COMPUTERISATION OF PRICE ANALYSIS

A

CASE STUDY OF

STATE PLANNING COMMISSION, STATISTICS BRANCH, ILORIN. KWARA STATE.

BY

EYITAYO SOFIYAT OLAJIDE
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DEDICATION

This project work is dedicated to the Lord God Almighty. Also to my dear husband and children.

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To God be the glory for all he has done in seeing me through this research work.

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ABSTRACT

This research work was born out of the desire that Price Data are made available at the required time and quality. The emphasis is on the use of electronic data processing, to speed up the analysis stage of Price Statistics which usually cause delay in the dissemination of price information to the ultimate users. The Information generated in this write-up is based on 1993 price data. A database System was developed and reports were generated on monthly, quarterly, yearly average prices and consumer price index by the developed program. Price Relative was analysed to reveal price increase or decrease from year to year using 1989 as the base year.

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CHAPTER ONE

ON PRICE DATA ANALYSIS

1.1 INTRODUCTION

Planning has become a day to day activity of individuals, private companies, Government and nations world wide. It is being engaged in at all levels right from the village to global level either consciously or sub-consciously. A plan, be it for an individual, organisation or Government is as good as nothing, if it is generated from wrong statistics for products or information. Hence, the need for adequate data for proper planning.

Statistical products are mainly products emanating from data available from resources and records of past performance for the benefit of mankind. It is therefore, essential that such data should be sequential, comprehensive and reliable if mankind is to derive maximum benefit from it.

As Statistical applications grew in recognition over the decades as an instrument for planning and development, it becomes necessary for the dynamic of its production to continue to undergo modification so as to meet its socio-economic goals of not just helping to generate wealth through effective planning and monitoring of projects or programmes but to guarantee that such wealth is equitably distributed. Because of this associated growth and increase relevance of Statistics in nation development, it is important not only that demand for statistical products be met but must be seen to be met adequately and promptly.

Statistics is defined as collection, organisation,

presentation, analysis and interpretation of numerical data. Statistics is considered synonymous with figures, that is, facts which can be put into a numerical form e.g. Unemployment Statistics, Agricultural Statistics, Economics Statistics etc. Facts and figure about any phenomenon whether it relates to population, production, national income, profit, birth, death or any other matters are called Statistics.

Price Statistics includes all types of Statistics relating to prices. Prices affect all sectors of the society and as such Price Statistics are regarded as most important economic data reflecting changes in the economy of a Country.

Having realise the huge benefit derivable from facts and figures about prices, it is mandatory for the producer of Statistical products (Statisticians) to liaise with the end-users (Planners) of their products, to know what their needs are, and work towards the satifaction of such needs. The efforts of Statisticians are wasted if the end products (Statistical products) fail to reach the target consumers. Producers of Statistics should and must supply accurate and timely information to their customers to justify their existence. This is possible by improving on data processing methods adopted.

Manual data processing is prone to error, slow, laborious and inadequate in facts generation. Therefore a more sophisticated automation like computer could be used to speed up the release of output which is a valuable tool in management decision making process.

1.2 AIMS AND OBJECTIVES OF THE STUDY

Wrong policy making may result from lack of accuracy of necessary data on which to base decision. Good planning can only be achieved with relevant and accurate data.

One of the major problems that affect timeliness in data delivery is low capacity for processing and analysis of data due to lack of resources and expertee. These twin issues need to be seriously tackled if statistical products is to make any sense. A lot of problems have been associated with statistical data and most especially on lateness in the time of their release, thus rendering them seriously inadequate and sometimes obsolete for effective planning, monitoring and purposeful management of the National economy.

Price analysis entails the use of suitable statistical methods e.g. price relative and price index, to calculate percentage increase in prices and construction of consumer price index. The outcome of this process serves as economic indicators to categories of people such as individual, private Companies, research Institutions, Government etc. The importance of consumer price index to these groups made it crucial for accurate and timely information to be supplied and made available for meaningful decision making.

The aim of this project work is to exploit the available facilities in a digital computer system in the analysis of prices of goods and services that will meet the desires of the various users. Such facilities are accuracy, timeliness, high speed and

large storage capacity that aid data processing. Manual data processing is currently applied in the analysis of this subject. The introduction of computer will go a long way in eliminating the delay, so that, Statisticians can best serve their target consumers in due time.

1.3 IMPORTANCE OF PRICE STATISTICS

Price generally stands for value in exchange of goods. It connote the rate at which goods are exchanged for money. Advantages of Price Statistics can not be over emphasised. It is a tool for strategic planning, policy formulation and economic indicator to various groups.

1. Price Statistics are useful to the Government and the Private employers for adjusting wages and salaries of their employees. When prices rise in the market, the employees put forth a demand for higher wages. In the absence of accurate and adequate prices data, correct decision would be hampered e.g. SAP relief package 1992.

2. Price data are needed to control prices of commodities. Arbitrary increase in prices is an indication for Government to Intervene either by setting up price control board that will monitor and stabilise prices for the benefit of the poor masses.

3. Price data reveal the Inflationary and deflationary pressure and help in taking suitable corrective measures. Price relative is used to compute consumer price index when weight is attach to it. The consumer prices index measures average change in prices of goods and services consumed by households and consequently may be

used as a measure of inflation or deflation. It is also used to evaluate the term of trade.

4. It enables the investors to know areas where judicious investment is possible. For example, share prices in various companies is a reflection of their performance. If shares are issued above the par value (at premium), Investment is good, but if below the par value (at discount), it means the Investors are loosing.

5. Comparative analysis of prices from time to time and from one locality with the other is made possible through authentic Price Statistics.

6. It is used to forecast future prices. This is possible using any suitable statistical method to compute such prices e.g. Time series analysis. It is also used for decision making for individuals, Companies, Government etc, to decide on vital issues that affect them or the nation at large.

7. Price data is used to measure standard of Living of any nation. Household survey shows income and expenditure of individual household and it's consumption pattern. Household consumption pattern studied for a long period of time determines the standard of living of such household. The aggregate, when statistically analysed gives standard of living for a nation.

8. Price Statistics also help in estimating National income e.g. Gross Domestic product (GDP).

However, changes in the prices of different commodities affect people differently and as such, it becomes necessary to compile

different types of Price Statistics as related to all aspect of economy. The type of Price Statistics is determined by the source of data in relation to the price collected. It has been collected and compiled for a few selected commodities from the very early days of the development of modern Statistics. At present the official series of Price Statistics relates to

(i) Retail prices:- These are compiled in our various markets where goods are bought in units at retail prices.

(ii) Wholesale Prices:- These are the amount paid on bulk purchase of goods by the buyers.

(iii) Industrial Prices:- This emanates from the producers of the industrial goods.

(iv) Import and Export Prices:- These are the prices compiled on our import and export goods in our various ports to determine the value of our international trade.

Therefore, price statistics is a catalogue of prices collected from various sources which shows price changes of various commodities over a period of time. It is used for forecasting, controlling and exploring economic situation of any nation.

1.4 PROJECT METHODOLOGY

Data collection stage is one of the problematic area in statistical investigation. Factors militating against this could be inadequate materials, finance and personnel resources. Price data are normally gathered from primary source directly from the market. Observation, interview and bargaining system are methods of collection.

Statistical methods used to facilitate the production of price data analysis is price relative. Price Relative is the price at the current date expressed as a percentage of the price at the base date, which measures percentage change in price of items. The formular is as follows:-

$$\text{Price Relative} = \frac{P1}{Po} \times K$$

Where P1 is the price at current date
Po " " " " base "
K is constant (i.e 100)

Data base Management System (DBMS) is a powerful application software used in any Management Information System (MIS). To manage price data effectively, database system is the best option. The choice of the software is influenced by its flexibility and the objectives of database system which is an advantage over all other methods of data processing. In database environment, maintenance of data integrity, removal of data redundancy, achievement of data integration are possible and data are centrally controlled for security reasons. Database Management System is a high speed filing system that manages the database. Hence a database can be considered as a set of files in a cabinet while the DBMS is a computer programs used for maintaining, and creating the database to extract Information from it. Database has capabilities to add, edit, delete and revise records that meet a specified criterion, queries the database, sorts records and generate formatted report, dBASE IV, an advance series of DBMS is an Instrument in the generation of this report.

1.5 DATA COLLECTION

Collection of data constitutes the first step in a statistical investigation. Utmost care must be exercised in collecting data because they constitute the foundation of statistical analysis. If they are faulty, the conclusion drawn can hardly be dependable. The data may be available from existing published or unpublished sources or else may be collected by the investigator himself. These are referred to as Secondary, Primary data and Statistical survey respectively. Primary data can be collected through the following methods:

(i) Observation
(ii) Sampling
(iii) Interview
(iv) Questionnaire
(v) Information from Correspondents
(vi) Registration
(vii) Enumeration or Census

Combination of the above are used in the collection of price data. Prices of commodities are collected directly from the market by the enumerators. Enumerators visit the Informants, interview them and enter their responses on a schedule or questionnaire which forms the basis of our price analysis. To obtain a desirable result from the prices collected, the following must be put into consideration.

(a) List of various items to be collected e.g. Retail prices of local food items, processed items, building materials,

stationeries etc.

(b) Design a standard questionnaire for each group of items selected.

(c) Decide on various markets and other sources where prices are to be collected.

(d) Price collectors or enumerators must be trained.

(e) Materials for measurement must be provided e.g. scale, standard measuring bowl/bottle etc.

Method of data collection in price statistics is based on bargaining system especially in the market and shops. An enumerator goes to the market with the questionnaire and measuring materials to collect prices from the sellers (Informants). He does that to two or three different sellers which may likely give different or same prices for the same item. The average of these prices is calculated for that unit of item. The frequency of collection depend on the item in question. Some items are collected on weekly or monthly basis, the monthly average is calculated for each item.

Sources of data for Price Statistics are markets, shops, supermarkets, departmental stores, commercial streets, industries, port authorities etc.

1.6 DATA PROCESSING

Data are raw facts about any phenomenon. These could be series of digits and/or letters that represents an idea. Information is an analysed or processed data which is now more meaningful and decision can be made based on it. Data processing

is the manipulation of data, the retention of it and its subsequent retrieval. Data and Information are connected as shown below:-

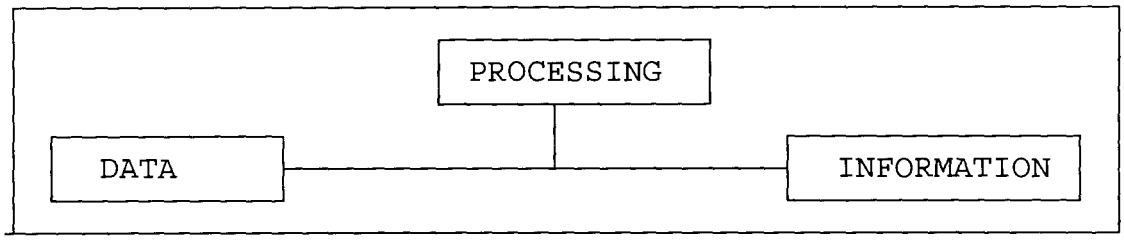


Fig 1.1 DATA AND INFORMATION

1.6.1 METHODS OF DATA PROCESSING

Methods of Data Processing that could be applied in any statistical Analysis are as follows:-

(i) Manual:- This is the processing of data without any Machine except a desk calculator, pencils, rulers, worksheets. This is the oldest method (and currently) used in data analysis in some establishments.

(ii) Mechanical or Electro-Mechanical Device: This generally indicates the use of punched cards equipments.

(iii) Electronic Data Processing:- This means the processing of data by Electronic Computers.

Data Processing consist of three basic steps namely:- Input, Processing and Output. Data are the Inputs while Information are the Outputs.

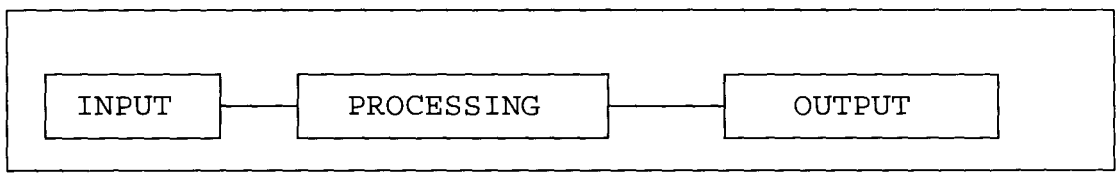


Fig 1.2 DATA PROCESSING

These steps can further be extended to include origination, input, processing, storage, output and distribution. Therefore, an information system is the collection and processing of data to give useful information for decision making.

