which is also a sub-system. The information is concern with procedures for the storage, control and flow of information which passes between the functional sub-systems to the tasks which are

presented to the organisation. Information System provides information for decision and control and acts as linking mechanism between the functional sub-systems.

3.2 Tool for System Design:- The design of the system is base on the findings of the feasibility study. This will be conducted on the existing system and it includes observation and interview of the key personnels of the company. The flow of data of the existing system which is to be modify in the proposed system will be taken note of; therefore in the new system we will use data flow diagram in designing the new system; also data stores, where data could be retrieve anytime the need arises

3.3 Designing the System:- In the system design, we made use of the input design to get the output and the over all objective of design; is to install a system which will work efficiently all the activities of DBMS.

The item consider as input in this project of management information system for import operation in Pated Marbles are data on customers order (material required), production stock availability, order volumes, machine availability and employees activities. In designing the system, main menu and sub-menu programs are develop to enable us make use of the files; in running the program effectively. The issue of data base file operation at Pated Marbles is as indicated in the figure below with the use of data bas structure.

Field	Field Name	Field Type	Width	Decimal
1	Item Name	Character	20	-
2	Invoice No.	Numeric	7	-
3	Supplier's Name	Character	20	-
4	Receipt No.	Numeric	20	-
5	Quantity on Order	Numeric	15	-
6	Quantity supplied	Numeric	15	-
7	Price	Numeric	8	2
8	Date	A/N	6	-
9	Customer's Name	Character	20	-
10	Quantity Placed			
	on order	N	14	-
11	Quantity Issued	N	12	-
12	Amount	N	8	-
Field	Field Name	Field Type	Width	Decimal
13	Selling Price	N	8	2
14	Date Supplied	A/N	6	-
15	Model	A/N	18	-
16	Country	A/N	15	-

Fig. 2

Field	Field Name	Field Type	Width	Decimal
13	Selling Price	N	8	2
14	Date Supplied	A/N	6	-
15	Model	A/N	18	-
16	Country	A/N	15	-

Fig. 2

The next input for the system is pass ward.

This is to maintain security for the data, making sure that intruders do not temper with the data stored in the system.

PASS WORD FILE

Field	Field Name	Type	Width	Decimal
1	0001-Justina-4	A/N	16	-

The above are the input design, the information are to be stored into the computer to enable an effective management for import operation.

With these stored, one can easily get the required output, the output design look like this, the first is the issue Dbase file. To get the quantity of goods issue at the company and the details about it.

Main Menu for Stock Control

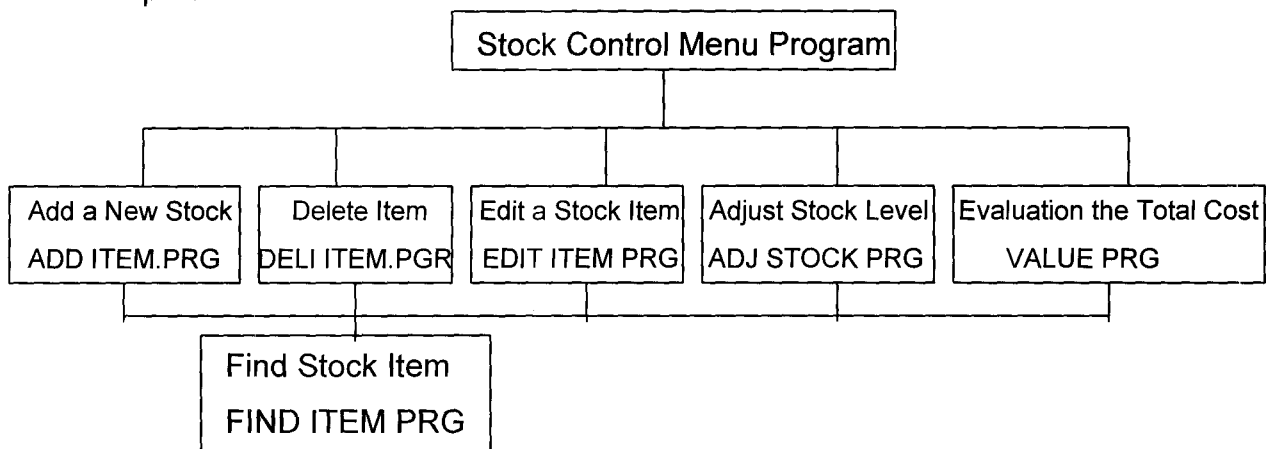
Using data base, structure of relational operation, all the items of building materials can be enter using data base file. STOCK.DBF

Field	Field Name	Field Type	Width	Decimal
1	Paints	Character	20	-
2	Doors	Character	15	-
3	Tiles	A/N	15	-
4	Ceramics	A/N	22	-
5	Ceiling	A/N	20	-
6	Granites	A/N	18	-
7	Marbles	A/N	20	-
8	Mosaics	A/N	20	-

Field	Field Name	Field Type	Width	Decimal
9	A/C	A/N	10	-
10	Sanitary	A/N	20	-
11	Italian Leather	A/N	10	-
12	Furniture	A/N	15	-
13	Fan	A/N	10	-
14	Gas Cooker	A/N	20	-
15	Fedex Lock	A/N	10	-

Fig. 3

The program module of stock menu program defines the tasks needed for stock control where by the main program will call upon the sub-program for an operation.



The tasks include the following functions:

- Adding a new stock item to the import data entry data base the STOCK.DBF
- Deleting stock items in the stock data base file.
- Examining or viewing and editing the content of a data record.
- Adjust or modify the stock level or position in the company.
- Evaluating the total stock value for each stock item as well as report generation.

Stock Control Sub-Menu

Task Code	Task
[A]	ADD a new stock item
[D]	Delete an existing item
[E]	EXAM/EDIT stock item
[J]	Adjusting stock level
[V]	Evaluation of stock
[Q]	Quit, Return to main menu

Enter your choice (type in code).

The above in a nutshell is the sub-menu program where it can be called by the main menu program for operations such as viewing of information concerning various types of finished building material imported by Pated Nig. Limited, as well as monthly import information concerning the building materials. For one to make use of these or any tasks above, the task code must be typed into the computer, then it will bring out the information needed.

The first task, to add a new stock item is a program which appends a new data base file; import.DBF using the entry form defined in stock.DBF. When AddiTEM.PRG, is call; an entry form is display as:-

Item name

Item number.....

Item code.....

Suppliers name.....

Quantity on order.....

Quantity on hand.....

Model number.....

Date.....

Country.....

Exchange rate.....

The next task on the menu is the DELITEM; the deletes an existing item in the STOCK.DBF; after the delete item program locates the stock item by number, the module deletes the record from STOCK.DBF. To locate the stock item, the DELITEM.PRG calls the find item to do the location.

The next in the module is EDITITEM.PRG.

This is used to edit or modify the contents of a data record in the STOCK.DBF data base file. FINDITEM.PRG will locate the stock to be edited, and the IMPORT.DBF is used to label the data fields in the data record. The next one is the ADJSTOCK.PRG. this program makes adjustment in stock when the stock level is reduced because of sales or when the quantity on order is reduced. It is used to adjust current stock level, that is quantities on hand and on order. The ADJSTOCK displays the current inventory or stock level.

The evaluation of stock or the value program calculates values of each stock item; it is the sock menu program that calls the program module VALUE.PRG to calculate and display value of each item in stock. The stock value of a stock item is calculated by multiplying its on-hand quantity. (STOCK.DBF) by the cost (COST PRICE).

Finally, quit makes the computer to quit the task from the sub-menu to the main menu. These have their written programs to enable the use of the sub-menu in running the program.

SYSTEM DESIGN AND DEVELOPMENT

The system analysis lead to a number of possible alternative designs. Once an alternative has been selected, the purpose of the design stage is to work. The system specification will be elaborated and then documented with all the features of the system indicated; for proper utilization of the system.

In the design file of a system, the features that will be use for the system design are module program structure, view of tables using design view, form design using check box and report generation on sales.

When you run the main modular program - BUSINESS.PRG with following

command line from Dbase dot prompt:

Do BUSINESS ↵

A main menu is displayed with the following options. Employees, customers, suppliers, inventory, orders, supply, Return to dbase, Quit to Dos.

Employees, Customers, Suppliers and Inventory have the following sub-menus.

1	-	Add
2	-	Modify
3	-	Delete
4	-	View
5	-	Back to Main Menu

We have the following data base (.dbf) files

1. Employee.dbf:- for holding information about the company's employees
2. Customer.dbf:- for holding information about the company's customers who buy product from the company.
3. Supplier.dbf:- for holding information about the company's suppliers
4. Inventory.dbf:- for holding information about the goods held in stock
5. Order.dbf:- for registering orders made by both the company and customers.
6. Supply.dbf:- for registering goods brought by the company suppliers.

MODULAR PROGRAM STRUCTURE

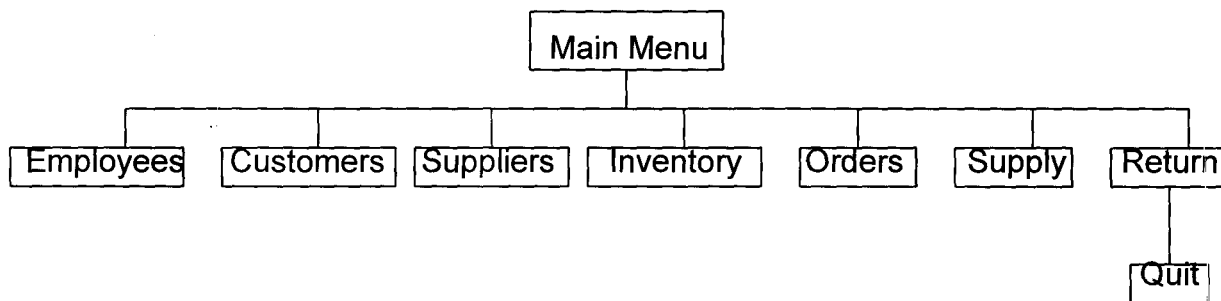
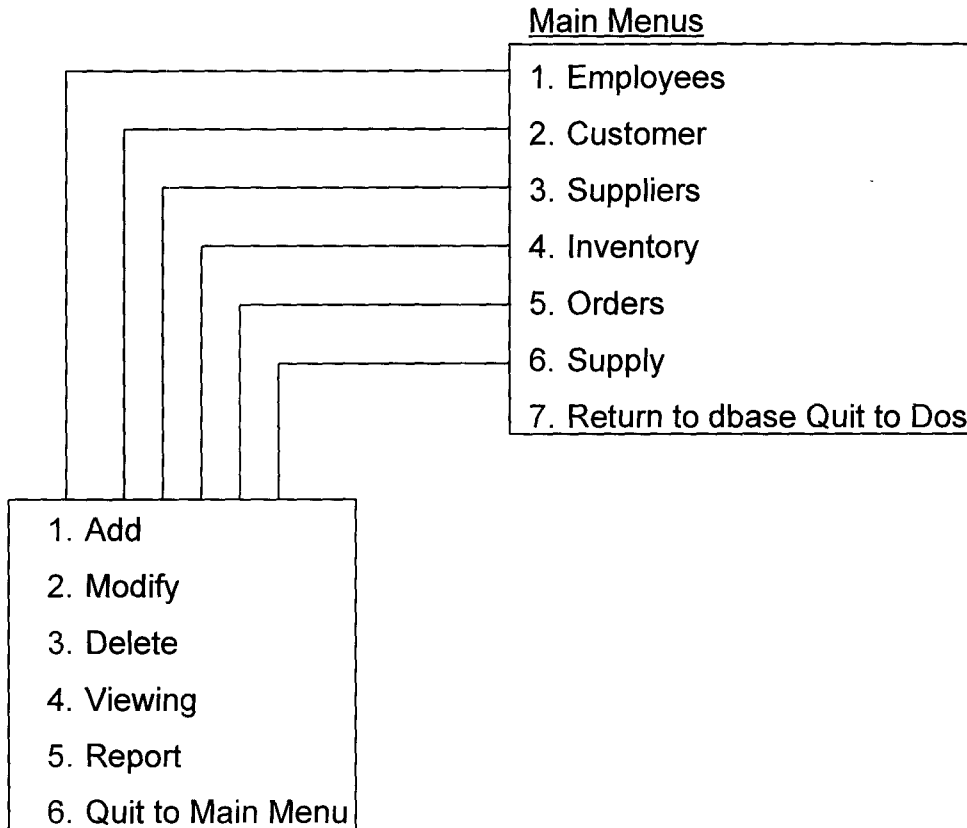