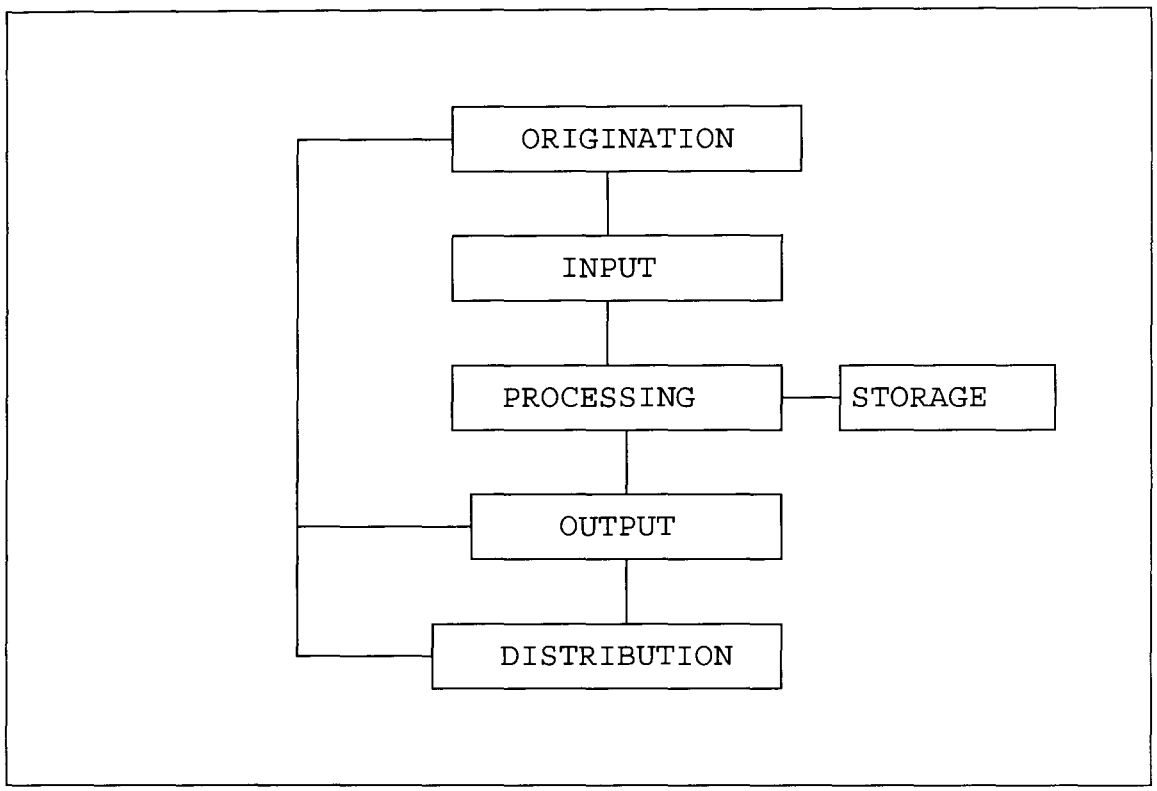


Figure 1.3 DATA PROCESSING EXTENSION

(i). ORIGINATION: This is the collection of original data (Primary data). The original recording of data is called source document.

(ii) INPUT:- This describes the data to be fed into the computer (raw data). It is prepared in a convenient or suitable form for processing. This form varies from one data processing device to another. An electro-Mechanical device employs the use of punched cards while an electronic computer uses magnetic tapes, magnetic disk and terminals/keyboard via the console etc.

(iii) PROCESSING:- Processing is a planned series of actions and operations performed on data using various data processing devices to yield data in a more meaningful form called information.

(iv) STORAGE:- This is the storing of processed data (information) on secondary storage media for future purposes. The two arrows show that the result of the processed data can be stored and retrieved when needed. Therefore this can serve as input data.

(v) OUTPUT:- This is the result of the processed data for the operator. This result could be distributed to the end users of the information or recirculated as input to the processing cycle.

(v) DISTRIBUTION:- This deals with the distribution of the result (information) to the appropriate quarters for decision making. This decision makers are called the end-users of the processed data.

The heart of an Information system is a data processing system, usually a data processing device like a computer for examples, facilitates the quality, speed and accuracy of information.

1.7 DATA MANAGEMENT

The introduction of computers in organisation and the ever-increasing sophistication of data processing system have highlighted the importance of data as one of the most valuable organisational resources. It is from the manipulation and interpretation of data that infomration is generated and, in return, used in the decision making process.

The realisation of this importance of data has meant that

there is a need for proper managment and efficient organisation of the data. It is also important that data are not locked away so that they can easily and efficiently be accessible by the software user.

Management Information System is an organised collection of people, procedures, databases, and devices used to provide routine information to managers and decision makers. The focus of Management Information System is an operational efficiency.

Managerial decision making can be classified to three categories. Strategie, tactical and operating decision making. These decisions are made by the Top Management, middle, and Operational heads respectively. Management Information System aims to help managers make effective decisions by providing them with reports or Information that are timely and to the point.

In many organisations, Management Information System is called Data Processing Unit and its function is to provide the following.

(i) Relevance:- Information provided should be relevant to the individual decision maker, hence, the information described as data should be relevant.

(ii) Accuracy:- Data that enters into the system must be validated to ensure that decisions are made with information obtained from accurate data. Accuracy also implies that the information reflects the current situation and therefore not from briefs that are out dated.

(iii) Timeliness:- The Information must reach the man at the

time it is most needed and useful.

The validity of the data from which information is generated must be accertained to enable the management to make valid decisions. If a wrong or incomplete data is collected, wrong information will be generated out of such data.

1.8 COMPUTER SYSTEM CAPABILITIES

The computer has many capabilities that make it a special machine and a modern tool in data processing system. They are as follows:

1.8.1. Rapid and accurate calculation:-

Computer is faster and more efficient at doing lengthy or complex analysis on data in a very short time. Once the procedures are specifically defined and appropriate data is fed, rapid processing and accurate output is guaranteed.

1.8.2 Reliability:- Computer systems are particularly perfectly suited to repetitive tasks. It gives instant response to any relevant command given to it. Provided, of cause that appropriate maintenance procedures are in place, and the environment for instance in time of power are quite optimal. Though, occasionally, there could be hardware problem that could hamper operation.

1.8.3 Memory Capacity:- Computer systems have total and instant recall of data - no forgetfulness. They also have virtually an unlimited capacity to store data. A typical mainframe computer system will have many billions of characters stored and available for instantaneous recall at the press of a key.

1.8.4 Storage of Data:- Large amounts of information may be

stored on a computer in a manageable form. For example, imagine the storage space to be occupied by the census data on Nigeria. Instead of a large warehouse, probably about 50 CD-ROM (Compact Disc Read only memory) disks are all that would be required. Being the latest innovation, each CD-ROM can store up to 680 million data units. e.g. characters of the alphabet.

1.8.5 Retrieval of Data:- For example, information on individual market might be stored according to place, date, turnover or volume of stock, but not according to all four. With a computer, the same data may be accessed in all these ways and more; and they may also be accessed by more than one person at the same time.

1.8.6 Modification of stored data:- It is possible to change data stored on a computer easily. Program modification involves changing, editing, adding, deleting of data which is possible in a Computer environment.

1.8.7. Data Analysis:- Once Information has been entered into a computer, you can ask for summaries and breakdowns of this information expressed in any way you like. Within a marketing Information system, for example, you could analyse the same data by individual market, by price bracket, or by individual vegetable type. Or, you could request a list of all goods sold by a particular vendor, on a particular day or within a specified period.

1.8.8. Transfer of Data:- At a most simple level, a computer can provide data for other computers. For example, the transfer of price information in a digital format over telephone lines from a

regional market to the central market information center may speed up the dissemination of that information to a significant degree and with greater accuracy.

1.8.9. Continuous Operation:- Computer system will not get bored with repeating the same task over and over. It has to be given precise instructions to be carried out and execution takes place instantaneously. The capabilities possess by a computer system makes it the most ideal method of data processing for any Management Information System to generate fast and quality Information which aid Management in performing its function effectively.

1.9 PRICE STATISTICS OVERVIEW

1.9.1 INDEX NUMBERS

Price index falls under a large topic called Index Numbers. An Index number may be described as a specialised average designed to measure the changes in a group of related variables over a period of time. It was originally developed for measuring the effect of change in prices, they have become today one of the most widely used statistical devices and there is hardly any field today where Index Numbers are not used. They are used to feel the pulse of the economy and used as indicators of inflationary and deflationary

tendencies. In facts, they are described as barometers of economic activities. If one wants to get an idea of what is happening to an economy, he should look to important indices like the index number of industrial and agricultural productions, business activity etc.

Index numbers are used for purpose of comparison in situations where two or more series are expressed in different units or the series are composed of different types of items. For example, while conducting a Household survey, the various items are divided into broad heads, namely, Food, clothing, Fuel and Lighting, House Rent and Miscellaneous. These items are expressed in different units: thus, under the head "Food" wheat and rice may be quoted per kg. Similarly, cloth may be measured in metres. An average of all these items expressed in different units is obtained by using the technique of Index numbers.

Index numbers measures the net change in a group of related variables. Since Index numbers are essentially averages they describe in one single figure the increase or decrease in group of related variables under study. Thus, if the consumer price Index of working class for Lagos has gone up to 125 in 1990 compared to 1989, it means that there is a net increase of 25% in the prices of commodities included in the Index.

Index numbers are most widely used for measuring changes over a period of time, this we can find out the net change in agricultural prices from 1960 to 1980 and comparison could be made between two different times. However, it should be noted that Index number not only measures changes over a period of time but also compare economic conditions of different locations, Industries, cities and Countries. They reveal trends and tendencies since Index numbers are most widely used for measuring changes over a period of time, the time series so formed enable us

to study the general trend of the phenomenon under study. For example, by examining Index number of imports for Nigeria for the last 10 years we can say that our imports are showing an upward tendency i.e. They are rising year after year. Thus, Index numbers provide some guide post that one can use in making decisions. They are highly useful in studying the general business conditions.

Index numbers may be classified in terms of what they measure. In economics and business the classifications are, Price, Quantity, Value and Special purpose.

1.9.2 CONSUMER PRICE INDEX NUMBER

The consumer price index numbers also known as cost of living index numbers are generally intended to represent the average change over time in the prices paid by the ultimate consumer of a specified basket of goods and services. The need for constructing consumer price indices arises because the general index numbers fail to give an exact idea of the effect of the change in the general price level on the cost of living of different classes of people. Different classes of people consume different types of commodities and even the same type of commodities are not consumed in the same proportion. The consumption pattern of rich, poor and middle class people varies widely. The consumption habits of the people of the same class differ from place to place. For example, the mode of expenditure of a Lower division Clerk living in Kaduna may differ widely from that of another Clerk of the same category living in Abuja. The construction of Index number is of great

significance because very often the demand for a higher wage is based on the cost of Living Index and wages and salaries in most countries are adjusted in accordance with the consumer price index.

The cost of living index does not measure the actual cost of living nor the fluctuations in the cost of living due to causes other than the change in the price level; its objective is to find out how much the consumers of a particular class have to pay more for a certain basketful of goods and services in a given period compared to the base period. Two different indices representing two different geographical areas can not be used to compare actual living costs of the two areas. A higher Index for one area than for another with the same period is no indication that living costs are higher in the one than in the other. It means, as compared with the base periods, prices have risen in one area than in another. But actual costs depend not only on the rise in prices as compared with the base period, but also on the actual cost of living for the base period which will vary for different regions and for different classes of population.

1.9.3 USES OF CONSUMER PRICE INDICES

The consumer price indices are of great significance as can be seen from the following:

(1) The most commonly use of these indices is in wage negotiations and wage contracts. Automatic adjustments of wages or allowance components of wages are governed in many countries by such indices.

(2) At Governmental level, the index numbers are used for wage policy, prices policy, rent control, taxation and general economic

policies.

(3) The Index numbers are also used to measure changing purchasing power of the currency, real income etc.

(4) Index numbers are used for analysing markets for particular kinds of goods and services.

1.10 CONSTRUCTION OF A CONSUMER PRICE INDEX

It is absolutely essential to decide clearly the class of people for whom the Index is meant i.e. Industrial workers, teachers, officers etc. The scope of the Index must be clearly defined i.e. primary teachers, middle class teachers or all teachers taken together. It is also necessary to decide the geographical area covered by the index.

The family budget enquiry needs to be conducted covering the population group for whom the index is to be designed. The objective is to determine the amount that an average family of the group included in the Index spends on different items of consumption. While conducting such an enquiry, the quantities of commodities consumed and their prices are taken into account, the consumption pattern can thus be easily ascertained.

To obtain the Price Index, weight is attached to price relatives, a weighted average of these price relative is calculated. The importance of these various commodities are called weights which will be proportion to the expenditure on each item. Before the weights of these items can be ascertained, income and expenditure survey will have to be conducted. That is, household survey will be carried out to know the quantity of each item

consumed by each household, or the importance attach to each item on which money is spent.These items are classified into certain well-accepted groups namely:-

(a) Food

(b) Beverages

(c) Tobacco and Kola

(d) Household items and expenditure

(e) Clothing and footwear

(f) Transport

(g) Medical care

(h) Rent

(i) Other services.

The commodities included are those which are generally consumed by people for whom the index is meant. Through family budget enquiry an average budget is prepared which is the standard budget for that class of people.

Obtaining price quotations, the collection of retail prices is a very important, tedious and difficult task because such prices may vary from place to place, shop to shop and person to person. Price quotations should be obtained from the localities in which the class of people concerned reside or from where they usually make their purchases. Since prices form the most important components of cost of living indices, considerable attention has to be paid to the methods of price collection and to the price collection personnel.

Price are collected by special agents or through mailed

When aggregate method is applied, the quantities of commodities consumed by the particular group in the base year are estimated which constitute the weights. The prices of commodities for various groups for the current year are multiplied by the quantities consumed in the base year and the aggregate expenditure incurred in buying those commodities is obtained. In a similar manner the prices of the base year are multiplied by the quantities of the base year and aggregate expenditure for the base period is obtained. The aggregate expenditure of the current year is divided by the aggregate expenditure of the base year and the quotient is multiplied by 100.

In Laspeyre's method, the base year quantities are taken as weights.

$$CPI = \frac{EP_1Qo}{EPoQo} \times 100$$

Steps

(i) Multiply the current year prices of various commodities with base year weights and obtain EP_1 Qo - (Aggregate expenditure for the current year)

(ii) Multiply the base year prices of various commodities with the base year weight and obtain EPoQo (Aggregate expenditure for the base year)

(iii) Divide EP_1Qo by EPoQo and multiply the quotient by 100.

In Paasche method the current year quantities are taken as weights.

$$CPI = \frac{EP_1Q1}{EPoQ1} \times 100$$

Laspeyres Index attempts to answer the question "what is the change in aggregate value of the base period list of goods when valued at given period prices?"

From a practical point of view, Laspeyre's index is often preferred to Paasche's for the simple reason that the weights (Qo) are the base year quantities and do not change from one period to the next. On the other hand, Paasche Index requires the continuous use of new quantity weights for each period considered in most cases these weights are difficult and expensive to obtain. However, in practice, the base year weighted Laspeyres Index remains the most popular for reasons of its practicability.

When Family Budget Method is used the consumption pattern of a large number of people for whom the index is meant, are carefully studied (Income and expenditure survey) and the aggregate expenditure of an average family on various items is estimated. This constitute the weights. At the end of the survey, the Laspeyres method is used to calculate the consumer price index.

1.10.2 PRECAUTIONS IN USING CONSUMER PRICE INDEX

Quite often the consumer price Indices are misinterpreted. Therefore, the following points should be kept in mind while using price Index.

The Consumer Price Index does not tell us anything about variations in living standard at two different places. Thus if the cost of living Index for working class for Lagos is 175 and for Kano 150 for the same period and the same class of people, it does not necessarily mean that living costs are higher in Lagos compared

to Kano. It only means that there is higher prices in Lagos than Kano.

While constructing the index it is assured that the quantities of the base year are constant and hold good for current year also. But this assumption does not appear to be very logical because the pattern of consumption goes on changing with change in fashion, introduction of new commodities in the market, taste, etc. It is desirable, therefore, that while constructing the index the current year quantities are taken into Account. But this is a difficult task. The index also does not take into account changes in quantities. Unlike changes in consumption pattern, changes in quantities of goods and services are more frequent and when a marked change in the quantity of items occurs appropriate adjustments should be made to ensure that the index takes into account change in quantities also. But in practice, it is a difficult proposition to follow.

Like any other Index, the consumer price index is based on a sample. While constructing the index, sampling is used at every stage in the selection of commodities, in obtaining price quotations, selecting families for family budget enquiry, etc. The accuracy of the index thus hinges upon the use of sampling methods. The consumption pattern derived from the expenditure data of a sample of households covered in the course of family budget enquiry has to be representative of all the items in the average budget, the localities from which price data are collected have to be representative of all localities from which the population group

makes purchases, the retail outlets from which prices are collected have to be representatives of all the retail outlets patronised by the population group etc. However, it is often difficult to ensure perfect representativeness and in the absence of this, the index may fail to provide the real picture. The index is usually based on a sample, hence sampling errors are introduced. Comparisons over long periods are not also reliable.

CHAPTER TWO

CASE STUDY: STATE PLANNING COMMISSION

2.1 PREAMBLE

One of the twelve states created in May, 1967 was Kwara. The former Ilorin and Kabba Provinces were carved out from the state. However, the state full administrative machinery was not in place until April, 1968. When the maiden budgetary provisions were approved for the then Ministries and Parastatals. It is relevant to mention that the areas constituting Kwara State since inception remained the same until 1976, when Ankpa, Idah and Dekina were exercised from the state and transferred to Benue State. Also, during the 1991 State creation exercise, a number of Local Government Areas, namely Okehi, Oyi, Okene, Kogi and Yagba were merged with the new Kogi State. It is therefore clear that the State creation exercise in 1976 and 1991 reduced the size of the state known as Kwara.

2.2 HISTORICAL BACKGROUND

Official Statistics in Kwara is as old as the state itself. Some Pioneer Staff, one Planning Officer and one Statistical Officer, were deployed from the defunct Northern Nigeria Government to the new State. They were saddled for a start with the responsibility of compiling and analysing of Official Statistics generated from administrative records.

The State started operations with seven Ministries; These are Justice, Finance, Works and Survey, Natural Resources, Education, Health and Social Welfare and Local Government and Community

Development. The body catering for the coordination and collation of Official Statistics was the statistical Unit in the Planning Division of the then Ministry of Finance. The Unit status of this establishment was retained until 1971 when as a result of mounting responsibilities, the data producing office was up-graded to a Division level headed by a Chief Statistician. With this new status, the Statistics office was administratively and legally equipped to conduct field statistical surveys on socio-economic activities of the state.

The Civil service reform of 1988 restructured the various Ministries and Parastatals. The reform edit not only improved the state of Statistics but also made it mandatory for every Ministry in all tiers of Governments in the Federation to have the Department of Planning, Research and Statistics. Thus the Statistics Division in Kwara State became a full fledged Statistics Directorate in 1990. However, the enhance status was shortlived. The Directorate was relegated early 1993 to a Division. This reduction in administrative structure is now in operation.

The question of where Statistics rightly belongs has not been clearly defined over the years. Initially, Statistics was originally under Ministry of Finance at the inception. It was later moved to Ministry of Economic Development. After some years it was returned to Governor's Office and currently part of new outfit designated as "State Planning Commission" in the State.

The department is charged with the responsibility of data collection, collation and analysis. At the end of the conduct of

survey and data compilation, the findings and results were usually tabulated and published. Statistical Abstracts covering various subjects and periods were published. The statistical Information were therefore released on Industry, manpower and Employment, Agriculture, Retail Prices, Public Finance, Local Government, Banking, Motor Vehicle Statistics, Crime and Justice, WAEC Analysis and Housing. It may be noted that only the statistical year book and Report on market prices were published annually and regularly. Other publications were published on an Ad hoc basis.

State Planning Commission was established in January 1996. The new Commission is made up of the former Directorate of Planning and Statistics, where Statistics was operating as a unit. The following are the aims and objectives of the Commission.

2.2.1 AIMS AND OBJECTIVES OF THE COMMISSION

The aims and objectives of the Commission shall be to:-

(i) determine and advise the State and Local Governments on matters relating to the development and overall management of the state revenue and economy;

(ii) provide focal point for the coordination and formulation of policies and programmes for the State and Local Governments;

(iii) draw up from time to time, the economic priorities and programmes and map out the Implementation strategies;

(iv) coordinate the formulation and implementation of Government programmes and projects as contained in annual plans, budgets and in the rolling and perspective plans of the State and Local Governments; and

(v) determine how best the State and the Local Governments can best realise the set objectives and plans.

2.2.2. FUNCTIONS OF THE COMMISSION

For the purpose of achieving the above objectives, the Commission shall perform the following functions:-

(a) coordinate the planning programmes of the State and Local Governments within the frame work of National objectives and priorities;

(b) transmit the State and Local Government programmes to the National Planning Commission;

(c) serve as focal point for planning and monitoring activities at the State level;

(d) ensure consistency in the programmes of the State Government for the three year Rolling Plan and the Annual Budgets; and

(e) Liaise from time to time with the National Planning Commission.

2.2.3. ORGANISATIONAL STRUCTURE

(1) The Chairman:- The State Military Administrator is the Chairman of the Commission.

(2) Deputy Chairman:- The Secretary to the State Government is the Deputy Chairman. He sees to the smooth running of the Commission and report directly to the Chairman.

(3) Executive Secretary:- The Military Administrator of the State appoints an Executive Secretary for the Commission whose rank shall be equivalent to that of a Director-General in the State Civil Service. The administration of the Commission is

coordinated by the Secretary. He sees that all efforts are directed towards the achievement of the set up objectives.

The Executive Secretary has the following duties to perform.

(a) assisting the Deputy Chairman in carrying out the day to day running and activities of the Commission;

(b) the Implementation of the decisions, policies and approved recommendations of the Commission;

(c) the carrying out of such other duties as may be directed to him from time to time by the Deputy Chairman of the Commission;

(d) heading of the Secretariat and be responsible for secretariat functions of the Commission.

Basically, there are two functional Directorates under State Planning Commission. They are:-

(4) MACRO, MONITORING AND STATISTICS DIRECTORATE:- There are three operational branches under this Directorate. They are:-

(A) Statistics Branch:- This branch gathers social-economic data for Planning purpose. It collects, collates, analyses and disseminates statistical data in respect of the State and Collaborates with the Federal Office of Statistics (FOS), other State Governments, Universities, Research Institutions and International Statistical Organisations on behalf of the State Government on Statistical matters.

Statistics branch conducts surveys which enables it to generate data that serves as socio-economic indicators which aid Government in decision making process. Three sections are visible

under the branch. They are:- Social survey, Data processing and Publications and Economic survey sections.

(1) Social Survey Section: This section collects and make available data that serves as social indicators which are vital tools in planning process. The data enables the Government to plan the social sector properly so that people can be catered for socially. This section is further divided into two.

(a) Social Statistic sub-section:- Social Statistics are collected and analysed in the following areas:-

(1) Education:- Education Statistics is a useful tool for the proper Management of education sector in the State.

The WAEC Examination results are analysed to generate reports in the following Areas for the State/Local Government Areas as a whole. (see table 1)

(i) To determine the rate of falling in Education standard.

(ii) Growth in population of school certificate products.

(iii) Classification of participating candidates into Arts and Science.

(iv) Overall results of candidates.

(v) Potential candidates for Higher Education.

(vi) Performances in various subjects

(2) Health Related Statistics: The data gathered on Health sector are analysed to generate report in the following areas.(see table 2)

(i) Number of Medical Institutions in the State by LGA's.

(ii) Number of Health Institutions in the State by LGA's

(iii) Number of Beds in Medical Institutions by LGA's

(iv) Communicable diseases in the State by LGA's

(v) Immunization of children by Government Clinic/Centres e.g. Smallpax, BCG, Measles and others.

(vi) Ante-natal Clinic Results of Delivery by LGA. Live-Birth, Normal Delivery, Still Birth etc.

(vii) Number of death recorded in Government Hospital in the State by LGA.

(3) Crime and Justice: The Courts in the State serve as sources from which these data are gathered. Area covered are as follow:- (see table 3)

(i) Number of persons tried in High Courts in the State according to the type of offence committed i.e. criminal offence like murder, Armed robbery, Assault rape, forgery etc., and Non-criminal offence like Tax defaulting, Traffic offence etc.

(ii) Number of people imprisioned in Courts according to sex and age etc.

(4) Power and Water Supply: The areas covered are as follows:-

(i) Number of Electricity consumers in the state according to the nature in which it is used e.g. Residential, Commercial, Industrial and others.

(ii) Unit of Electricity Consumed in kilo watts (Kwtt)

(iii) Value of Electricity consumed in Naira.

(iv) Water supply according to source e.g. Dam, Rivers, Weir etc and according to towns and villages.

(5) Employment and Unemployment: Persons aged 15 - 55 years are referred to as the working age population. However, it is appreciated that some people who are slightly less than 15 years and some others slightly more than 55 years do engage in productive employment. Reports are generated on:

(i) Percentage of unemployed people to the total number of people between the working age population.

(ii) Percentage of unemployed people to the Labour force according to LGA.

(b) Demography Sub-section: Population Projection was produced based on 1963 census, using the relevant Statistical Method to arrive at the estimated Population figures. The figures were very relevant to the people even when the census exercise was long overdue and delayed. The population of Kwara state was projected to the year 2000 based on Local Government Areas, Town and Villages in each LGA.

(see table 4).

Vital Statistics are also collected on birth, death, immigration and emmigration within a stipulated time.

The result generated from this is the Mortality rate and Migration figure for the period.

(2) DATA PROCESSING AND PUBLICATION SECTION

The concern of this section include the use of both Manual and Electronic Data Processing (Computer) for processing and analysing all data collected, and make the publications available as demanded.

(3) ECONOMIC SURVEY SECTION:- For proper planning to be made

on economic sector, the planners need some economic indicators to serve as a tool to guide them. The populace are best catered for economically if the right tool (data) are available/considered during planning. The section is sub divided into two.

(a) Economic Statistics sub-section:-

Agriculture: This publication assembles basic information in agricultural activities which is essential for the formulation of agricultural policies in the state. Data coverage in this section include Climatology, Forestry, Fisheries produce and Agricultural-inputs. Data are collected on the following.

(i) Rainfall, Humidity, Temperature and Sunshine in selected towns in the State.

(ii) Name and location of live stock farm in the State.

(iii) Name and area of government Forest Reserves.

(iv) Produce graded figures in the State(cocoa and coffee).

(v) Quatity of fertilizer sales in the State by LGA.

(see table 5)

(b) Regional Account Sub-section:-

Data on revenue and expenditure of the state are collected and made available for Comparative Analysis.

(i) Kwara State actual recurrent Revenue by sources.

(ii) Actual Capital expenditure for the period (a year)

(iii) Actual Capital receipt for the period.

(iv) Summary of actual Revenue and actual expenditure by LG in the State.

TABLE 1

WASC/GCE (O) EXAMINATION RESULTS: OVERALL PERFORMANCE OF CANDIDATES BY LOCAL GOVERNMENT AREA. 1987.

Local Govt. Area	Total No of Candidates Presented	Total No of Candidates Passed	Total No of Candidates Failed	Percentage of Candidates Passed
ASA	349	95	254	27.22
BORGU	491	122	369	24.85
EDU	645	94	551	14.57
IFELODUN	1,587	576	1,011	36.30
ILORIN	4,605	1,739	2,866	37.76
IREPODUN	3,994	1,586	2,408	39.71
KOGI	567	140	427	24.69
MORO	453	147	306	32.45
OKEHI	1,282	490	792	38.22
OKENE	1,034	293	741	28.22
OYI	3,801	1,607	2,194	42.28
OYUN	2,536	1,192	1,344	47.00
TOTAL	21,344	8,081	13,263	37.86

Source: Ministry of finance & Economic Development, Statistics Division. Ilorin.