Fig. 3.1

The following main menus (modules) are envisaged:-

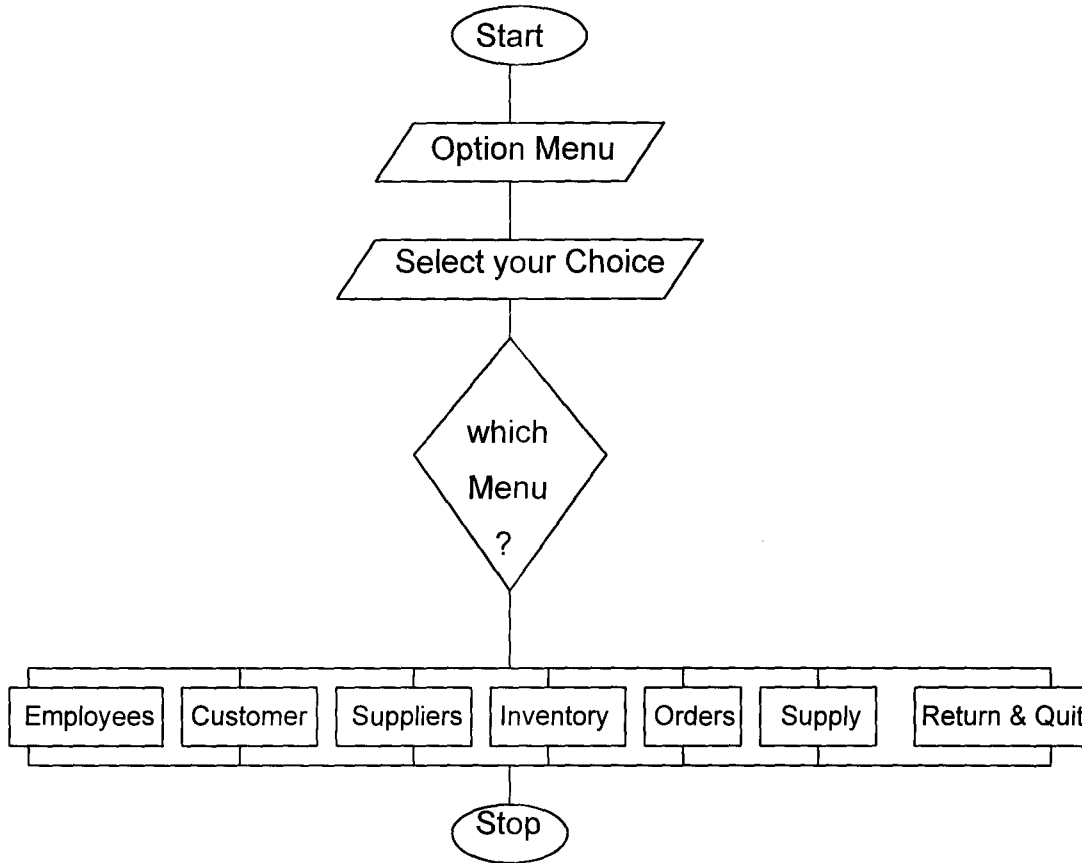


1. Employees information include:- employees names, Address, Salary and Staff Welfare.
2. Customers information are generated for customer identification number, contact address, phone number, purchased product and customers name.
3. Suppliers information are generated for the following - products supplied, product ID, English name, category and country; suppliers name.
4. Inventory are made for:- Stock position, sales volume, in/outward return and sales performance.
5. Orders:- Information are made for order ID, Customers ID, order date, ship name, freight, quantity on order, quantity supplied.
6. Supply of products are made for the item name, Category, Country, Invoice No., Quantity on order, Quantity supplied, Amount, Date supplied, Receipt No. and Way bill number.

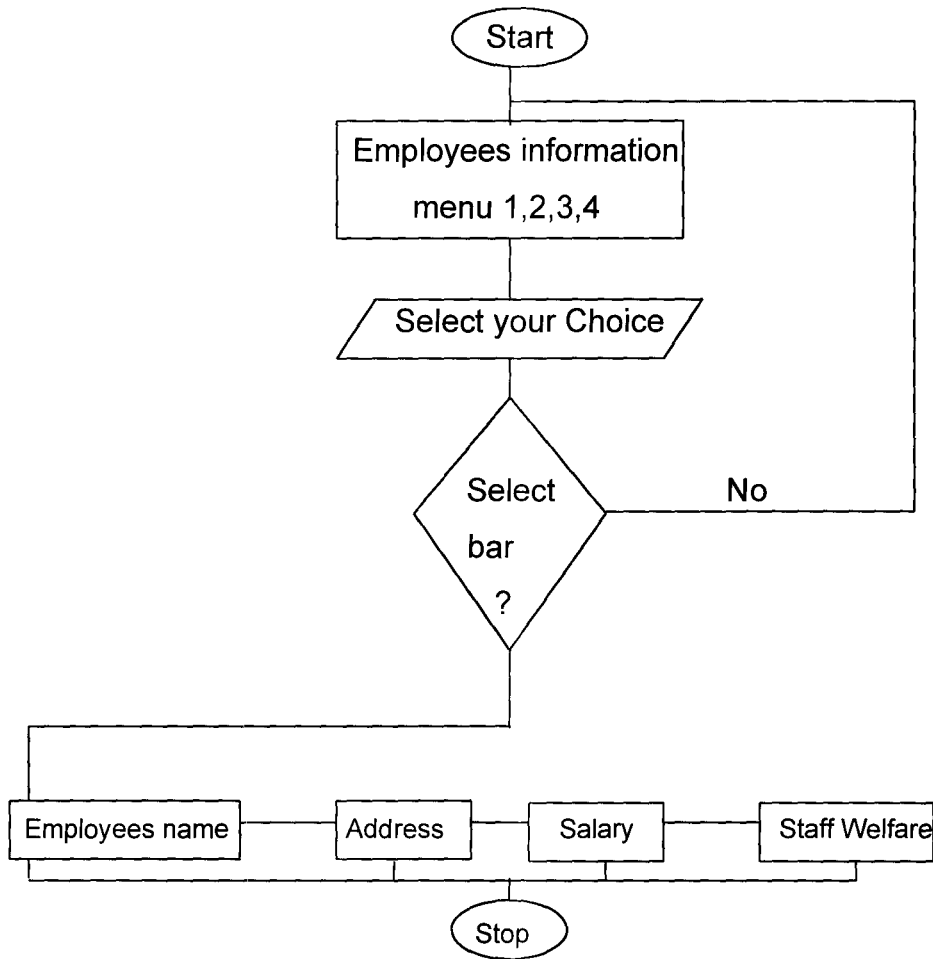
7. Return to dbase and quit:- This transfers the control to the Dos Prompt.