TABLE 2

NUMBER OF MEDICAL INSTITUTIONS IN KWARA STATE BY LOCAL GOVERNMENT, 1986

Local Government Area	*NO. OF HOSPITAL*			*CLINICS/ MATERNITY & CLINICS*		*MATERNITY HOSPITAL/ CENTRE/HOME (b)*			*DISPENSARIES/ DISPENSARY & CLINICS*		*LEPROSY SETTLEMENT*		*LEPROSY CLINICS*	
	Govt.	*Local Govt.*	*Mission/ Private*	*Local Govt.*	*(a) Private*	*Govt.*	*Local Govt.*	*Mission/ Private*	*Local Govt*	*Private*	*Local Govt.*	*Mission/ Private*	*Local Govt.*	*Mission/ Private*
Asa	—	—	—	—	2	—	8	1	4	—	—	—	9	—
Borgu ..	1	—	—	—	1	—	4	2	16	—	—	—	27	—
Edu	2	—	1	—	—	—	4	1	15	1	—	—	25	—
Ifelodun ..	—	—	—	—	5	—	10	2	5	7	—	1	8	—
Ilorin	2*	—	11	—	25	1(**)	7	5	3	2	—	—	8	—
Irepodun ..	3	—	3	—	5	—	17	12	(N/A)	3	—	1	4	—
Kogi	2	—	—	—	5	—	1	—	10	—	—	—	12	—
Moro	—	—	—	—	—	—	3	1	2	2	—	—	8	—
Okehi.. ..	1	—	—	—	—	—	8	2	8	—	—	—	4	—
Okene ..	2	—	3	—	4	—	5	2	10	—	—	—	6	—
Oyi	3	—	3	—	5	—	13	4	8	7	—	1	22	—
Oyun	1	—	2	—	8	—	7	1	(N/A)	1	—	—	4	—
Total	17	—	22	—	60	1	87	33	81	23	—	3	137	—

Note:— (*i*) Clinics are Small Hospitals owned by Private Medical Doctors; (*a*)

(*ii*) Asterisk (*) Includes Ilorin Teaching Hospital, while Asterisk (**) is University of Ilorin Teaching Hospital;

(*iii*) Note (*b*) includes Maternity and Dispensaries.

Source: Ministry of Health, Ilorin.

TABLE 3

NUMBER OF PERSONS TRIED IN ALL COURTS AND BY THE TYPE OF OFFENCES IN KWARA STATE, 1986

Type of Offence by Local Government Area	CRIMINAL														NON-CRIMINAL				TOTAL	
	Murder	Manslaughter	Armed Robbery	Assault	Rape and Indecent Assault	Abortion	Burglary, Theft and Stealing	Forgery of Currency Notes and Counterfeiting	Forgery, Altering of Document	False Pretence, Fraud, Cheating, e.t.c.	Child Stealing	Escaping	Others	Sub-Total	Tax Defaulting	Divorce	Traffic Offence	Others	Sub-Total	Criminal and Non-Criminal
Asa	—	—	—	2	1	—	4	—	—	1	—	—	5	13	—	260	—	1	261	274
Borgu	—	—	—	118	—	—	170	—	—	40	—	2	487	817	152	663	160	225	1,200	2,017
Edu	—	—	—	5	15	—	25	—	—	14	—	11	213	283	151	209	96	1	457	740
Ifelodun	—	—	—	2	—	—	12	—	—	1	—	—	3	18	—	379	3	1	383	401
Ilorin	3	14	21	41	9	4	535	5	12	81	10	5	793	1537	27	3,335	210	554	4,126	5,663
Irepodun	—	—	—	35	2	—	107	—	—	15	—	4	170	333	260	1565	62	194	2,082	2,415
Kogi	1	—	—	26	2	—	126	—	3	15	—	7	164	364	4	237	106	174	521	885
Moro	—	—	—	7	—	—	47	—	—	4	—	2	77	137	60	411	31	4	506	643
Okehi	—	—	1	64	1	10	151	—	—	34	—	15	403	679	—	1,213	4	90	1,307	1,986
Okene	27	19	2	80	16	2	210	—	8	32	1	8	240	645	—	1,175	76	150	1,401	2,046
Oyi	—	—	—	61	5	—	225	—	1	79	—	8	165	545	53	516	115	117	801	1,346
Oyun	—	3	—	9	12	2	116	8	2	28	1	3	244	428	—	663	126	292	1,081	1,509
Total	31	36	24	450	63	18	1,728	13	26	344	12	65	2,939	5,799	707	10,627	989	1,803	14,126	19,925

Source:—Ministry of Finance and Economic Development, Ilorin

(Crime and Justice Survey)

TABLE 4

1963 POPULATION OF KWARA STATE BY LOCAL GOVERNMENT AND ITS MID-YEAR PROJECTIONS.

L.G.A.	1963 CENSUS	PROJECTED MID-YEAR POPULATION											
		1963	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	2000
ASA	119,084	118,109	266,291	276,058	286,184	296,706	307,635	318,981	330,768	343,011	355,725	368,936	464,883
BORGU	106,991	106,114	221,789	229,050	236,529	244,271	252,265	260,522	269,059	277,872	286,982	311,877	390,375
EDU	110,815	109,722	247,974	269,715	279,319	291,242	302,673	324,377	340,920	391,797	407,226	425,372	523,136
IFELODUN	129,254	128,193	305,295	317,301	329,800	342,821	356,379	370,497	385,206	400,524	416,492	433,122	527,363
ILORIN	267,052	263,202	750,999	785,294	822,336	861,156	901,845	944,520	989,194	1036048	1085161	1136503	1433876
IREPODUN	153,948	152,686	328,978	340,270	351,948	364,060	376,592	389,569	416,453	431,415	446,938	463.043	553,138
KOGI	89,953	89,016	208,496	216,530	224,885	233,575	242,768	252,044	261,847	272,047	282,667	293,719	354,213
MORO	117,988	117,021	253,344	262,098	271,170	280,563	290,294	300,378	310,815	321,630	332,845	344,448	409,129
OKEHI	181,885	180,394	482,259	514,543	538,060	562,697	588,502	615,538	643,857	673,525	704,608	737,174	924,917
OKENE	143,388	141,730	385,834	403,316	421,615	440,768	460,816	481,608	503,784	526,789	550,878	576,099	721,213
OYI	180,037	178,233	476,952	496,131	516,023	536,961	558,680	594,528	619,177	644,897	671,728	699,728	859,211
OYUN	114,090	112,570	305,291	315,062	333,478	360,353	372,102	394,652	413,048	432,298	452,519	473,622	595,493
	1,714,485	1,696,990	4,233,502	4,423,368	4,611,347	4,815,173	5,010,551	5,247,214	5,484,128	5,751,853	5,993,771	6,263,643	7,757,947

Source: Ministry of Finance & Economic Development,
Statistics Division, Ilorin.

TABLE 5
QUANTITY OF FERTILIZER SALES IN KWARA STATE BY L.G.A.
1981-1984 IN (BAGS)

Local Government Area	YEAR				
	1981	1982	1983	1984	TOTAL
ILORIN/ ASA/MORO	67,292	79,050	109,346	102,647	358,335
BURGU	8,622	4,755	4,562	5,328	23,267
EDU	18,526	20,036	16,253	18,639	73,454
IFELODUN	177	-	-	-	177
IREPODUN	872	-	-	-	872
KOGI	6,366	4,782	8,292	4,271	23,711
OKEHI	4,222	4,857	-	-	9,079
OKENE	4,219	8,388	3,958	7,362	23,927
OYI	20,609	21,523	11,464	8,768	62,364
OYUN	841	-	-	9,355	10,196
TOTAL	131,746	143,391	153,875	156,370	585,382

Source: Ministry of Agric & Natural Resuorces, Ilorin.

(B) Macro and Production Branch:- This branch performs the following functions.

(i) coordinates the formulation, preparation and annual review of the Kwara State programmes within the framework of the National Rolling Plans.

(ii) Prepares the macro-economic/financial analysis of the State Development plan and the annual budget.

(iii) Collaborates with the Directorate of Budget in the preparation of the Annual Capital Estimates.

(iv) Evaluates projects proposals from Ministries and extra-Ministerial Departments in the directly productive sectors viz:

Agriculture, Livestock, Forestry, Commerce and Finance, Industry, Cooperative and Transport.

(v) Co-ordinates the Secretarial functions of the State Planning Commission.

(C) Monitoring and Social Service Branch:- This branch performs the following functions:-

(i) Monitors the progress on physical and financial performances of the State's Capital projects.

(ii) Prepares periodic and annual progress reports on the implementation of Capital projects emphasizing actual levels of Physical performance and bottlenecks to execution.

(iii) Secretariats of the State Planning Implementation Committee.

(iv) Evaluates Project Proposals from Ministries/Departments in the social sector of the State Economy, namely:- Education, Health, Social Development, Information and Culture.

(5) CONSULTANCY, MANPOWER, EXTERNAL ASSISTANCE AND LOCAL GOVERNMENT PLANNING DIRECTORATE:

There are two operational branches under this Directorate. They are:-

(A) Manpower, General Administration and Local Government Planning Branch:- This branch performs the following functions:-

(i) Assists Local Governments in the preparation of the Consolidated Local Government Programmes in National Rolling Plans;

(ii) Advises the State Government on Manpower needs, Training and Utilization;

(iii) Secretariat of the State Manpower Committee;

(iv) Serves on the Advisory Committee on Employment;

(v) Carries out periodic surveys on Manpower problems of the State Economy.

(vi) Evaluates Project Proposals in the General Administration sector of the State Economy.

(B) Consultancy, External Assistance and Regional Development Branch:- This branch also performs the following functions:-

(i) Conducts Pre-investment and feasibility studies;

(ii) Appraises Feasibility surveys conducted by external consultants on behalf of the State Government;

(iii) Handles Technical Assistance on training and foreign loan offers on capital projects;

(iv) Secretariat of the States Inter-Ministerial Committee on Feasibility Studies and Consultancy Services; and

(v) Evaluates Project Proposals from Ministries/Departments in the Regional Development sector of the State's economy, namely; Water Supply, Power, Urban and Regional Planning, Survey and mapping Environment and Community Development.

(6) Personnel, Finance and Supply Unit

The unit is responsible for the welfare, promotion and discipline of staff. Other functions carry out by the unit are Financial Management and Store control of the Commission. The unit is headed by an Assistant Director who is directly responsible to the Executive Secretary.