PROGRAM FLOW CHARTS

Flow Chart for Main Menu

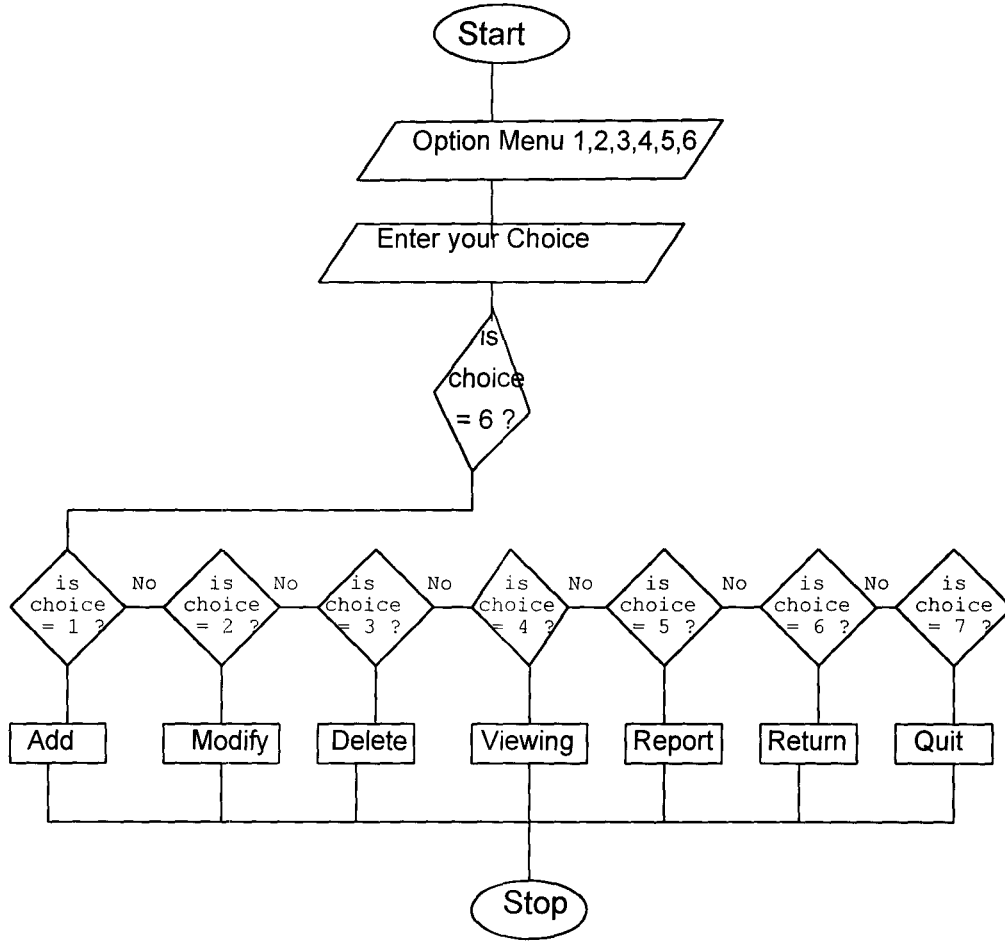


Flow Chart for Employees information

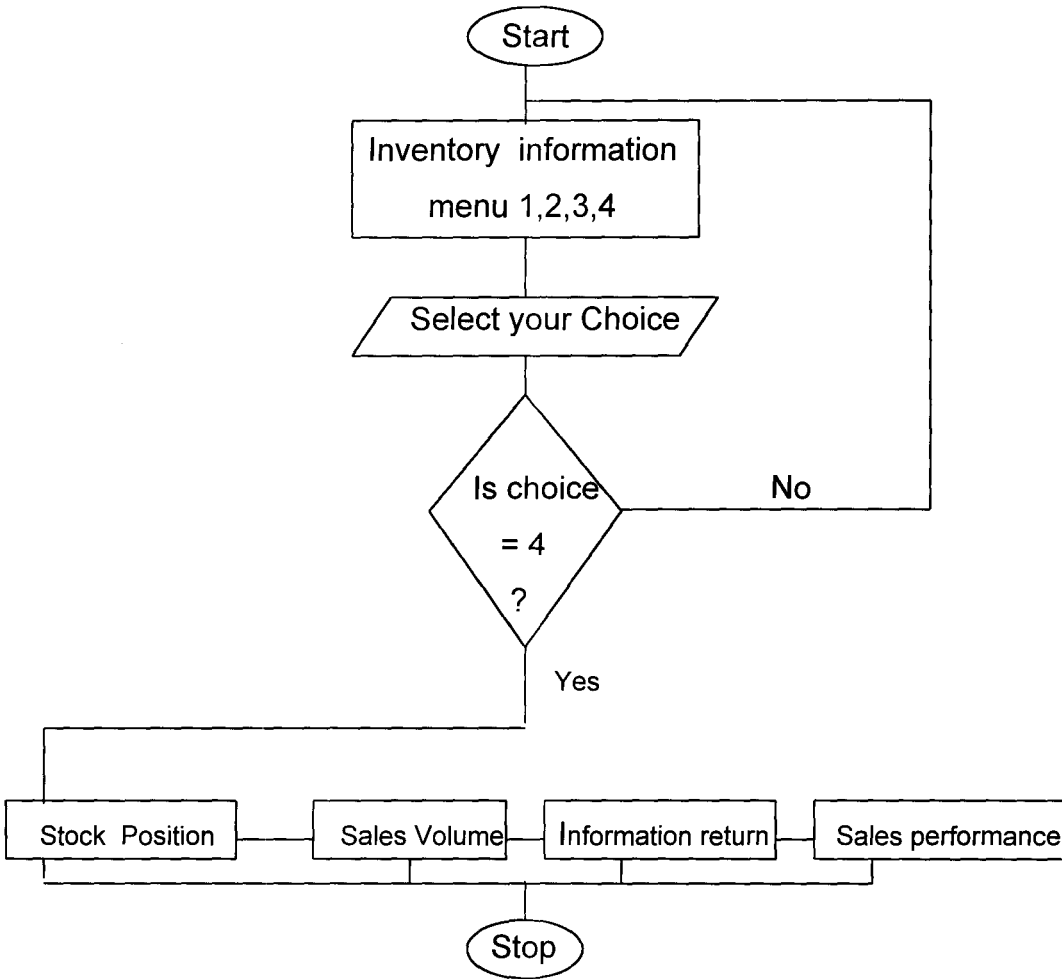


PROGRAM FLOW CHARTS

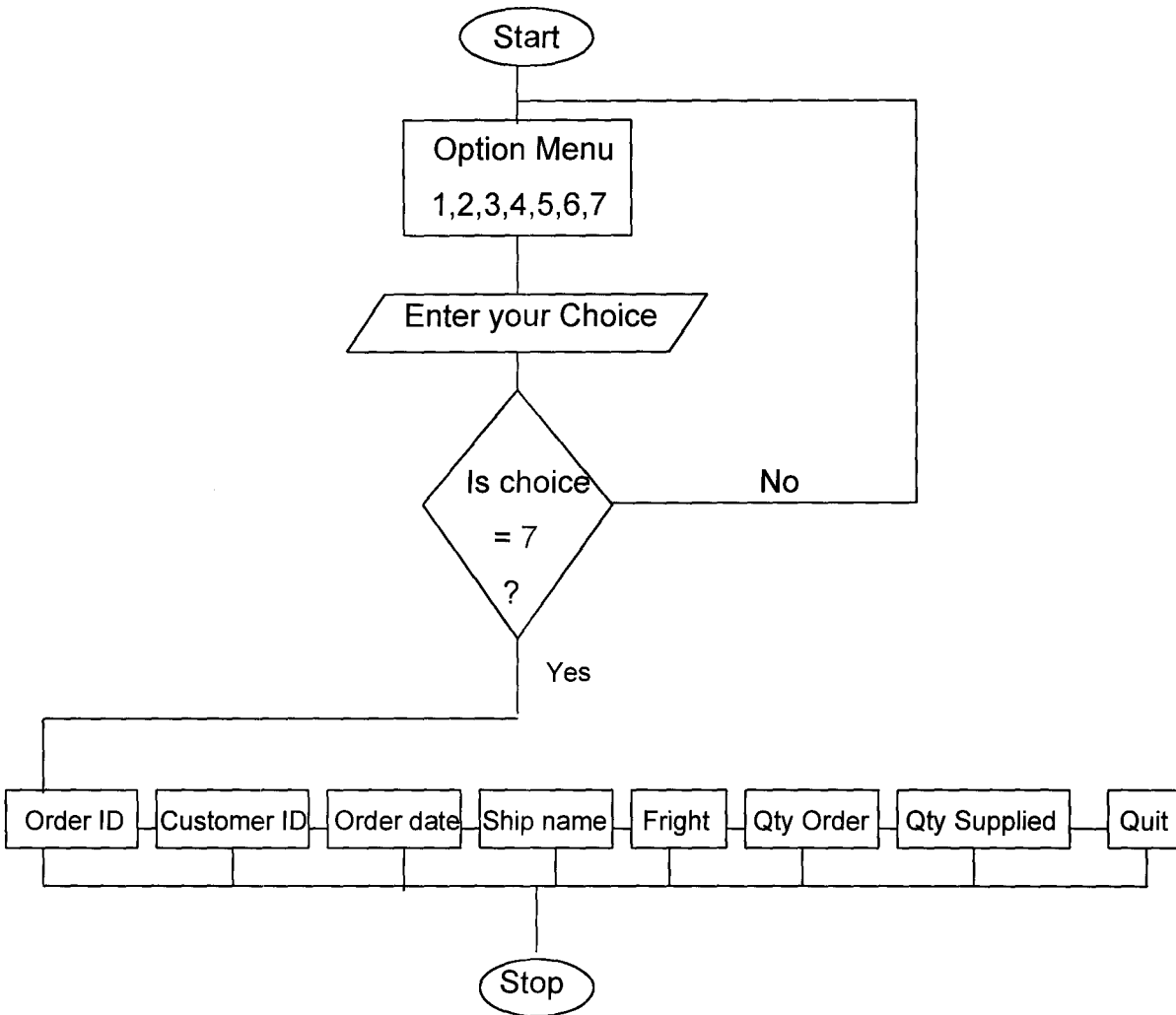
Flow Chart for Main Menu



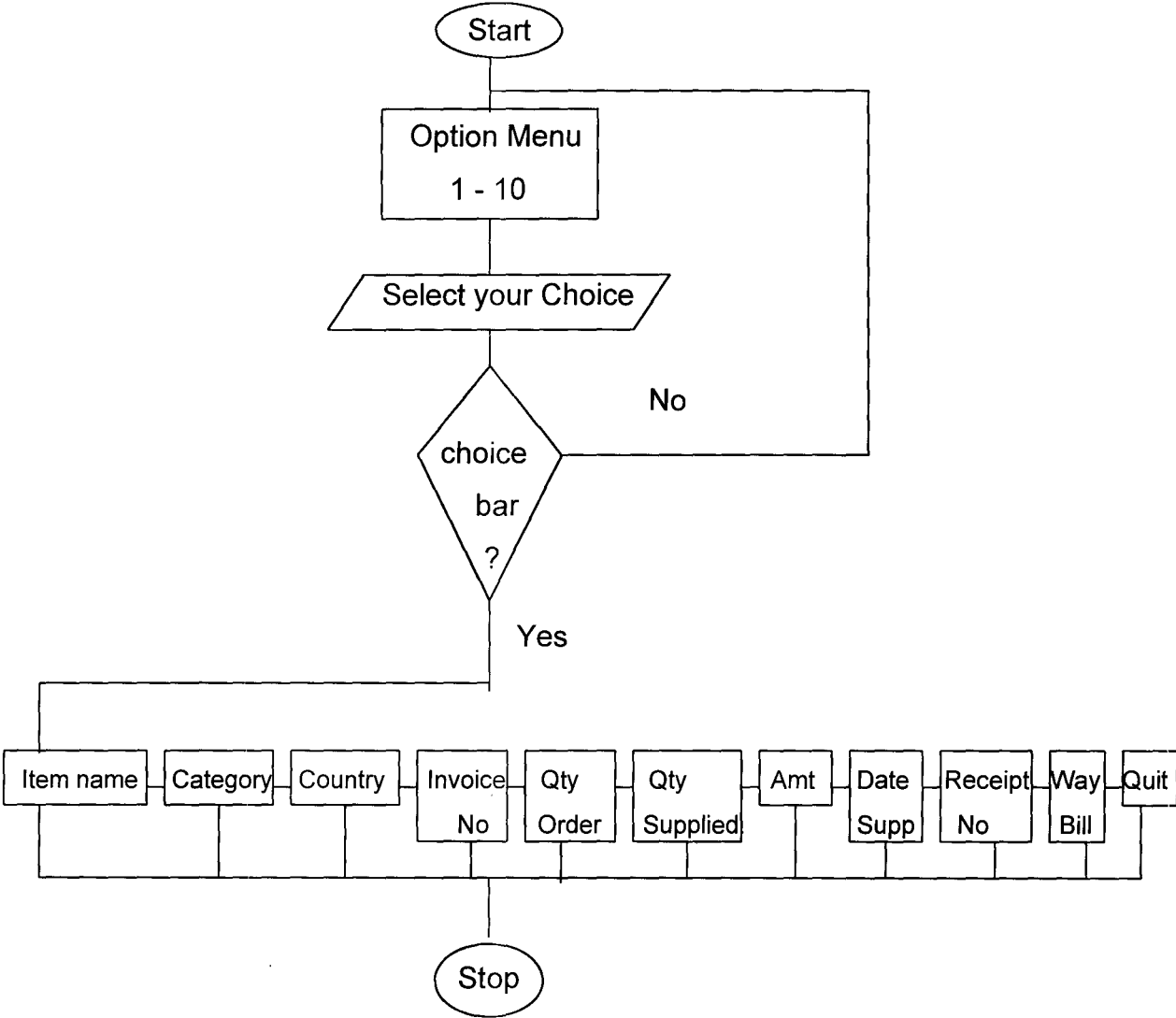
Flow Chart for Inventory information



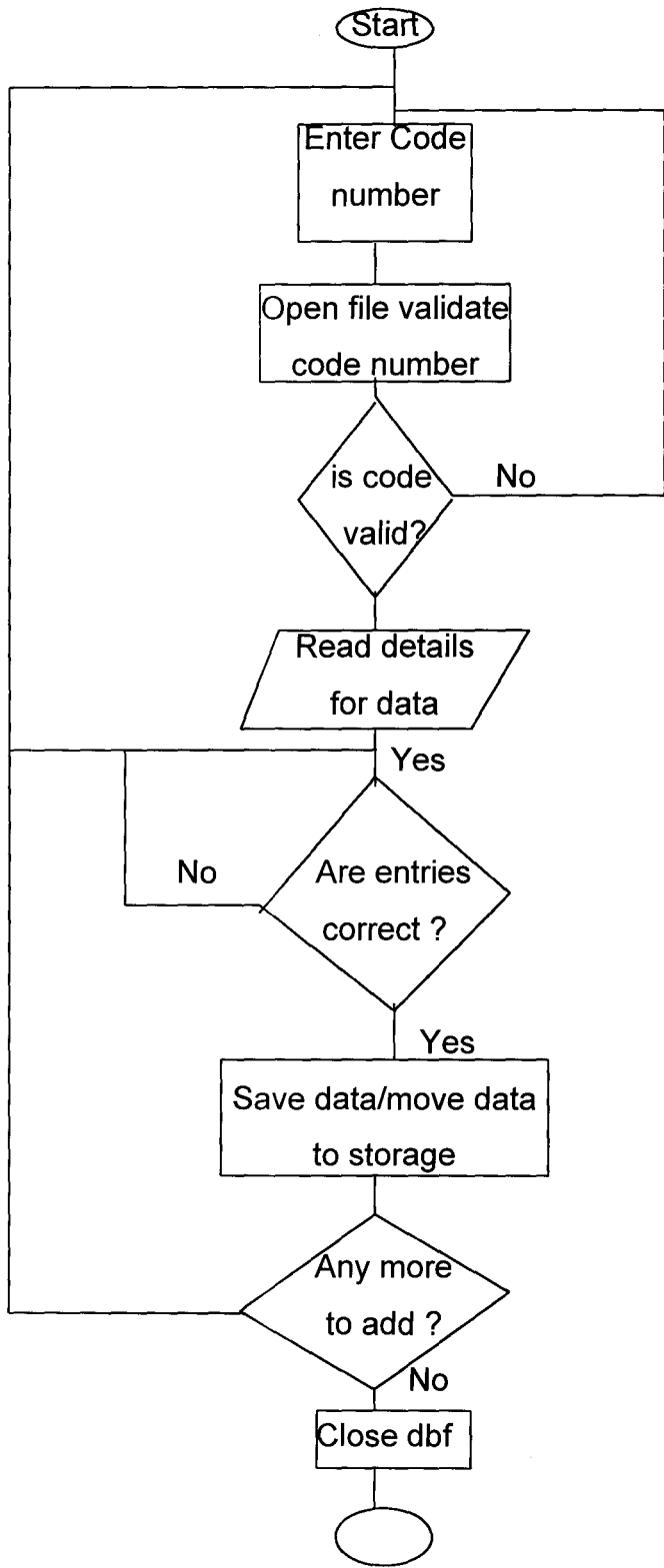
Flow Chart for Order information



Flow Chart for the Supply of product information

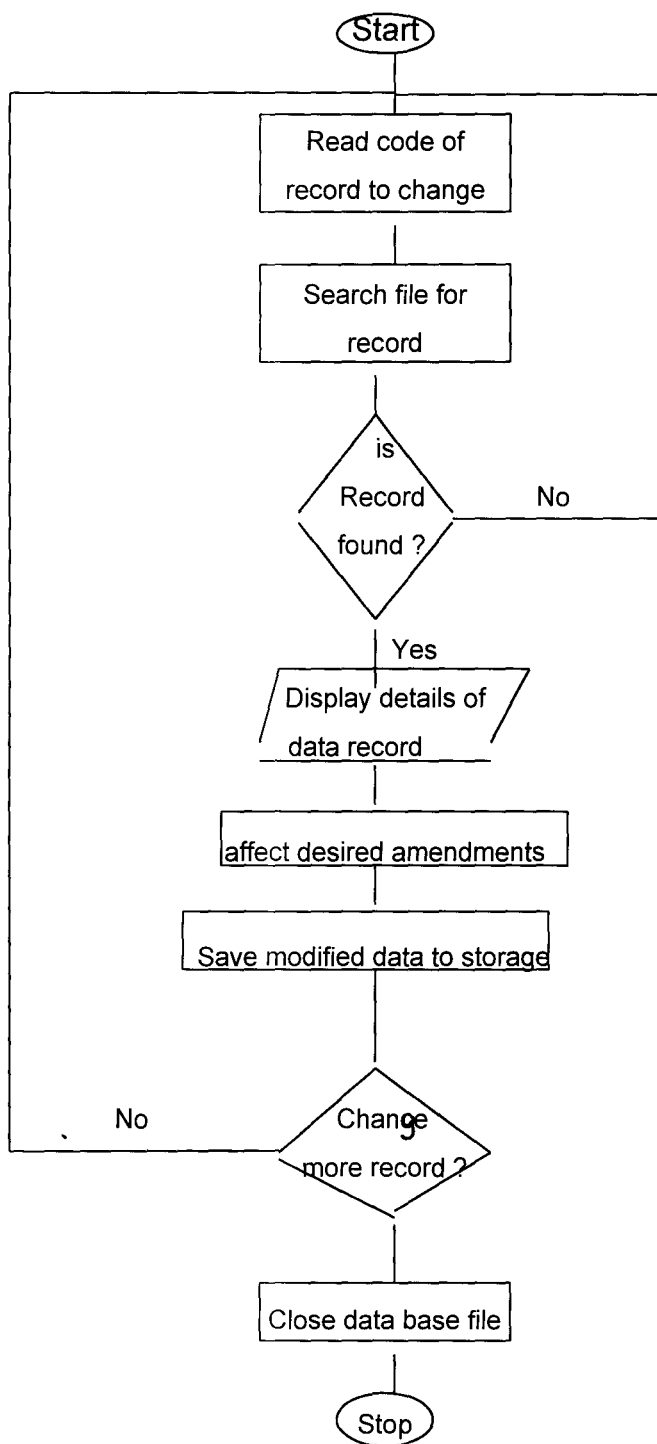


Flow Chart for Addition of records



Stop

Flow Chart for Modification/Change of data.



- (3) Type set default to A: enter and this changes the C: drive.
- (4) Type DO BUSINESS and press enter;
- (5) This takes you to the main menu screen, and here, the user can select the option of choice with the following horizontal menu bar Employees
 - (1) Employees
 - (2) Customer
 - (3) Suppliers
 - (4) Inventory
 - (5) Orders
 - (6) Supply
 - (7) Return and Quit the Dbase:- It returns to the Dbase while quit takes us to the Dos Prompt.

4.2 **IMPLEMENTATION REVIEW**

This is intended to check accuracy and timeliness of the new system with a view to identifying any unusual situation. This will be achieved through the following:-

- a). **IMPACT EVALUATION:-** This determines the effect of the new system on the company under review.
- b). **EVENT LOGGING:-** This entails users recording unusual events that effects the new system.
- c). **ACTITUDE SURVEY:-** This entails sampling the views of the current users towards the new system; which could be positive or otherwise.

9. Noel, K. (1998) An Introduction to Computer Studies,
Cambridge University Press, Great Britain
10. Ogis, O. (1988) Computer User's Directory
11. Rick, H. (1990) Using Dbase IV: Que Corporation, N. College
Ave; Carmel.

PROCEDURE Business

```
CLEAR ALL
SET SCOREBOARD off
SET ESCAPE on
SET CLOCK off
SET STATUS off
SET TALK off
SET EXACT off
SET BELL off
SET CONFIRM ON
```

DO Main_def

```
DO WHILE BAR() <> 10
  CLEAR
  DO Title
  ACTIVATE POPUP mainmenu
ENDDO
```

```
CLOSE ALL
CLEAR
CLEAR ALL
SET SCOREBOARD on
SET ESCAPE on
SET CLOCK on
SET STATUS on
SET TALK on
SET EXACT on
SET BELL on
SET CONFIRM OFF
```

RETURN

*** END MAIN PROCEDURE

PROCEDURE Title

```
CLEAR
@2,20 TO 6,60 DOUBLE
@ 3,27 SAY "MANAGEMENT INFORMATION SYSTEM "
@ 4,27 SAY "FOR IMPORT OPERATION IN"
@ 5,27 SAY "PATED NIG. LTD., ABUJA"

@ 22,22 SAY "WRITTEN BY JUSTINA SYLVANUS AKPAN"
RETURN
```

PROCEDURE Main_def