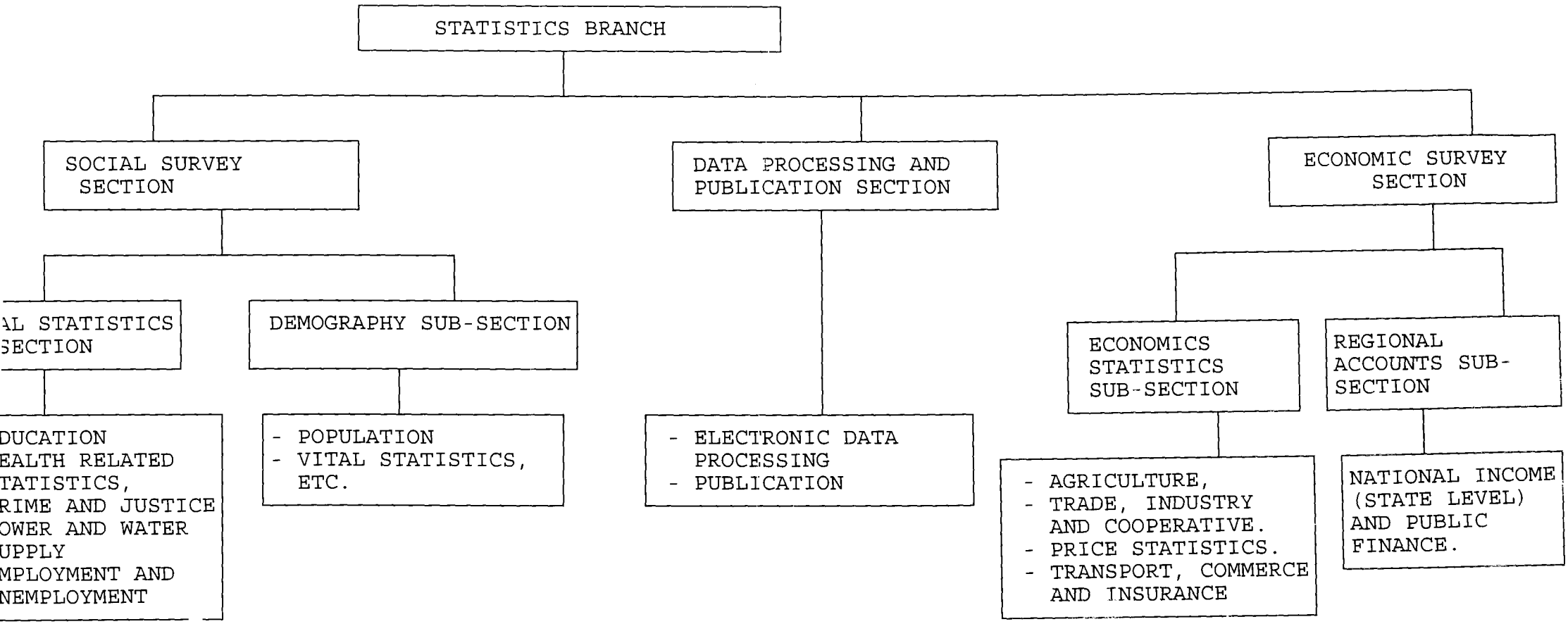


FIG. 2.2 STATISTICS BRANCH IN FULL PERSPECTIVE

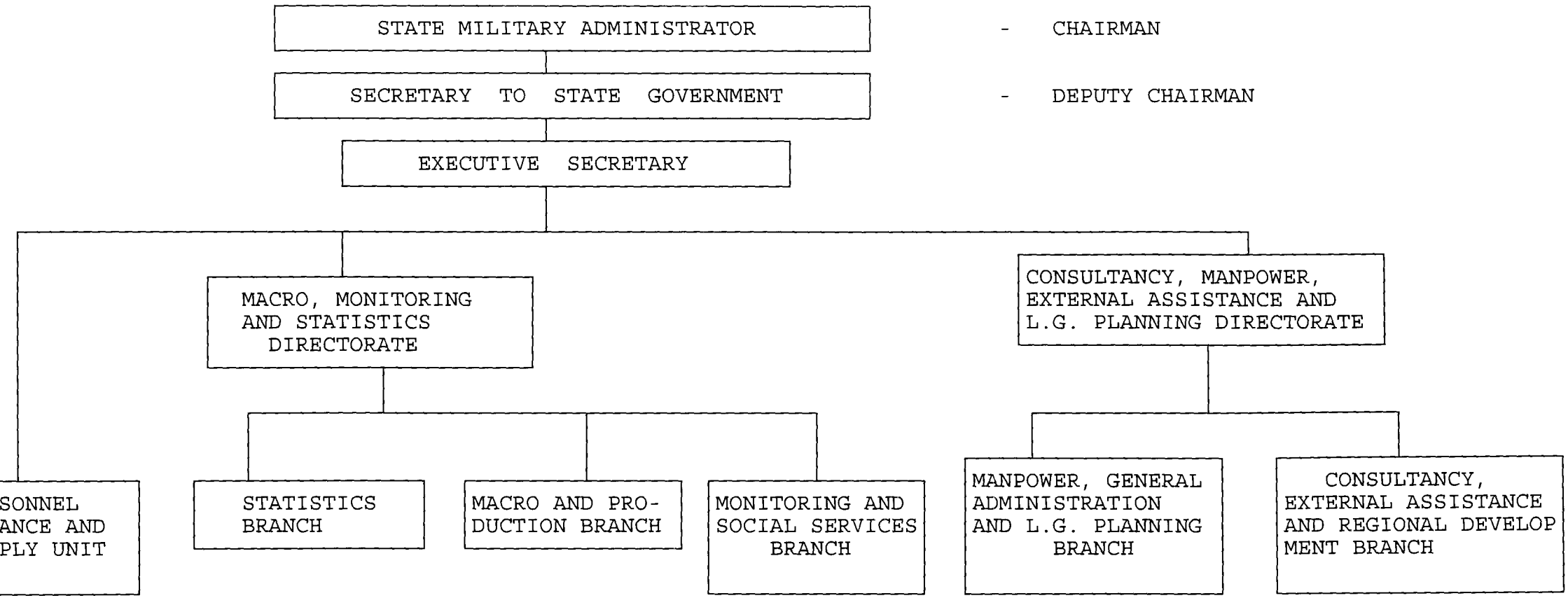


FIG.2.1 ORGANISATIONAL CHART OF THE STATE PLANNING COMMISSION, KWARA STATE.

CHAPTER THREE

COMPUTATIONAL PRICE ANALYSIS ALGORITHM

3.1 SYSTEM ANALYSIS/DESIGN.

3.1.1 FEASIBILITY STUDY

This stage is otherwise referred to as preliminary investigation. This stage has been embarked upon to determine whether or not the proposed system is desirable.

3.1.2 TESTING PROJECT FEASIBILITY

The project feasibility has to be tested and there are three ways that can be employed, namely:

(1) Operational feasibility:- We have to look in to the workability of the proposed system design, when it is developed and subsequently installed.

(2) Technical feasibility:- It is necessary to find out or clarify if the system designed can be run with the right equipment interms of the software, personnel or even the hardwares.

(2) Economical feasibility:- This is to check the cost of implementing the new system to be designed and also the benefit derived from the new system.

In carrying out an analysis of a system, there are some steps to be taken. Firstly, an investigation of the current system needs to be made. The objectives of the organisation must be considered and the strenghts and weaknesses must be brought to light, on which the development of new system could be based.

3.2 SYSTEM ANALYSIS

System Analysis can be defined simply as the organisation of information gathered during the investigation phase into a

meaningful form about the existing system. In other words, system analysis can be defined as the study of an existing system in order to provide detail of nature, characteristics, problems and weakness of such system, which serves as a basis for designing a more effective system.

The system analysis is an important intermediate stage between system investigation and system design for the proposed system. At the end of any system analysis, there should be a report known as requirements specification. The specification of requirement simply spell out every possible solutions to overcome the problems facing the user of the exisitng system.

3.3 EXISTING SYSTEM

The price Analysis System is manually processed, it is serving as existing system under this study. In designing the proposed System, facts relating to the existing system is needed which will help in the designing of the proposed system. The following operations are also performed manually in price Statistics. They are:-

(i) Designing of Questionnaire
(ii) Data collection
(iii) Data verification
(iv) Data collation
(v) Tabulation
(vi) Analysis
(vii) Data dissemination
(viii) Storage.

The rate at which these operations are carried out is very

slow and cumbersome. In order to appreciate the importance of price data to our economy in general, this system needs to be improved to the standard required of any data bank. To remove the undue delay in the operations listed above, advance technology such as computer system is required.

3.4 SYSTEM DESIGN

The specification requirement is an input to the system design. The system design aim at achieving the objectives of the proposed system by outlining clearly the requirement specification and the necessary procedures involves in accomplishing the various task in the proposed system.

The system design is divided into two phases, the logical design and the physical design. The logical design transform the specification of both data and processing requirement, that is, what in detail, is required of the proposed system. The physical design transforms the logical specification into physical specifications, database and program specification. During the physical design details such as input and output formats will be designed along with file format, screen format and so on.

The objectives of the system design includes efficiency and flexibility. Efficiency involves accuracy and timeliness of the system output. Flexibility means that the designed system should be responsive to changes inevitably requested by its user in the nearest future.

In designing a system there is a need for proper planning and control of the system under design. The planning should involve the following sequential steps to forestall lapses that may result

in inconsistency in the designing of the new system.

3.4.1 LOGICAL DESIGN

The logical design is divided into logical data and logical process design. The logical data design represent the data structure used in the new system while the logical process design are the program modules in the new system.

Logical data Design

Input Data structure ONE

Items of Data

	Field Name	Field Type	Size	Remark
1.	Cat-code	Character	1	Category Code
2.	Cat-Name	Character	14	Category Name
3.	Item	Character	12	Name of the Items
4.	Type	Character	15	Description of Items
5.	Unit	Character	8	Quantity of the Items
6.	Month1	Numeric	5	1st month price of items in the quarter
7.	Month2	Numeric	5	2nd month price of items in the quarter
8.	Month3	Numeric	5	3rd month price of items in the quarter

Name: LOC-1-93_DBF

Description: Entering of 1st Quarter Price data for local food items.

All the twelve data base files on quarterly analysis have the same structure as above.

Input Data structure Two

	Field Name	Field Type	Size	Remark
1.	Cat-Name	Character	17	Category Name
2.	Item	Character	18	Name of Items
3.	Type	Character	16	Description of Items
4.	Unit	Character	8	Quantity of the Items
5.	Year 1	Numeric	8	Yearly average Price for 1989
6.	Year 2	Numeric	8	Yearly average Price for 1990
7.	Year 3	Numeric	8	Yearly average Price for 1991
8.	Year 4	Numeric	8	Yearly average Price for 1992
9.	Year 5	Numeric	8	Yearly average Price for 1993

Name: RELATIVE_DBF

Description: Contains yearly average Price data between 1989-1993

3.4.2. LOGICAL PROCESS DESIGN

Program module (Major Program Modules making up this system under Quarterly analysis of Local Food items) are listed below.

	Module Name	Function
1.	Add-Loc	Accepts records of Local food items
2.	Edit-Loc	Effect changes on records
3.	Dele-Loc	Delete records that are not wanted
4.	View-Loc	It enables users to view records

All other modules which are related to Processed items and Building materials on quarterly analysis have similar structure. Program Modules under Report and Printing Stages.

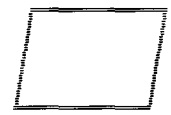
	Module Name	Function
1.	Anal-Loc	Analyses Local food items on quarterly basis
2.	Anal-Pro	Analyses processed items on quarterly basis
3.	Anal-Bud	Analyses Building Materials on quarterly basis
4.	Relative	Analyses all the items on yearly basis
5.	Prt-loc	Prints Local food items on quarterly basis
6.	Prt-Pro	Prints Processed food items on quarterly basis
7.	Prt-Bud	Prints Buindling materials on quarterly basis
8.	Prt-Rela	Prints Price relative report

3.5 FLOWCHART

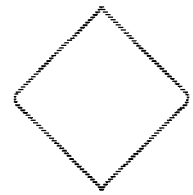
Flowcharts are used to graphically illustrate data, information and work flow by the inter-connection of specilised symbols with flow line. The combination of symbols and flow lines portrays the Logic of the programme or system. Each symbol indicates the type of operation to be performed. The flowchart graphically illustrates the sequence in which the operations are to be performed, while the flow lines indicate the direction of the programme Logic.