DEFINE POPUP mainmenu FROM 7,27 TO 20,50;
MESSAGE "Press first letter of menu choice, " + ;

"or highlight and press <Enter>"

DEFINE BAR 1 OF mainmenu PROMPT "===== MAIN MENU =====" SKIP
DEFINE BAR 2 OF mainmenu PROMPT " Databases:" SKIP
DEFINE BAR 3 OF mainmenu PROMPT " EMPLOYEES"
DEFINE BAR 4 OF mainmenu PROMPT " CUSTOMERS"
DEFINE BAR 5 OF mainmenu PROMPT " SUPPLIERS"
DEFINE BAR 6 OF mainmenu PROMPT " INVENTORY"
DEFINE BAR 7 OF mainmenu PROMPT " ORDERS"
DEFINE BAR 8 OF mainmenu PROMPT " SUPPLY"
DEFINE BAR 9 OF mainmenu PROMPT " Utilities:" SKIP
DEFINE BAR 10 OF mainmenu PROMPT " RETURN TO dBASE"
DEFINE BAR 11 OF mainmenu PROMPT " QUIT TO DOS"
ON SELECTION POPUP mainmenu DO Main

RETURN

PROCEDURE Main

DO CASE

CASE BAR() = 3

DO Employee

CASE BAR() = 4

DO Cust

CASE BAR() = 5

DO Supplier

CASE BAR() = 6

DO Goods

CASE BAR() = 7

DO Orders

CASE BAR() = 8

DO SUPPLY

CASE BAR() = 10 .OR. BAR() = 11

RELEASE ALL

SET CLOCK ON

IF BAR() = 10

RETURN TO MASTER

ELSE

QUIT

ENDIF

ENDCASE

RETURN

*** END BUSINESS.PRG

Structure for database: EMPLOYEE.DBF

Field	Field Name	Type	Width	Dec	Index
1	LASTNAME	Character	15		N
2	FIRSTNAME	Character	10		N
3	INITIAL	Character	1		N
4	DEPARTMENT	Character	15		N
5	EMP_ID	Character	11		Y
6	PHONE	Character	13		N
7	SPECIALTY	Character	11		N
8	COMMENTS	Character	40		N
9	AWARDS	Character	15		N
10	DATE_HIRED	Date	8		N
11	DEGREE	Character	3		N
12	EXEMPT	Logical	1		N
13	FULL_TIME	Logical	1		N
14	LABORGRADE	Numeric	1		N
15	RATE	Numeric	4	1	N
16	SALARY	Numeric	9		N
17	TITLE	Character	15		N
18	YRS_EXPER	Numeric	4	1	N
19	ADDRESS1	Character	20		N
20	ADDRESS2	Character	20		N
21	CITY	Character	14		N
22	STATE	Character	10		N
23	ZIP	Character	10		N
** Total **			252		

Structure for database: SUPPLIER.DBF

Field	Field Name	Type	Width	Dec	Index
1	VENDOR_ID	Character	4		Y
2	VENDOR	Character	30		N
3	ADDRESS1	Character	30		N
4	ADDRESS2	Character	30		N
5	CITY	Character	20		N
6	STATE	Character	10		N
7	ZIP	Character	10		N
8	PHONE	Character	13		N
9	CONTACT	Character	30		N
10	PHONE_EXT	Character	4		N
11	TERMS	Character	10		N
12	DISCOUNT	Numeric	2		N
** Total **			194		

5	PO_NUMBER	Character	5		N
6	NOTES	Memo	10		N
7	EMP_ID	Character	11		N
8	INVOICED	Logical	1		N
** Total **			55		

Structure for database: SUPPLY.DBF

Field	Field Name	Type	Width	Dec	Index
1	VENDOR_ID	Character	4		N
2	PART_ID	Character	10		N
3	INV_NUM	Character	10		N
4	QUANTITY	Numeric	3		N
5	DATE_TRANS	Date	8		N
** Total **			36		

→

***** MAIN PROCEDURE *****

PROCEDURE Employee
DO WHILE .T.

STORE "" TO lastname, firstname, initial, address1, address2, city, state
STORE "" TO zip, phone, emp_id, specialty, degree, awards, comments
STORE "" TO department, title
STORE 0 TO laborgrade, yrs_exper, salary, rate
STORE .T. TO exempt, full_time
date_hired = { / / }

CLEAR

@8,12 TO 20,60 DOUBLE

@10,15 SAY "[1] ENTER DATA FOR NEW EMPLOYEE "

@12,15 SAY "[2] MODIFY DATA FOR EXISTING EMPLOYEE "

@14,15 SAY "[3] DELETE DATA OF EXISTING EMPLOYEE "

@16,15 SAY "[4] EMPLOYEE REPORT GENERATION "

@18,15 SAY "[5] GO BACK TO MAIN MENU "

MCHOICE=5

@22,15 SAY "ENTER YOUR CHOICE [1 - 5]" GET MCHOICE PICT "9"

READ

DO CASE

CASE MCHOICE = 1

DO ADDREC

CASE MCHOICE = 2

DO MODREC

CASE MCHOICE = 3

DO DELREC

CASE MCHOICE = 4

DO REPREC

CASE MCHOICE = 5

RETURN TO MASTER

ENDCASE

ENDDO

CLEAR

RETURN

*===== end of main procedure

=====

PROCEDURE ADDREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR

DO INIT_FLD

USE EMPLOYEE ORDER EMP_ID

GO TOP

@7, 20 SAY "EMPLOYEE NO:" GET M->EMP_ID PICTURE "999-99-9999"

READ

SEEK(M->EMP_ID)

IF FOUND()

 @16,10 SAY "EMPLOYEE NUMBER ALREADY EXISTS!!!"

ELSE

 CLEAR

 APPEND BLANK

 REPLACE emp_id WITH m->emp_id

 DO BACKGROUND

 @14,21 SAY emp_id

 DO GET_DATA

 DO REPL_FLD

ENDIF

@24,10 SAY "ENTER MORE DATA? (Y/N): " GET ANS PICT "X"

READ

ENDDO

CLOSE ALL

RETURN

PROCEDURE MODREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR

DO INIT_FLD

USE EMPLOYEE ORDER EMP_ID

GO TOP

@7, 20 SAY "EMPLOYEE NO:" GET M->EMP_ID PICTURE "999-99-9999"

READ

SEEK(M->EMP_ID)

IF .NOT. FOUND()

 @16,10 SAY "EMPLOYEE NUMBER DOES NOT EXIST!!!"

ELSE

CLEAR
DO BACKGROUND
@14,21 SAY emp_id
DO LOAD_FLD

DO GET_DATA
DO REPL_FLD

ENDIF

@24,10 SAY "EDIT MORE DATA? (Y/N): " GET ANS PICT "X"

READ
ENDDO

CLOSE ALL
RETURN

PROCEDURE DELREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR
DO INIT_FLD
USE EMPLOYEE ORDER EMP_ID
GO TOP

@7, 20 SAY "EMPLOYEE NO:" GET M->EMP_ID PICTURE "999-99-9999"

READ
SEEK(M->EMP_ID)
IF .NOT. FOUND()

@16,10 SAY "EMPLOYEE NUMBER DOES NOT EXIST!!!"

ELSE

CLEAR
DO BACKGROUND
@14,21 SAY emp_id
DO LOAD_FLD
DO SHOW_DATA

ANS = "N"

@24,10 SAY "DELETE THIS RECORD? (Y/N): " GET ANS PICT "X"

READ
IF ANS \$ "yY"
DELETE

```
PACK
ENDIF
ENDIF
ANS="Y"
@24,10 SAY "DELETE MORE DATA? (Y/N): " GET ANS PICT "X"
READ
ENDDO
```

```
CLOSE ALL
RETURN
```

```
*****
```

```
PROCEDURE REPREC
CLEAR
CLOSE ALL
USE EMPLOYEE ORDER EMP_ID
GO TOP
@24,10 SAY "PRESS ESCAPE KEY TO GO BACK TO EMPLOYEE MENU"
DEFINE WINDOW EMPLOYEE FROM 2,2 TO 22,78 DOUBLE
ACTIVATE WINDOW EMPLOYEE
BROWSE NOAPPEND NOEDIT NODELETE
DEACTIVATE WINDOW EMPLOYEE
CLEAR WINDOWS
CLOSE ALL
RETURN
```

```
*****8
```

```
PROCEDURE Init_fld
initial = " "
STORE SPACE(20) TO address1, address2
STORE SPACE(10) TO firstname, zip
STORE SPACE(15) TO lastname, department, title, awards
STORE SPACE(11) TO emp_id, specialty
STORE 0 TO laborgrade, yrs_exper, salary, rate
STORE .T. TO exempt, full_time
city = SPACE(14)
state = SPACE(10)
phone = SPACE(13)
degree = SPACE(3)
comments = SPACE(40)
date_hired = { / / }
RETURN
```

```

@ 3,30 SAY "EMPLOYEE DATABASE"
@ 5, 8 SAY "LAST NAME:"
@ 5,37 SAY "FIRST:"
@ 5,58 SAY "."
@ 8, 8 SAY "ADDRESS:"
@ 9, 8 SAY "CITY:"
@ 9,37 SAY "STATE:"
@ 10, 8 SAY "ZIP:"
@ 10,37 SAY "PHONE:"
@ 12, 8 SAY "DEPARTMENT:"
@ 12,37 SAY "TITLE:"
@ 13,37 SAY "SPECIALTY:"
@ 14, 8 SAY "EMPLOYEE NO:"
@ 14,37 SAY "HIRE DATE:"
@ 15,37 SAY "FULL TIME:"
@ 16,37 SAY "EXEMPT:"
@ 17,37 SAY "LABOR GRADE:"
@ 18, 8 SAY "SALARY: $"
@ 18,37 SAY "COMMISSION RATE:"
@ 18,59 SAY "%"
@ 19, 8 SAY "DEGREE:"
@ 19,37 SAY "YEARS EXPERIENCE:"
@ 20, 8 SAY "AWARDS:"
@ 21, 8 SAY "COMMENTS:"

```

RETURN

PROCEDURE Show_data

```

@ 5,19 SAY lastname
@ 5,44 SAY firstname
@ 5,57 SAY initial
@ 8,17 SAY address1
@ 8,39 SAY address2
@ 9,17 SAY city
@ 9,44 SAY state
@ 10,17 SAY zip
@ 10,44 SAY phone
@ 12,21 SAY department
@ 12,44 SAY title
@ 13,48 SAY specialty
@ 14,21 SAY emp_id
@ 14,48 SAY date_hired
@ 15,48 SAY full_time PICTURE "Y"
@ 16,48 SAY exempt PICTURE "Y"
@ 17,50 SAY laborgrade PICTURE "9"
@ 18,19 SAY salary PICTURE "999,999.99"

```

```
@ 18,55 SAY rate    PICTURE "99.9"  
@ 19,19 SAY degree  
@ 19,55 SAY yrs_exper PICTURE "99.9"  
@ 20,19 SAY awards  
@ 21,19 SAY comments
```

RETURN

PROCEDURE Get_data

```
@ 5,19 GET m->lastname PICTURE "!XXXXXXXXXXXXXXXXX" ;  
    MESSAGE "Enter employee last name"  
@ 5,44 GET m->firstname PICTURE "!XXXXXXXXXX"  
@ 5,57 GET m->initial  PICTURE "!"  
@ 8,17 GET m->address1  
@ 8,39 GET m->address2  
@ 9,17 GET m->city    PICTURE "!XXXXXXXXXXXXXXXXX"  
@ 9,44 GET m->state   PICTURE "!XXXXXXXXXX"  
@ 10,17 GET m->zip  
@ 10,44 GET m->phone  PICTURE "(999)999-9999"  
@ 12,21 GET m->department PICTURE "@M SALES, EXECUTIVE" ;  
    MESSAGE "Press spacebar for Department options"  
@ 12,44 GET m->title  FUNCTION "!"  
@ 13,48 GET m->specialty FUNCTION "!"  
*@ 14,21 GET m->emp_id  PICTURE "999-99-9999"  
@ 14,48 GET m->date_hired FUNCTION "D"  
@ 15,48 GET m->full_time PICTURE "Y" ;  
    WHEN TRIM(m->department) <> "EXECUTIVE"  
@ 16,48 GET m->exempt  PICTURE "Y" ;  
    WHEN TRIM(m->department) <> "EXECUTIVE"  
@ 17,50 GET m->laborgrade PICTURE "9"  
@ 18,19 GET m->salary  PICTURE "999,999.99"  
@ 18,55 GET m->rate    PICTURE "99.9" ;  
    WHEN TRIM(m->department) <> "EXECUTIVE"  
@ 19,19 GET m->degree  PICTURE "!!!"  
@ 19,55 GET m->yrs_exper PICTURE "99.9"  
@ 20,19 GET m->awards  FUNCTION "!"  
@ 21,19 GET m->comments
```

READ

RETURN

```
***** END OF EMPLOYEE.PRG  
*****
```


***** MAIN PROCEDURE *****

PROCEDURE Cust

DO WHILE .T.

STORE "" TO cust_id, category, customer, address1, address2, city, state

STORE "" TO zip, phone, contact, phone_cont, phone_ext, date_last, terms

STORE "" TO comments

CLEAR

@8,12 TO 20,60 DOUBLE

@10,15 SAY "[1] ENTER DATA FOR NEW CUSTOMER "

@12,15 SAY "[2] MODIFY DATA FOR EXISTING CUSTOMER "

@14,15 SAY "[3] DELETE DATA OF EXISTING CUSTOMER "

@16,15 SAY "[4] CUSTOMER REPORT GENERATION "

@18,15 SAY "[5] GO BACK TO MAIN MENU "

MCHOICE=5

@22,15 SAY "ENTER YOUR CHOICE [1 - 5]" GET MCHOICE PICT "9"

READ

DO CASE

CASE MCHOICE = 1

DO ADDREC

CASE MCHOICE = 2

DO MODREC

CASE MCHOICE = 3

DO DELREC

CASE MCHOICE = 4

DO REPREC

CASE MCHOICE = 5

RETURN TO MASTER

ENDCASE

ENDDO

CLEAR

RETURN

*===== end of main procedure

PROCEDURE ADDREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR

DO INIT_FLD

USE CUST ORDER CUST_ID

GO TOP

```
@7, 20 SAY "NEW CUSTOMER NO:" GET M->CUST_ID PICTURE "XXXXXX"
```

```
READ
```

```
SEEK(M->CUST_ID)
```

```
IF FOUND()
```

```
    @16,10 SAY "CUSTOMER NUMBER ALREADY EXISTS!!!"
```

```
ELSE
```

```
    CLEAR
```

```
    APPEND BLANK
```

```
    REPLACE CUST_id WITH m->CUST_id
```

```
    DO BACKGROUND
```

```
    @6,21 SAY CUST_id
```

```
    DO GET_DATA
```

```
    DO REPL_FLD
```

```
ENDIF
```

```
@24,14 SAY "ENTER MORE DATA? (Y/N): " GET ANS PICT "X"
```

```
READ
```

```
ENDDO
```

```
CLOSE ALL
```

```
RETURN
```

```
PROCEDURE MODREC
```

```
ANS = "Y"
```

```
DO WHILE ANS $ "Yy"
```

```
    CLEAR
```

```
    DO INIT_FLD
```

```
    USE CUST ORDER CUST_ID
```

```
    GO TOP
```

```
@7, 20 SAY "CUSTOMER NO:" GET M->CUST_ID PICTURE "XXXXXX"
```

```
READ
```

```
SEEK(M->CUST_ID)
```

```
IF .NOT. FOUND()
```

```
    @16,10 SAY "CUSTOMER NUMBER DOES NOT EXIST!!!"
```

```
ELSE
```

```
    CLEAR
```

```
    DO BACKGROUND
```

```
    @6,21 SAY CUST_id
```

```
    DO LOAD_FLD
```

```
    DO GET_DATA
```

```
DO REPL_FLD
ENDIF
```

```
@24,14 SAY "EDIT MORE DATA? (Y/N): " GET ANS PICT "X"
READ
ENDDO
```

```
CLOSE ALL
RETURN
```

```
*****
```

```
PROCEDURE DELREC
ANS = "Y"
```

```
DO WHILE ANS $ "Yy"
CLEAR
DO INIT_FLD
USE CUST ORDER CUST_ID
GO TOP
```

```
@7, 20 SAY "CUSTOMER NO:" GET M->CUST_ID PICTURE "XXXXXX"
READ
SEEK(M->CUST_ID)
IF .NOT. FOUND()
```

```
    @16,10 SAY "CUSTOMER NUMBER DOES NOT EXIST!!!"
```

```
ELSE
```

```
    CLEAR
    DO BACKGROUND
    @6,21 SAY CUST_ID
    DO LOAD_FLD
    DO SHOW_DATA
```

```
    ANS = "N"
```

```
    @24,14 SAY "DELETE THIS RECORD? (Y/N): " GET ANS PICT "X"
```

```
    READ
```

```
    IF ANS $ "yY"
```

```
        DELETE
```

```
        PACK
```

```
    ENDIF
```

```
ENDIF
```

```
ANS="Y"
```

```
@24,14 SAY "DELETE MORE DATA? (Y/N): " GET ANS PICT "X"
```

```
READ
```