3.5.1 FLOWCHART SYMBOLS AND THEIR MEANINGS.

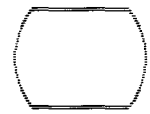
COMPUTER PROCESS



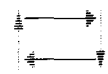
INPUT/OUTPUT



DECISION BOX



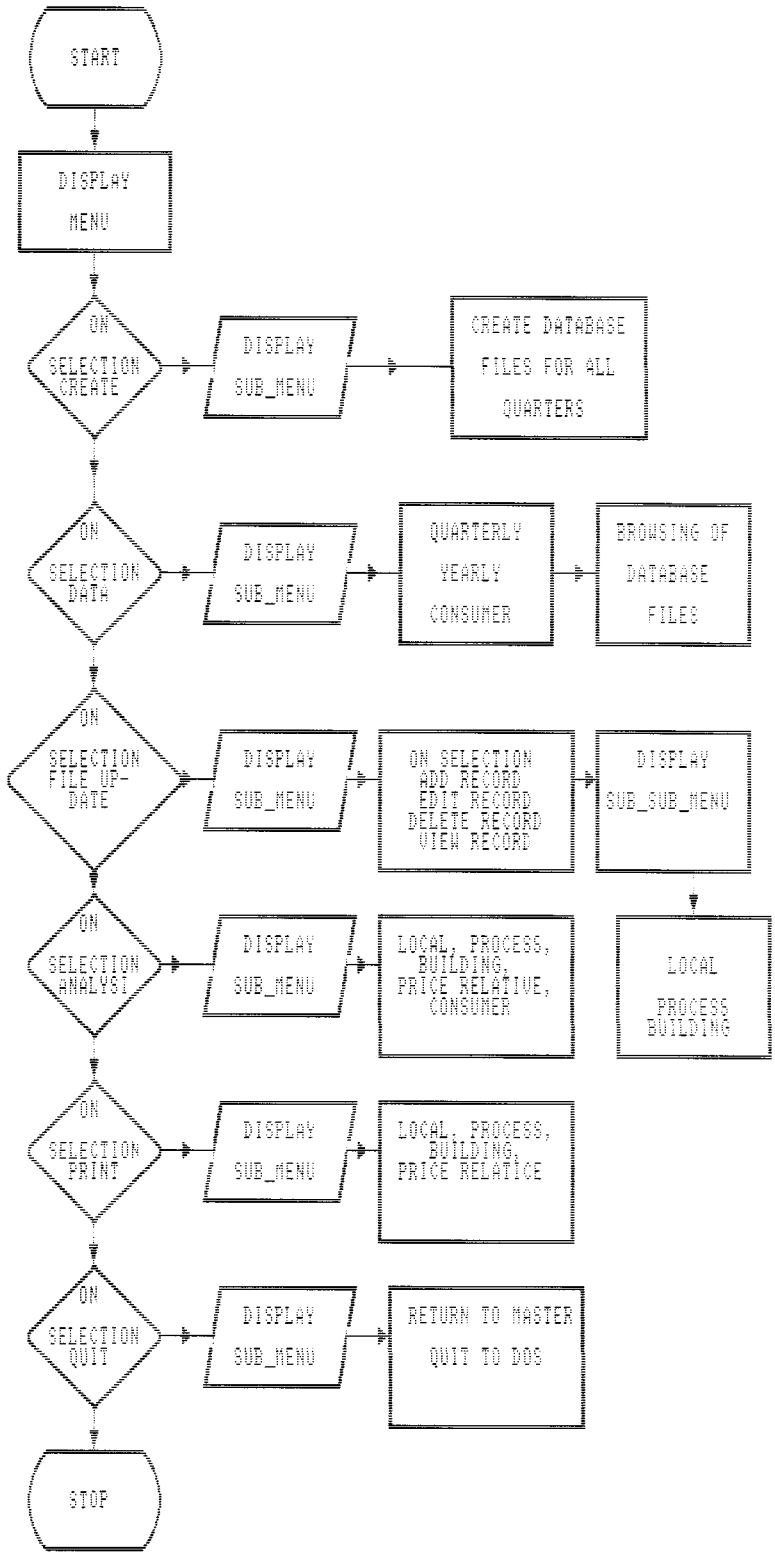
START OR END OF PROCEDURE



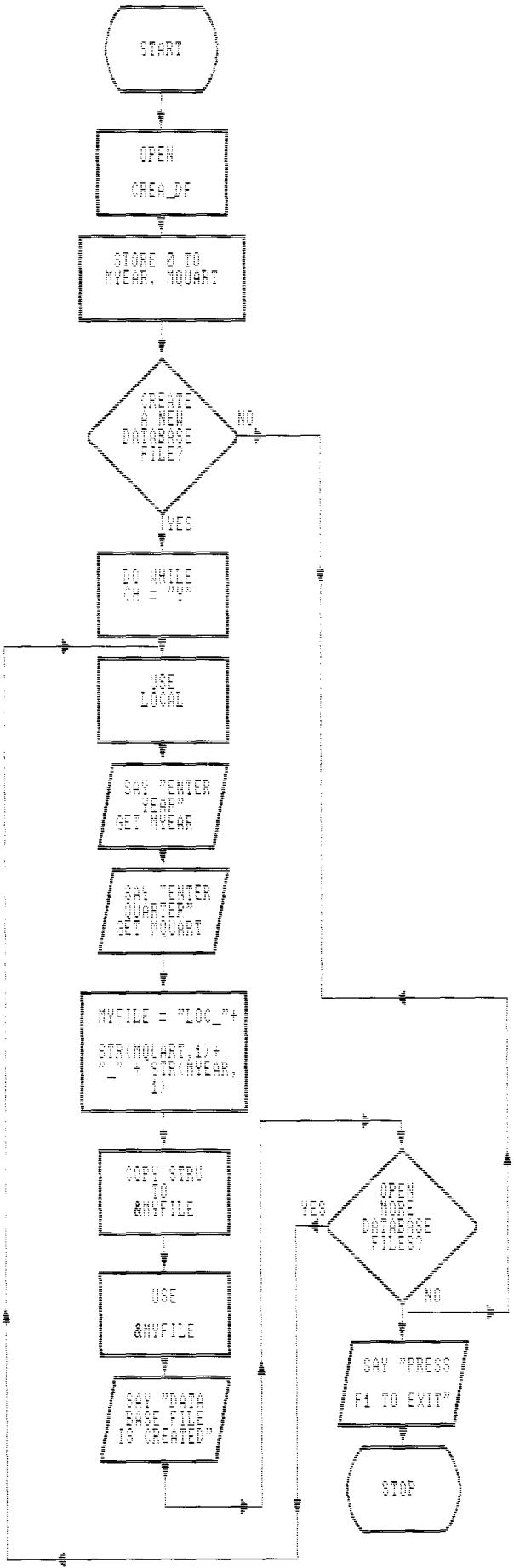
FLOW LINES

CONNECTOR

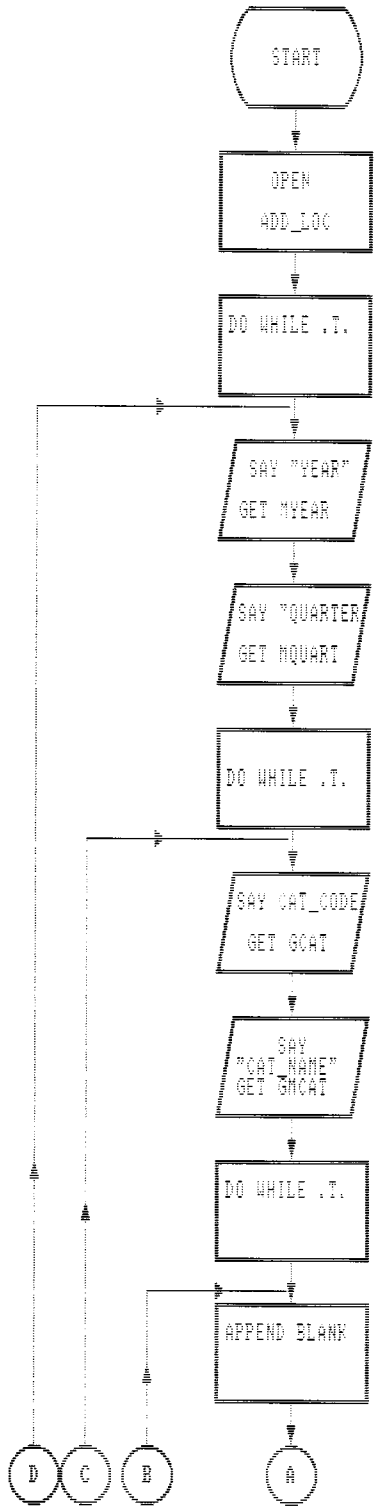
3.5.2 MAIN MENU PROGRAM FLOWCHART

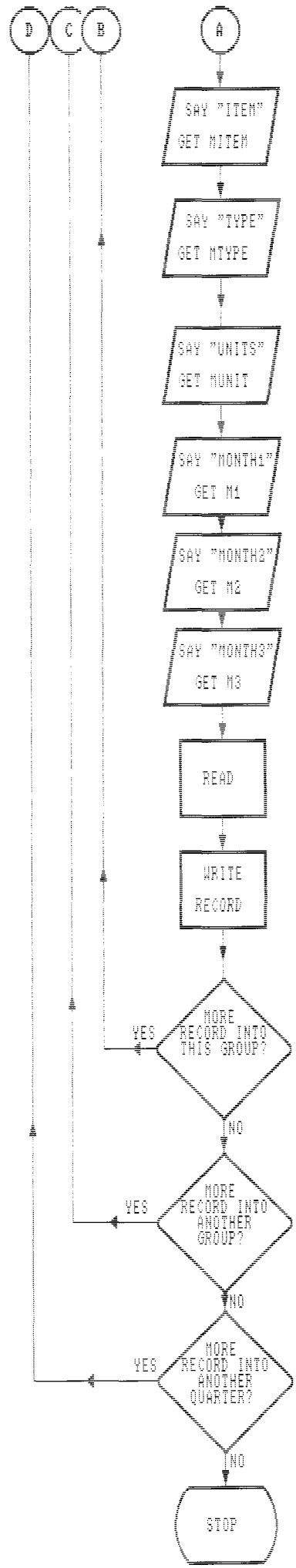


3.5.3 PROGRAM FLOWCHART FOR CREATING DATABASE FILES.

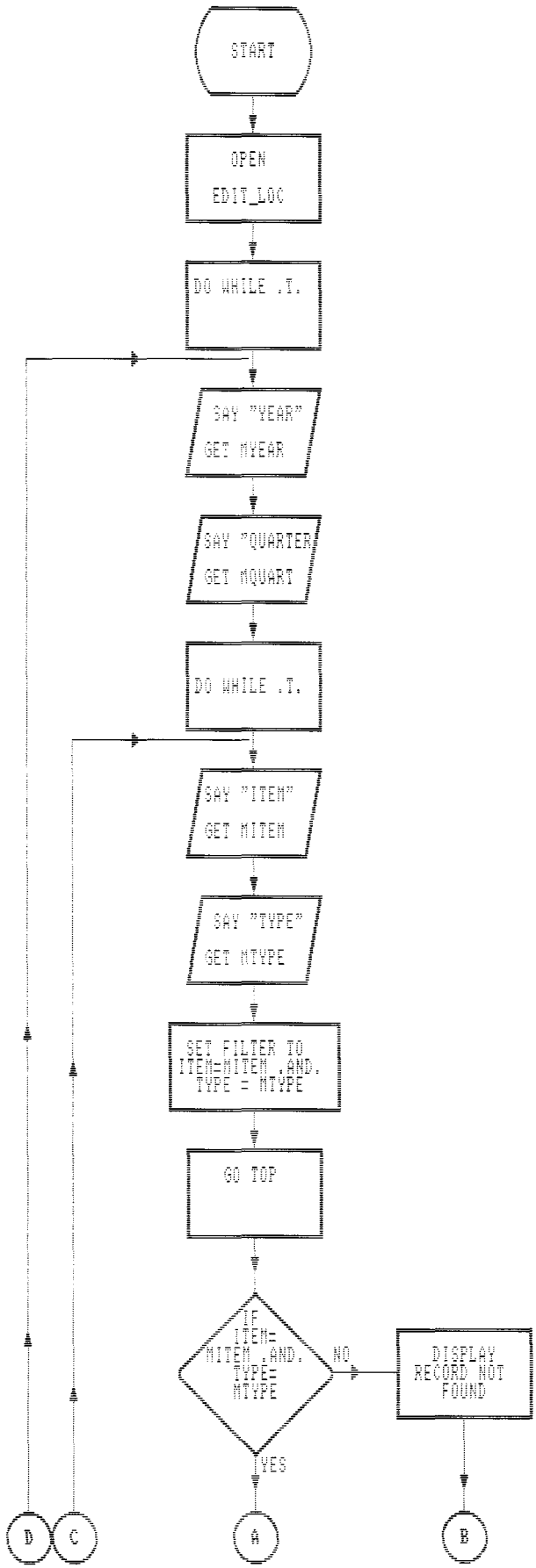


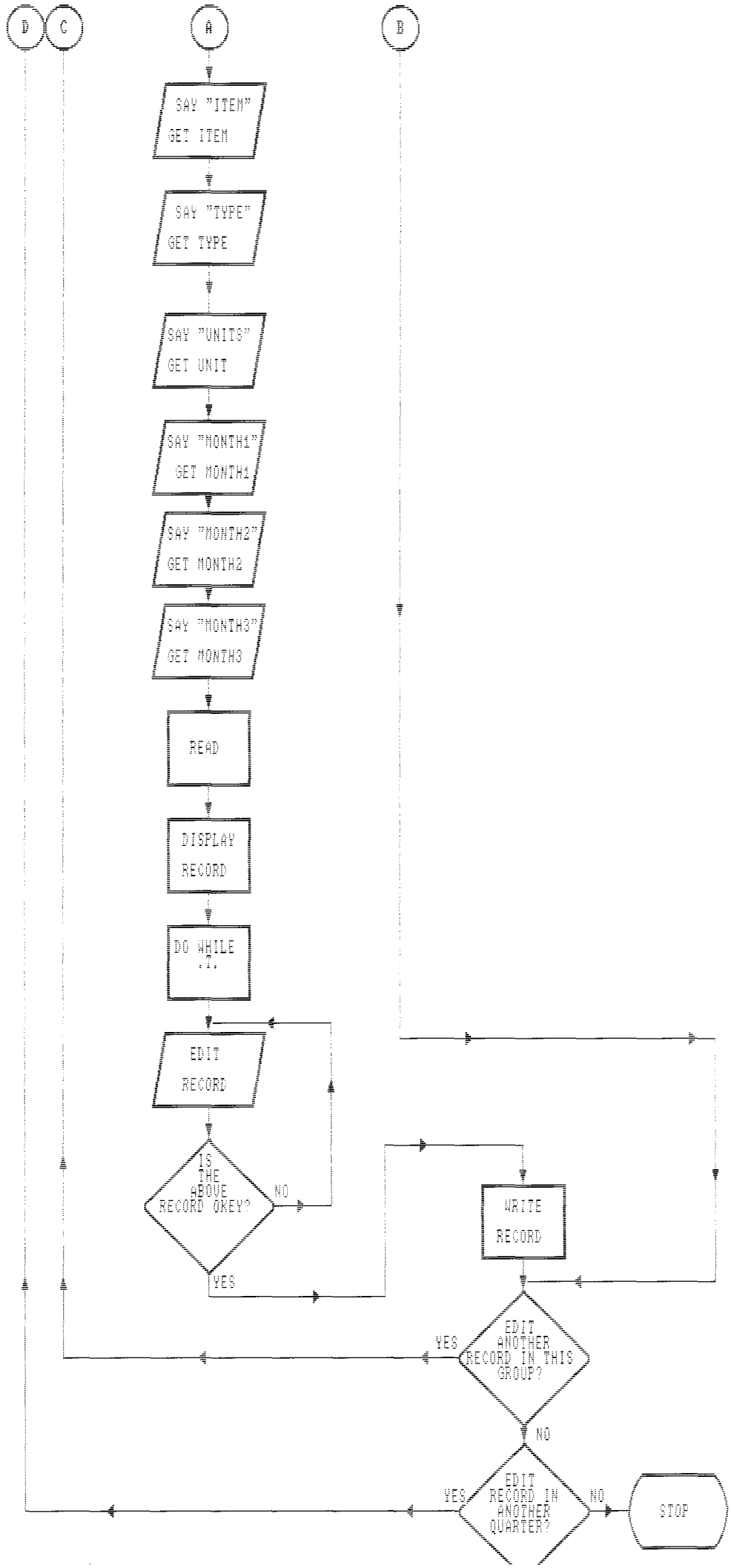
3.5.4 DATA ENTRY PROGRAM FLOWCHART FOR LOCAL FOOD ITEMS.