ENDDO

CLOSE ALL
RETURN

PROCEDURE REPREC
CLEAR
CLOSE ALL
USE CUST ORDER CUST_ID
GO TOP
@24,14 SAY "PRESS ESCAPE KEY TO GO BACK TO CUSTOMER MENU"
DEFINE WINDOW CUST FROM 2,2 TO 22,78 DOUBLE
ACTIVATE WINDOW CUST
BROWSE NOAPPEND NOEDIT NODELETE
DEACTIVATE WINDOW CUST
CLEAR WINDOWS
CLOSE ALL
RETURN

*****8

PROCEDURE Init_flg
STORE SPACE(30) TO customer, address1
STORE SPACE(20) TO city, contact, comments
STORE SPACE(10) TO zip, terms
STORE SPACE(13) TO phone, phone_cont
state = SPACE(10)
cust_id = SPACE(6)
category = SPACE(15)
address2 = SPACE(25)
phone_ext = SPACE(4)
date_last = { // }
RETURN

PROCEDURE Load_flg
cust_id = cust_id
category = category
customer = customer
address1 = address1
address2 = address2
city = city

```
state    = state
zip      = zip
phone    = phone
contact  = contact
phone_cont = phone_cont
phone_ext = phone_ext
date_last = date_last
terms    = terms
comments = comments
RETURN
```

PROCEDURE Repl_flg

```
* Replace database fields with values of current memory variables
REPLACE cust_id WITH m->cust_id, category WITH m->category, ;
customer WITH m->customer,address1 WITH m->address1, ;
address2 WITH m->address2,city WITH m->city, state WITH m->state
REPLACE zip WITH m->zip, phone WITH m->phone,;
contact WITH m->contact,phone_cont WITH m->phone_cont,;
phone_ext WITH m->phone_ext,date_last WITH m->date_last, ;
terms WITH m->terms,comments WITH m->comments
```

```
RETURN
```

PROCEDURE BackgrOUnd

```
CLEAR
```

```
@3,5 TO 22,70 DOUBLE
```

```
@2,28 TO 4,50 DOUBLE
```

```
@ 3,30 SAY "CUSTOMER DATABASE"
@ 6, 8 SAY "CUSTOMER NO:"
@ 6,34 SAY "CATEGORY:"
@ 9, 8 SAY "NAME:"
@ 10, 8 SAY "ADDRESS:"
@ 12, 8 SAY "CITY:"
@ 13, 8 SAY "STATE:"
@ 13,20 SAY "ZIP:"
@ 14, 8 SAY "PHONE:"
@ 16, 8 SAY "CONTACT:"
@ 17, 8 SAY "PHONE:"
@ 17,31 SAY "EXTENSION:"
@ 18, 8 SAY "LAST CONTACT DATE:"
@ 19, 8 SAY "TERMS:"
@ 19,31 SAY "COMMENT:"
```

```
RETURN
```

PROCEDURE Show_data

- @ 6,21 SAY cust_id
- @ 6,44 SAY category
- @ 9,17 SAY customer
- @ 10,17 SAY address1
- @ 11,17 SAY address2
- @ 12,17 SAY city
- @ 13,17 SAY state
- @ 13,25 SAY zip
- @ 14,17 SAY phone
- @ 16,17 SAY contact
- @ 17,17 SAY phone_cont
- @ 17,42 SAY phone_ext
- @ 18,27 SAY date_last
- @ 19,17 SAY terms
- @ 19,40 SAY comments

RETURN

PROCEDURE Get_data

- * @ 6,17 GET m->cust_id PICTURE "!99999" ;
- * VALID Duplicat(&key.) ;
- * ERROR "Invalid customer ID number; please re-enter" ;
- * MESSAGE "Enter a six digit customer ID beginning " + ;
- * "with a letter, or Esc to quit"
- @ 6,44 GET m->category ;
PICTURE "@M ARCHITECTS, CONSULTANTS, CONTRACTORS, LEGAL" ;
MESSAGE "Press spacebar for Category choices"
- @ 9,17 GET m->customer FUNCTION "!" ;
MESSAGE "Enter name of customer"
- @ 10,17 GET m->address1
- @ 11,17 GET m->address2
- @ 12,17 GET m->city PICTURE "!XXXXXXXXXXXXXXXX"
- @ 13,17 GET m->state PICTURE "!XXXXXXXXXX"
- @ 13,25 GET m->zip
- @ 14,17 GET m->phone PICTURE "(999)999-9999"
- @ 16,17 GET m->contact FUNCTION "!" ;
MESSAGE "Enter name of contact"
- @ 17,17 GET m->phone_cont PICTURE "(999)999-9999"
- @ 17,42 GET m->phone_ext PICTURE "9999" ;
MESSAGE "Enter phone extension"
- @ 18,27 GET m->date_last FUNCTION "D" ;
MESSAGE "Enter date that customer was last contacted"
- @ 19,17 GET m->terms PICTURE "@M CASH, NET 30, NET 45" ;
MESSAGE "Press spacebar to see Terms choices"
- @ 19,40 GET m->comments FUNCTION "!" ;
MESSAGE "Enter any comments"

READ
RETURN

***** END OF CUST.PRG

***** MAIN PROCEDURE *****

PROCEDURE SUPPLIER

DO WHILE .T.

CLOSE ALL

CLOSE DATA

discount = 0

STORE "" TO vendor_id, vendor, address1, address2, city, state

STORE "" TO zip, phone, contact, phone_ext, terms

CLEAR

@8,12 TO 20,60 DOUBLE

@10,15 SAY "[1] ENTER DATA FOR NEW SUPPLIER "

@12,15 SAY "[2] MODIFY DATA FOR EXISTING SUPPLIER "

@14,15 SAY "[3] DELETE DATA OF EXISTING SUPPLIER "

@16,15 SAY "[4] SUPPLIER REPORT GENERATION "

@18,15 SAY "[5] GO BACK TO MAIN MENU "

MCHOICE=5

@22,15 SAY "ENTER YOUR CHOICE [1 - 5]" GET MCHOICE PICT "9"

READ

DO CASE

CASE MCHOICE = 1

DO ADDREC

CASE MCHOICE = 2

DO MODREC

CASE MCHOICE = 3

DO DELREC

CASE MCHOICE = 4

DO REPREC

CASE MCHOICE = 5

RETURN TO MASTER

ENDCASE

ENDDO

CLEAR

RETURN

*===== end of main procedure

PROCEDURE ADDREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR

DO INIT_FLD

USE SUPPLIER ORDER VENDOR_ID

GO TOP

@7, 20 SAY "NEW SUPPLIER NO:" GET M->VENDOR_ID PICTURE "9999"

READ

SEEK(M->VENDOR_ID)

IF FOUND()

 @16,10 SAY "SUPPLIER NUMBER ALREADY EXISTS!!!"

ELSE

 CLEAR

 APPEND BLANK

 REPLACE VENDOR_id WITH m->VENDOR_id

 DO BACKGROUND

 @6,25 SAY VENDOR_id

 DO GET_DATA

 DO REPL_FLD

ENDIF

@24,14 SAY "ENTER MORE DATA? (Y/N): " GET ANS PICT "X"

READ

ENDDO

CLOSE DATA

CLOSE ALL

RETURN

PROCEDURE MODREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

 CLEAR

 DO INIT_FLD

 USE SUPPLIER ORDER VENDOR_ID

 GO TOP

@7, 20 SAY "SUPPLIER NO:" GET M->VENDOR_ID PICTURE "9999"

READ

SEEK(M->VENDOR_ID)

IF .NOT. FOUND()

 @16,10 SAY "SUPPLIER NUMBER DOES NOT EXIST!!!"

ELSE

 CLEAR

 DO BACKGROUND

 @6,25 SAY VENDOR_id

 DO LOAD_FLD

```
DO GET_DATA
DO REPL_FLD
ENDIF
```

```
@24,14 SAY "EDIT MORE DATA? (Y/N): " GET ANS PICT "X"
READ
ENDDO
```

```
CLOSE DATA
CLOSE ALL
RETURN
```

```
*****
```

```
PROCEDURE DELREC
ANS = "Y"
```

```
DO WHILE ANS $ "Yy"
CLEAR
DO INIT_FLD
USE SUPPLIER ORDER VENDOR_ID
GO TOP
```

```
@7, 20 SAY "SUPPLIER NO:" GET M->VENDOR_ID PICTURE "9999"
READ
SEEK(M->VENDOR_ID)
IF .NOT. FOUND()
```

```
    @16,10 SAY "SUPPLIER NUMBER DOES NOT EXIST!!!"
ELSE
    CLEAR
    DO BACKGROUND
    @6,25 SAY VENDOR_id
    DO LOAD_FLD
    DO SHOW_DATA
```

```
    ANS = "N"
    @24,14 SAY "DELETE THIS RECORD? (Y/N): " GET ANS PICT "X"
    READ
    IF ANS $ "yY"
        DELETE
        PACK
    ENDIF
ENDIF
ANS="Y"
```

```
@24,14 SAY "DELETE MORE DATA? (Y/N): " GET ANS PICT "X"  
READ  
ENDDO
```

```
CLOSE ALL  
RETURN
```

```
*****
```

```
PROCEDURE REPREC  
CLEAR  
CLOSE ALL  
USE SUPPLIER ORDER VENDOR_ID  
GO TOP  
@24,14 SAY "PRESS ESCAPE KEY TO GO BACK TO SUPLIER MENU"  
DEFINE WINDOW SUPPLIER FROM 2,2 TO 22,78 DOUBLE  
ACTIVATE WINDOW SUPPLIER  
BROWSE NOAPPEND NOEDIT NODELETE  
DEACTIVATE WINDOW SUPPLIER  
CLEAR WINDOWS  
CLOSE ALL  
RETURN
```

```
*****8
```

```
PROCEDURE Init_flg  
STORE SPACE(4) TO vendor_id,phone_ext  
STORE SPACE(30) TO vendor, address1, address2, contact  
terms = SPACE(15)  
discount = 0  
city = SPACE(20)  
state = SPACE(10)  
zip = SPACE(10)  
phone = SPACE(13)  
RETURN
```

```
PROCEDURE Load_flg  
vendor_id = vendor_id  
vendor = vendor  
address1 = address1  
address2 = address2
```

```
city    = city
state   = state
zip     = zip
phone   = phone
contact = contact
phone_ext = phone_ext
terms   = terms
discount = discount
RETURN
```

PROCEDURE Repl_flg

```
REPLACE vendor_id WITH m->vendor_id,vendor WITH m->vendor, ;
address1 WITH m->address1,address2 WITH m->address2, ;
city WITH m->city,state WITH m->state, ;
zip WITH m->zip,phone WITH m->phone, ;
contact WITH m->contact,phone_ext WITH m->phone_ext, ;
terms WITH m->terms,discount WITH m->discount
```

RETURN

PROCEDURE BackgrOUnd

CLEAR

@3,5 TO 22,70 DOUBLE

@2,28 TO 4,50 DOUBLE

```
@ 3,30 SAY "VENDORS DATABASE"
@ 6, 10 SAY "VENDOR NUMBER:"
@ 9, 10 SAY "NAME:"
@ 10, 10 SAY "ADDRESS:"
@ 12, 10 SAY "CITY:"
@ 13, 10 SAY "STATE:"
@ 13,34 SAY "ZIP:"
@ 15, 10 SAY "CONTACT:"
@ 16, 10 SAY "PHONE:"
@ 16,34 SAY "EXTENSION:"
@ 17, 10 SAY "TERMS:"
@ 18, 10 SAY "DISCOUNT:"
@ 18,23 SAY "%"
```

RETURN

PROCEDURE Show_data

```
@ 6,25 SAY vendor_id
@ 9,19 SAY vendor
@ 10,19 SAY address1
@ 11,19 SAY address2
@ 12,19 SAY city
```

@ 13,19 SAY state
@ 13,39 SAY zip
@ 15,19 SAY contact
@ 16,19 SAY phone
@ 16,45 SAY phone_ext
@ 17,19 SAY terms
@ 18,20 SAY discount PICTURE "99"

RETURN

PROCEDURE Get_data

```
* @ 6,21 GET m->vendor_id PICTURE "9999" ;
*     VALID Duplicat(&key.) ;
*     ERROR "Invalid vendor ID number; please re-enter" ;
*     MESSAGE "Enter a four digit vendor ID number, or Esc to quit"
@ 9,19 GET m->vendor  FUNCTION "!" ;
        MESSAGE "Enter vendor name"
@ 10,19 GET m->address1 FUNCTION "!"
@ 11,19 GET m->address2 FUNCTION "!"
@ 12,19 GET m->city    PICTURE "!XXXXXXXXXXXXXXXX"
@ 13,19 GET m->state   PICTURE "!XXXXXXXXXX"
@ 13,39 GET m->zip
@ 15,19 GET m->contact FUNCTION "!" ;
        MESSAGE "Enter name of vendor contact"
@ 16,19 GET m->phone   PICTURE "(999)999-9999"
@ 16,45 GET m->phone_ext PICTURE "9999" ;
        MESSAGE "Enter phone extension"
@ 17,19 GET m->terms   FUNCTION "!" ;
        MESSAGE "Enter vendor's terms of sale"
@ 18,20 GET m->discount PICTURE "99" ;
        MESSAGE "Enter a discount rate (max. 99)"
```

READ

RETURN

```
***** END OF VENDORS.PRG
*****
```

***** MAIN PROCEDURE *****

PROCEDURE Goods

CLOSE ALL

CLOSE DATA

DO WHILE .T.

STORE "" TO part_id, part_name, descript, vendor_id, comments

STORE 0 TO price, cost, qty_onhand, qty_2order, lead_time

discontin = .F.

CLEAR

@8,12 TO 20,60 DOUBLE

@10,15 SAY "[1] ENTER DATA FOR NEW GOODS "

@12,15 SAY "[2] MODIFY DATA FOR EXISTING GOODS "

@14,15 SAY "[3] DELETE DATA OF EXISTING GOODS "

@16,15 SAY "[4] GOODS REPORT GENERATION "

@18,15 SAY "[5] GO BACK TO MAIN MENU "

MCHOICE=5

@22,15 SAY "ENTER YOUR CHOICE [1 - 5]" GET MCHOICE PICT "9"

READ

DO CASE

CASE MCHOICE = 1

DO ADDREC

CASE MCHOICE = 2

DO MODREC

CASE MCHOICE = 3

DO DELREC

CASE MCHOICE = 4

DO REPREC

CASE MCHOICE = 5

RETURN TO MASTER

ENDCASE

ENDDO

CLEAR

RETURN

*===== end of main procedure

PROCEDURE ADDREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR

DO INIT_FLD

USE GOODS ORDER PART_ID

GO TOP

@7,20 SAY "PART NO:" GET M->PART_ID PICTURE "XXXXXXXXXX"

READ

SEEK(M->PART_ID)

IF FOUND()

 @16,10 SAY "PART NUMBER ALREADY EXISTS!!!"

ELSE

 CLEAR

 APPEND BLANK

 REPLACE PART_id WITH m->PART_id

 DO BACKGROUND

 @6,19 SAY PART_id

 DO GET_DATA

 DO REPL_FLD

ENDIF

@24,14 SAY "ENTER MORE DATA? (Y/N): " GET ANS PICT "X"

READ

ENDDO

CLOSE ALL

RETURN

PROCEDURE MODREC

ANS = "Y"

DO WHILE ANS \$ "Yy"

 CLEAR

 DO INIT_FLD

 USE GOODS ORDER PART_ID

 GO TOP

@7,20 SAY "PART NO.:" GET M->PART_ID PICTURE "XXXXXXXXXX"

READ

SEEK(M->PART_ID)

IF .NOT. FOUND()

 @16,10 SAY "PART NUMBER DOES NOT EXIST!!!"

ELSE

 CLEAR

 DO BACKGROUND

 @6,19 SAY PART_id

```
DO LOAD_FLD

DO GET_DATA
DO REPL_FLD
ENDIF
```

```
@24,14 SAY "EDIT MORE DATA? (Y/N): " GET ANS PICT "X"
READ
ENDDO
```

```
CLOSE ALL
RETURN
```

```
*****
```

```
PROCEDURE DELREC
ANS = "Y"
```

```
DO WHILE ANS $ "Yy"
CLEAR
DO INIT_FLD
USE GOODS ORDER PART_ID
GO TOP
```

```
@7, 20 SAY "PART NO:" GET M->PART_ID PICTURE "XXXXXXXXXX"
READ
SEEK(M->PART_ID)
IF .NOT. FOUND()
```

```
    @16,10 SAY "PART NUMBER DOES NOT EXIST!!!"
ELSE
```

```
    CLEAR
    DO BACKGROUND
    @6,19 SAY PART_id
    DO LOAD_FLD
    DO SHOW_DATA
```

```
    ANS = "N"
    @24,14 SAY "DELETE THIS RECORD? (Y/N): " GET ANS PICT "X"
    READ
    IF ANS $ "yY"
        DELETE
        PACK
    ENDIF
```

```
ENDIF
ANS="Y"
```



```
@24,14 SAY "DELETE MORE DATA? (Y/N): " GET ANS PICT "X"  
READ  
ENDDO
```

```
CLOSE ALL  
RETURN
```

```
*****
```

```
PROCEDURE REPREC  
CLEAR  
CLOSE ALL  
USE GOODS ORDER PART_ID  
GO TOP  
@24,14 SAY "PRESS ESCAPE KEY TO GO BACK TO GOODS MENU"  
DEFINE WINDOW GOODS FROM 2,2 TO 22,78 DOUBLE  
ACTIVATE WINDOW GOODS  
BROWSE NOAPPEND NOEDIT NODELETE  
DEACTIVATE WINDOW GOODS  
CLEAR WINDOWS  
CLOSE ALL  
RETURN
```

```
*****8
```

```
PROCEDURE Init_fld  
  part_id = SPACE(10)  
  STORE SPACE(30) TO part_name, descript, comments  
  STORE 0 TO qty_onhand, cost, price, qty_2order, lead_time  
  vendor_id = SPACE(4)  
RETURN
```

```
PROCEDURE Load_fld  
  part_id = part_id  
  part_name = part_name  
  descript = descript  
  qty_onhand = qty_onhand  
  cost = cost  
  price = price  
  qty_2order = qty_2order  
  vendor_id = vendor_id  
  lead_time = lead_time
```

```
comments = comments
RETURN
```

```
PROCEDURE Repl_fld
```

```
REPLACE part_id WITH m->part_id, part_name WITH m->part_name, ;
descript WITH m->descript, qty_onhand WITH m->qty_onhand, ;
cost WITH m->cost, price WITH m->price, ;
qty_2order WITH m->qty_2order, vendor_id WITH m->vendor_id, ;
lead_time WITH m->lead_time, comments WITH m->comments
RETURN
```

```
PROCEDURE BackgrOUnd
```

```
CLEAR
```

```
@3,5 TO 22,70 DOUBLE
```

```
@2,25 TO 4,54 DOUBLE
```

```
@ 3,27 SAY "GOODS (INVENTORY) DATABASE"
```

```
@ 6, 8 SAY "PART NO.:"
```

```
@ 9, 8 SAY "NAME:"
```

```
@ 10, 8 SAY "DESCRIPTION:"
```

```
@ 11, 8 SAY "SALES PRICE:"
```

```
@ 12, 8 SAY "QUANTITY ON HAND:"
```

```
@ 12,36 SAY "DISCONTINUED:"
```

```
@ 14, 8 SAY "VENDOR NUMBER:"
```

```
@ 15, 8 SAY "COST:  $"
```

```
@ 16, 8 SAY "QUANTITY TO ORDER:"
```

```
@ 16,33 SAY "(minimum/batch)"
```

```
@ 17, 8 SAY "LEAD TIME:"
```

```
@ 17,24 SAY "(in days)"
```

```
@ 18, 8 SAY "COMMENTS:"
```

```
RETURN
```

```
PROCEDURE Show_data
```

```
@ 6,19 SAY part_id
```

```
@ 9,21 SAY part_name
```

```
@ 10,21 SAY descript
```

```
@ 11,21 SAY price PICTURE "99,999.99"
```

```
@ 12,26 SAY qty_onhand PICTURE "9,999"
```

```
@ 12,50 SAY discontinu PICTURE "Y"
```

```
@ 14,23 SAY vendor_id
```

```
@ 15,20 SAY cost PICTURE "99,999.99"
```

```
@ 16,27 SAY qty_2order PICTURE "9,999"
```

```
@ 17,20 SAY lead_time PICTURE "999"
```

```
@ 18,20 SAY comments
```

```
RETURN
```

PROCEDURE Get_data

```
* @ 6,15 GET m->part_id FUNCTION "!" ;
*     VALID Duplicat(&key.);
*     ERROR "Duplicate part ID number, please re-enter" ;
*     MESSAGE "Enter a part ID number, or Esc to quit"
@ 9,21 GET m->part_name FUNCTION "!" ;
    MESSAGE "Enter the name of the part"
@ 10,21 GET m->descript FUNCTION "!" ;
    MESSAGE "Enter a description of the part"
@ 11,21 GET m->price PICTURE "99,999.99" ;
    MESSAGE "Enter the selling price of this part"
@ 12,26 GET m->qty_onhand PICTURE "9,999" ;
    MESSAGE "Enter how many of these parts are in current inventory"
@ 12,50 GET m->discontin PICTURE "Y" ;
    MESSAGE "Is the part now discontinued (Y/N)"
@ 14,23 GET m->vendor_id FUNCTION "9" ;
    VALID Lookupid((m->vendor_id),"Vendors", "Vendor",1) ;
    ERROR "Invalid vendor ID number, please re-enter" ;
    MESSAGE "Enter a vendor ID number, or Esc to quit"
@ 15,20 GET m->cost PICTURE "99,999.99" ;
    MESSAGE "Enter the cost of the part"
@ 16,27 GET m->qty_2order PICTURE "9,999" ;
    MESSAGE "Enter the minimum quantity which can be ordered"
@ 17,20 GET m->lead_time PICTURE "999" ;
    MESSAGE "Enter the lead time before vendor " + ;
            "typically ships the parts"
@ 18,20 GET m->comments FUNCTION "!" ;
    MESSAGE "Enter any comments on this part"
```

READ

RETURN

***** END OF GOODS.PRG

→

***** MAIN PROCEDURE *****

PROCEDURE Orders
CLOSE ALL
CLOSE DATA
DEFINE WINDOW LOOK FROM 6,15 TO 16,65 PANEL
SET NEAR on

STORE "" TO cust_id, po_number, emp_id, part_id
STORE { / / } TO date_trans
part_qty = 0
invoiced = .F.