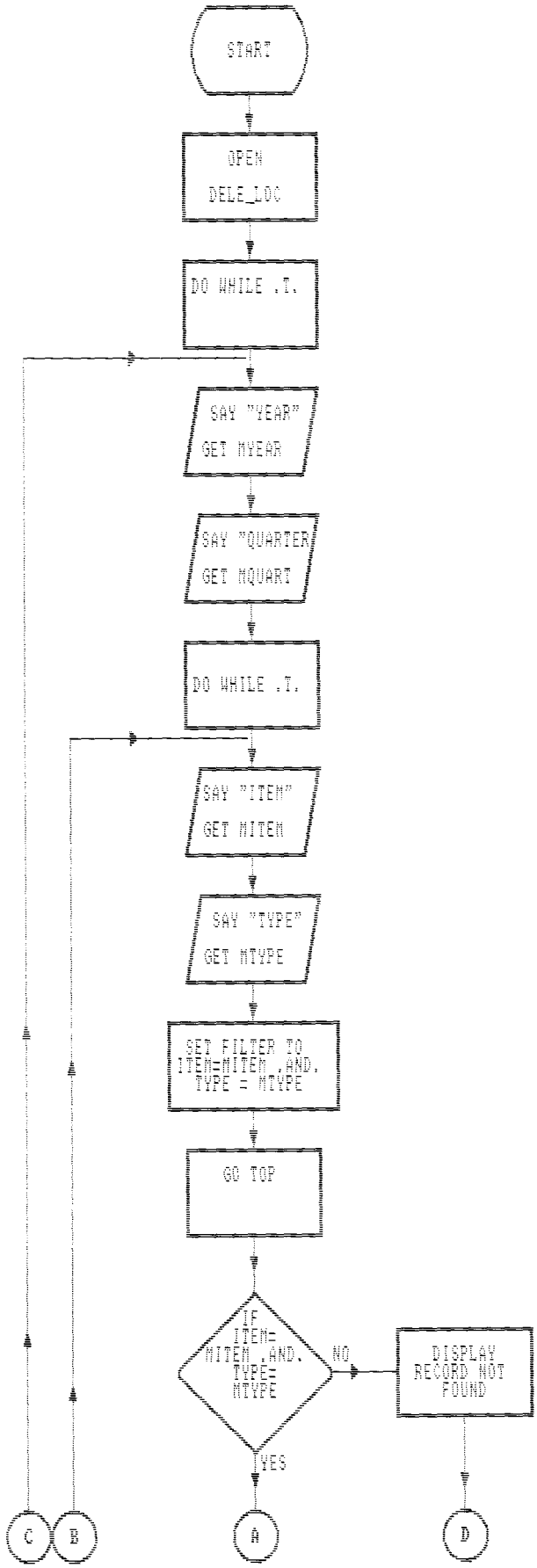

D
C
B
A
SAY "ITEM"
GET MITEM
SAY "TYPE"
GET MTYPE
SAY "UNITS"
GET MUNIT
SAY "MONTH1"
GET M1
SAY "MONTH2"
GET M2
SAY "MONTH3"
GET M3
READ
WRITE
RECORD
MORE RECORD INTO THIS GROUP?
YES
NO
MORE RECORD INTO ANOTHER GROUP?
YES
NO
MORE RECORD INTO ANOTHER QUARTER?
YES
NO
STOP

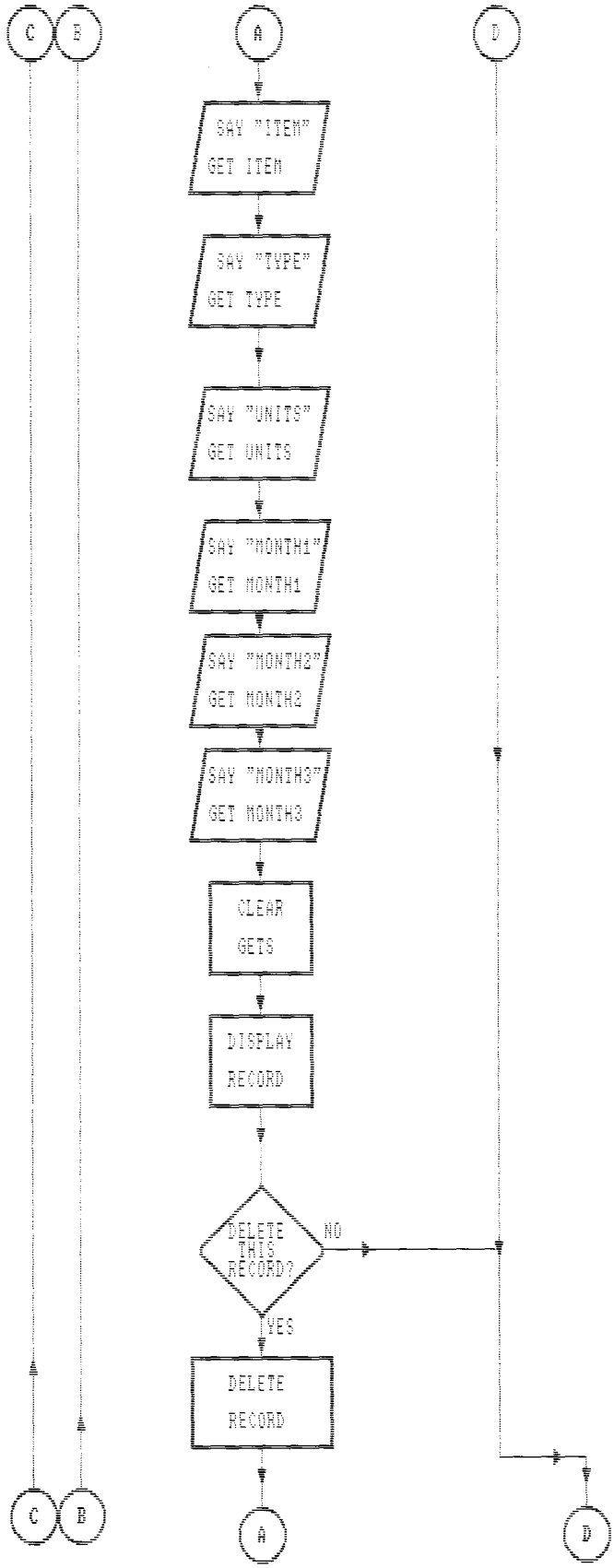
3.5.5 EDIT PROGRAM FLOWCHART FOR LOCAL FOOD ITEMS.

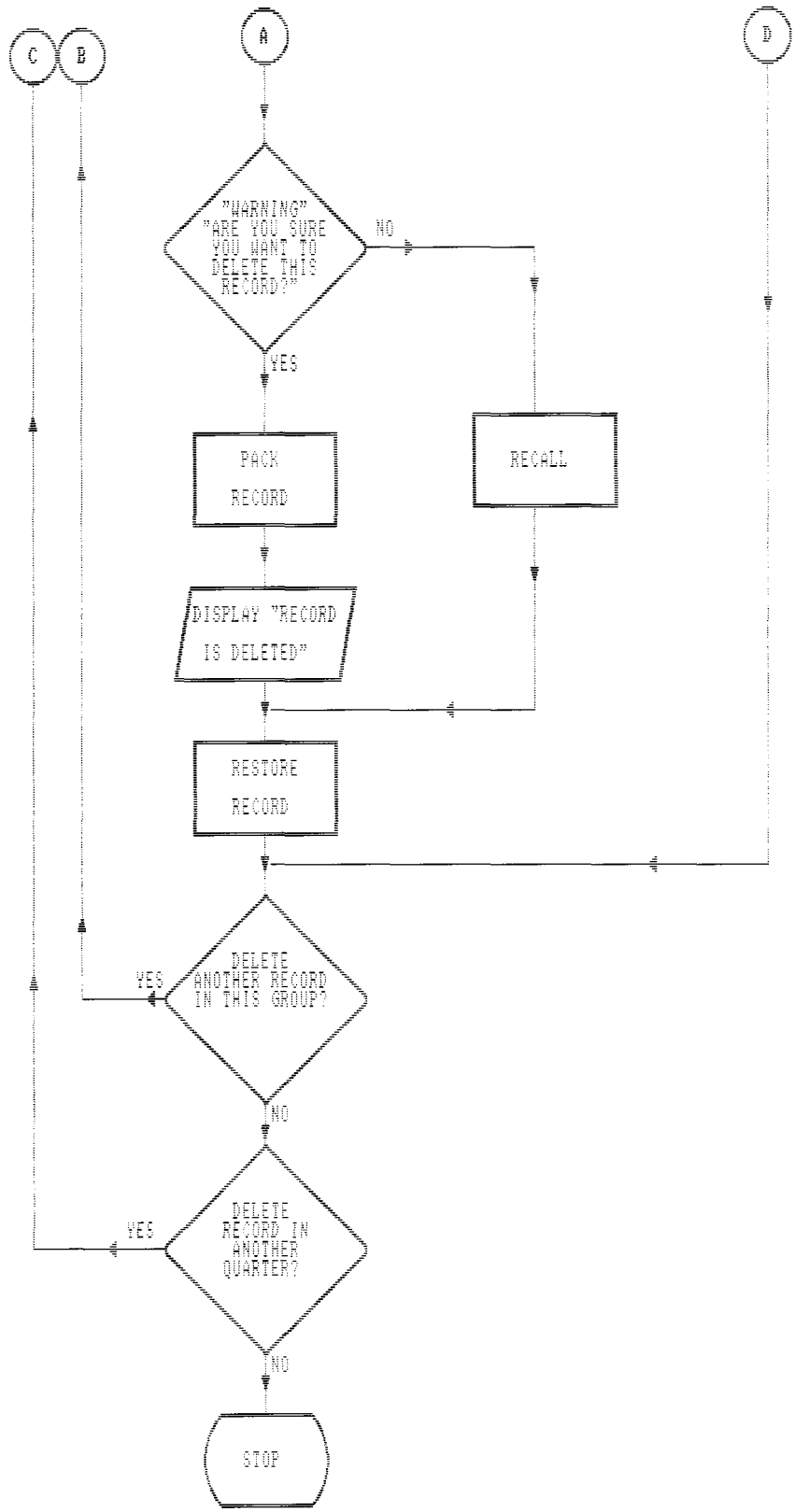



D
C
A
B
SAY "ITEM"
GET ITEM
SAY "TYPE"
GET TYPE
SAY "UNITS"
GET UNIT
SAY "MONTH1"
GET MONTH1
SAY "MONTH2"
GET MONTH2
SAY "MONTH3"
GET MONTH3
READ
DISPLAY
RECORD
DO WHILE
.T.
EDIT
RECORD
IS
THE
ABOVE
RECORD OKEY?
NO
YES
WRITE
RECORD
EDIT
ANOTHER
RECORD IN THIS
GROUP?
YES
NO
EDIT
RECORD IN
ANOTHER
QUARTER?
YES
NO
STOP

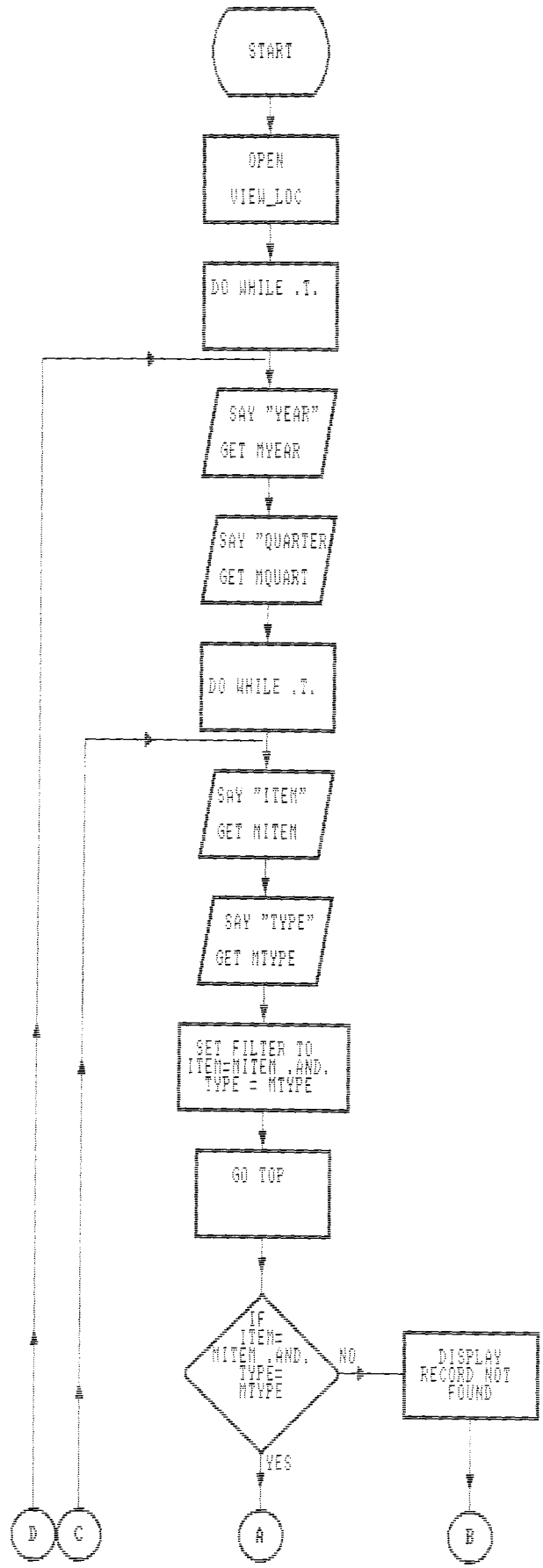
3.5.6 DELETE PROGRAM FLOWCHART FOR LOCAL FOOD ITEMS.