* Open databases and choose active indexes

SELECT 1
USE Orders
USE Goods ORDER Part_id IN 2
USE Cust ORDER Cust_id IN 3
USE Employee ORDER Emp_id IN 4
GO TOP

CLEAR
ANS = "Y"

DO WHILE ANS \$ "Yy"
CLEAR
DO INIT_FLD

APPEND BLANK
DO BACKGROUND
DO GET_DATA
DO REPL_FLD

@24,10 SAY "ENTER MORE DATA? (Y/N): " GET ANS PICT "X"
READ
ENDDO

CLOSE ALL
CLEAR
RETURN

*=====end of main
procedure=====

@ 12,29 SAY "each"
@ 12,39 SAY "PRICE: \$"
@ 13, 8 SAY "QTY. AVAILABLE:"
@ 13,29 SAY "each"
@ 13,39 SAY "MARGIN:"
@ 13,57 SAY "%"
@ 14, 8 SAY "EMPLOYEE #:"
@ 15, 8 SAY "INVOICED:"
@ 17, 8 SAY "NOTES:"

RETURN

PROCEDURE Get_data

@ 6,22 GET m->cust_id PICTURE "!99999" ;
VALID REQUIRED Lookupid(m->cust_id,"Cust","Customer", 2) ;
ERROR "Invalid customer I.D. number, please re-enter." ;
MESSAGE "Enter a six digit customer ID (beginning with a " + ;
"letter) - Esc to quit"

READ

@ 6,30 SAY Cust->Customer

@ 7,22 GET m->date_trans FUNCTION "D" ;
MESSAGE "Enter date of this order"

@ 7,52 GET m->po_number FUNCTION "!" ;
MESSAGE "Enter customer's P.O. number"

@ 10,22 GET m->part_id FUNCTION "!" ;
VALID REQUIRED Lookupid(m->part_id,"Goods", "Part", 3) ;
ERROR "Invalid part ID number, please re-enter." ;
MESSAGE "Enter a part ID number, or Esc to quit"

READ

@ 11,22 SAY Goods->Part_name
@ 12,48 SAY Goods->Price PICTURE "99,999.99"
@ 13,25 SAY Goods->Qty_onhand PICTURE "999"
@ 13,52 SAY Prof_mgn(Goods->Cost,Goods->Price) ;
PICTURE "99.9"

@ 12,25 GET m->part_qty PICTURE "999" ;
MESSAGE "Enter quantity of parts ordered"

@ 14,20 GET m->emp_id PICTURE "999-99-9999" ;
VALID REQUIRED Lookupid(m->emp_id, "Employee", "Employee", 6) ;
ERROR "Invalid employee ID number, please re-enter." ;

```

MESSAGE "Enter an employee ID number, or Esc to quit"
READ
    @ 14,34 SAY TRIM(Employee->Firstname)+" "+ Employee->Lastname

@ 15,18 GET m->invoiced PICTURE "Y" ;
MESSAGE "Enter whether this order has been invoiced " + ;
        "(usually done by system)"

@ 17,14 GET Notes ;
MESSAGE "Enter notes into memo field, press " + ;
        "Ctrl-Home to enter (Ctrl-End to exit)"

```

READ
RETURN

```

FUNCTION Lookupid
PARAMETERS l_target, look_dbf, look_name, matchchars
NOT_VALID=.F.
IF .NOT. SEEK(l_target,(look_dbf))
    ACTIVATE WINDOW look
    answer = " "
    similar = .F.
    SELECT (look_dbf)
    GO TOP
DO WHILE .NOT. (EOF() .OR. answer $ "rR")
    * Show list of records having identical initial character(s)
    * in ID number
    @ 0,0 SAY "----- DATA ENTRY ERROR: " + look_name + ;
        " ID WAS INVALID -----"
    @ 1,0 SAY "    This is a list of similar " + look_name + ;
        " ID's"
    ?
    listcount = 0
        DO CASE
            && Check which field is being read
            CASE VARREAD() = "CUST_ID"
                SCAN FOR
                LIKE(SUBSTR(l_target,1,matchchars)+"*",cust_id) ;
                WHILE listcount <= 4
                    ? cust_id, customer    && Display a record
                    listcount = listcount + 1    && Increment list counter
                    similar = .T.    && Data found and listed
                ENDSCAN
            CASE VARREAD() = "PART_ID"

```

```

SCAN FOR
LIKE(SUBSTR(l_target,1,matchchars)+"*",part_id) ;
  WHILE listcount <= 4
  ? part_id, SUBSTR(part_name,1,21), ;
    SUBSTR(descript,1,24)
  listcount = listcount + 1  && Increment list counter
  similar = .T.             && Data found and listed
ENDSCAN
CASE VARREAD() = "EMP_ID"
SCAN FOR
LIKE(SUBSTR(l_target,1,matchchars)+"*",emp_id) ;
  WHILE listcount <= 4
  ? emp_id, lastname, firstname && Display a record
  listcount = listcount + 1  && Increment list counter
  similar = .T.             && Data found and listed
ENDSCAN
ENDCASE
ENDDO
DEACTIVATE WINDOW look
SELECT 1                      && Use original dbf
ENDIF
RETURN not_valid = .NOT. FOUND((look_dbf))

```

```

***** END OF ORDERS.PRG
*****

```

→

***** MAIN PROCEDURE *****

PROCEDURE SUPPLY

CLOSE ALL

CLOSE DATA

DEFINE WINDOW LOOK FROM 6,5 TO 16,65 PANEL

SET NEAR on

STORE "" TO VENDOR_id, INV_num, part_id

STORE { / / } TO date_trans

qUANTITY = 0

* Open databases and choose active indexes

SELECT 1

USE SUPPLY

USE Goods ORDER Part_id IN 2

USE SUPPLIER ORDER VENDOR_id IN 3

GO TOP

CLEAR

ANS = "Y"

DO WHILE ANS \$ "Yy"

CLEAR

DO INIT_FLD

APPEND BLANK

DO BACKGROUND

DO GET_DATA

DO REPL_FLD

@24,10 SAY "ENTER MORE DATA? (Y/N): " GET ANS PICT "X"

READ

ENDDO

CLOSE ALL

CLEAR

RETURN

*=====end of main
procedure=====

PROCEDURE Init_fld

VENDOR_id = SPACE(4)


```
@ 7,22 GET m->date_trans FUNCTION "D" ;  
      MESSAGE "Enter date of this order"
```

```
@ 7,52 GET m->INV_num FUNCTION "!" ;  
      MESSAGE "Enter SUPPLIER's INV. number"
```

```
@ 10,22 GET m->part_id FUNCTION "XXXXXXXXXX" ;  
      VALID REQUIRED Lookupid(m->part_id,"Goods", "Part", 2) ;  
      MESSAGE "Enter a part ID number, or Esc to quit"
```

```
READ
```

```
@ 11,22 SAY Goods->Part_name
```

```
@ 12,25 GET m->QUANTITY PICTURE "999" ;  
      MESSAGE "Enter quantity of parts SUPPLIED"
```

```
READ
```

```
REPLACE GOODS->QTY_ONHAND WITH GOODS->QTY_ONHAND + M->QUANTITY
```

```
RETURN
```

```
***** END OF ORDERS.PRG  
*****
```

```
FUNCTION Lookupid
```

```
  PARAMETERS l_target, look_dbf, look_name, matchchars  
  NOT_VALID=.F.
```

```
  IF .NOT. SEEK(l_target,(look_dbf))
```

```
    ACTIVATE WINDOW look
```

```
    answer = " "
```

```
    similar = .F.
```

```
    SELECT (look_dbf)
```

```
    GO TOP
```

```
    * Show list of records having identical initial character(s)
```

```
    * in ID number
```

```
    @ 0,0 SAY "----- DATA ENTRY ERROR: " + look_name + ;
```

```
      " ID WAS INVALID -----"
```

```
    DEACTIVATE WINDOW look
```

```
    SELECT 1          && Use original dbf
```

```
  ENDIF
```

```
RETURN not_valid = .NOT. FOUND((look_dbf))
```

```
***** END OF ORDERS.PRG
```

PATED NIGERIA LIMITED

EMPLOYEE REPORT

<u>REC. NO.</u>	<u>L/ NAME</u>	<u>F/ NAME</u>	<u>DEPT.</u>	<u>EMP. ID.</u>	<u>PHONE</u>	<u>DATE</u>	<u>DEGREE</u>	<u>YRS EXP.</u>	<u>ADD</u>	<u>S</u>
1.	Udoji	Justy	Sales	3333	064/253-5667	01/01/96	B.Sc.	6.0	Bosso	N
2.	Usman	Law	Executive	1522	-	09/12/97	N.C.E.	0.0	Yaba	L
3.	Alex	Mariam	Sales	2424	-	01/08/98	B.Sc.	4.0	Benin	E
4.	Mohammed	Abdul	Executive	7543	754/545-4523	03/03/96	H.N.D.	3.0	Kaduna	K
5.	Akpan	Ofofon	Sales	4832	-	08/08/96	B.Sc.	7.0	Abak	A

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CUSTOMER REPORT

<u>REC. NO.</u>	<u>CUSTOMER</u>	<u>CUST. ID.</u>	<u>CATEGORY</u>	<u>ADDRESS</u>	<u>STATE</u>	<u>PHONE</u>	<u>DATE</u>	<u>PRODUCT</u>
1.	Donatus Mary	101	Leg.	Bosso	Niger	-	01/01/86	Marbles
2.	Okoniyo Mendie	611	Arch.	Kano	Kano	234-234	07/08/97	Mosaic
3.	Ojo Anyangi	450	Cost.	Kaduna	Kaduna	-	11/02/98	T.V.
4.	Ofoniye Akpani	870	Const.	Victoria Island	Lagos	424-2342	03/04/98	Ceramics

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SUPPLIER REPORT

<u>REC. NO.</u>	<u>VENDOR.ID</u>	<u>VENDOR</u>	<u>ADDRESS</u>	<u>STATE</u>	<u>PHONE</u>	<u>DISCOUNT</u>
1.	5354	Tina & Co.	Kaduna	Kaduna	131-2321	Cash
2.	3432	Shehu Umar	Sokoto	Sokoto	213-2136	Cash
3.	3122	G. Cappa	Lagos	Lagos	323-1323	Cash

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GOODS REPORT

<u>REC. NO.</u>	<u>PART. ID.</u>	<u>DATE ORDER</u>	<u>PART. NAME</u>	<u>DESCRIPTION</u>	<u>QTY ORDER</u>	<u>QTY. ON HAND</u>	<u>PRICE</u>	<u>COST</u>
1	6843	11/01/97	A. C.	Sharp	6	3	25.00	0.00
2	5544	09/01/97	Tables	Marble	6	4	322.00	0.00
3	3345	08/11/98	Chairs	Italian	4	2	232.00	0.00