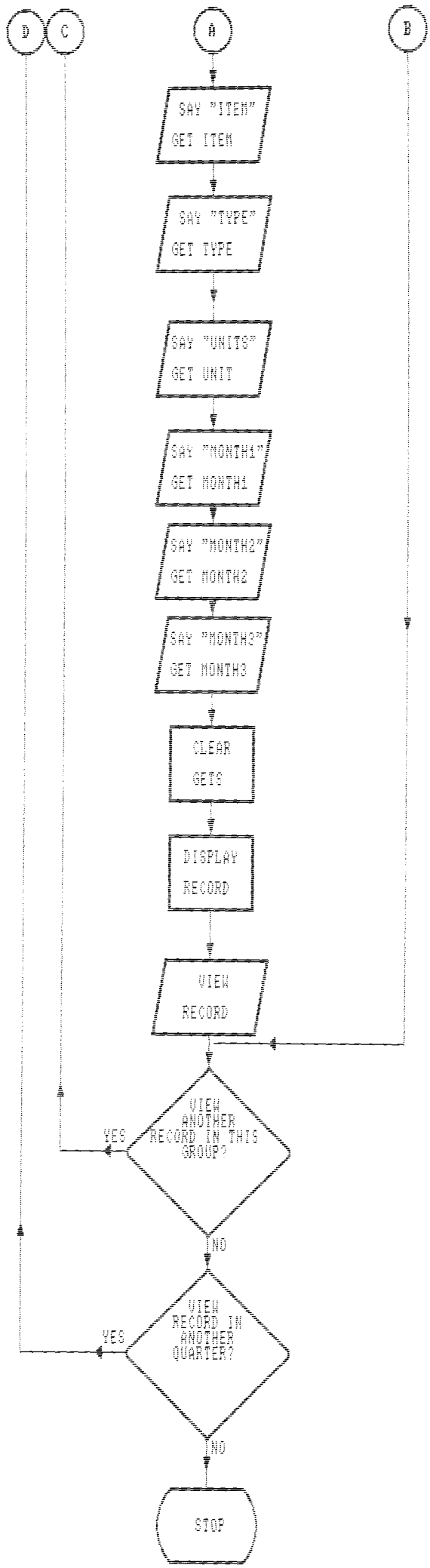



C
B
A
D
SAY "ITEM"
GET ITEM
SAY "TYPE"
GET TYPE
SAY "UNITS"
GET UNITS
SAY "MONTH1"
GET MONTH1
SAY "MONTH2"
GET MONTH2
SAY "MONTH3"
GET MONTH3
CLEAR
GETS
DISPLAY
RECORD
DELETE
THIS
RECORD?
NO
YES
DELETE
RECORD
C
B
A
D

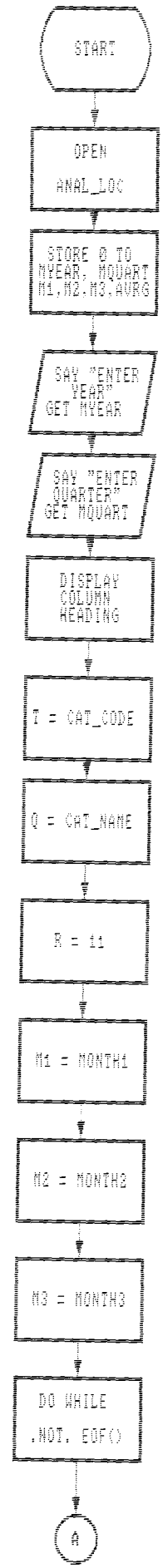

C
B
A
D
"WARNING"
"ARE YOU SURE
YOU WANT TO
DELETE THIS
RECORD?"
NO
YES
PACK
RECORD
RECALL
DISPLAY "RECORD
IS DELETED"
RESTORE
RECORD
DELETE
ANOTHER RECORD
IN THIS GROUP?
YES
NO
DELETE
RECORD IN
ANOTHER
QUARTER?
YES
NO
STOP

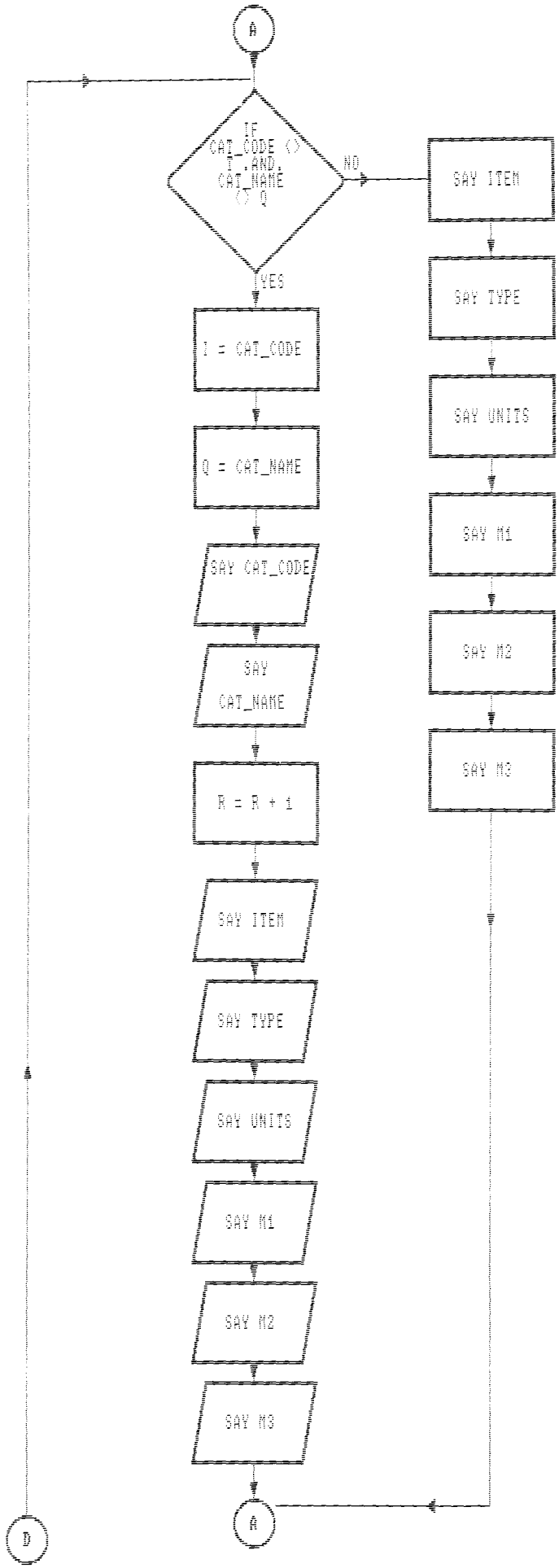
3.5.7 VIEW PROGRAM FLOWCHART FOR LOCAL FOOD ITEMS.

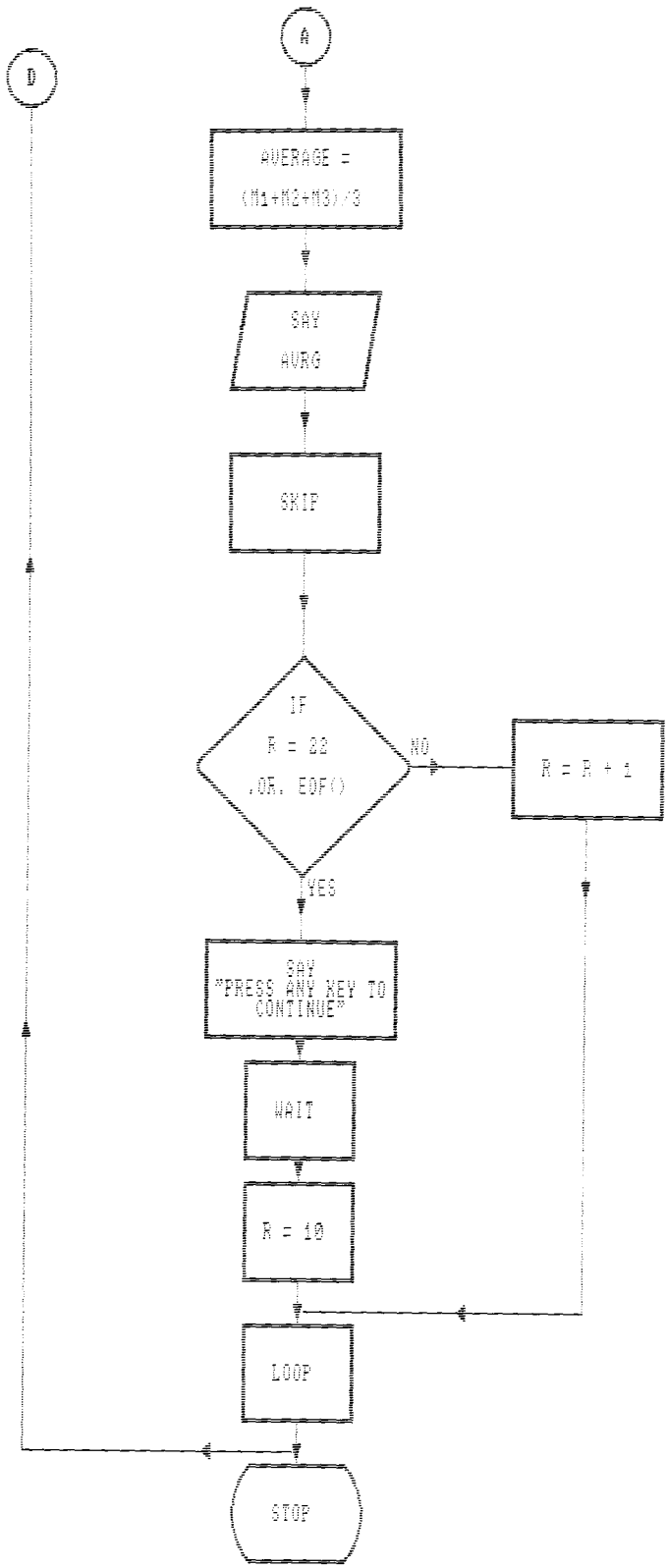



D
C
A
B
SAY "ITEM"
GET ITEM
SAY "TYPE"
GET TYPE
SAY "UNITS"
GET UNIT
SAY "MONTH1"
GET MONTH1
SAY "MONTH2"
GET MONTH2
SAY "MONTH3"
GET MONTH3
CLEAR
GETS
DISPLAY
RECORD
VIEW
RECORD
VIEW ANOTHER RECORD IN THIS GROUP?
YES
NO
VIEW RECORD IN ANOTHER QUARTER?
YES
NO
STOP

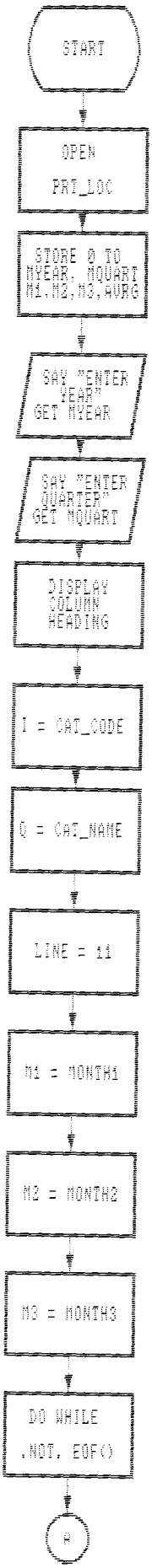
3.5.8 ANALYSIS PROGRAM FLOWCHART FOR LOCAL FOOD ITEMS

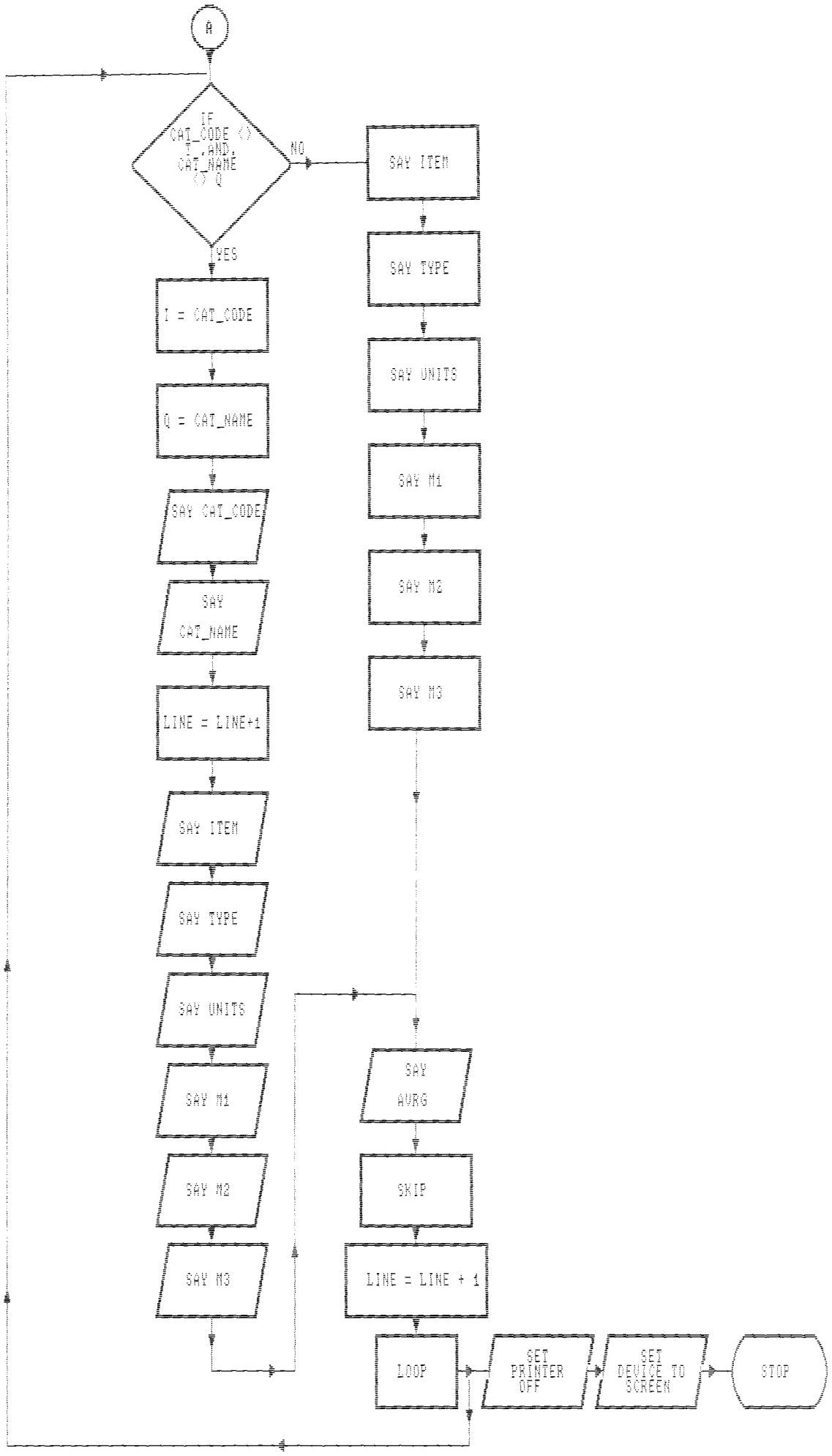



A
IF
CAT_CODE <>
I 'AND.
CAT_NAME
<> Q
NO
YES
SAY ITEM
SAY TYPE
SAY UNITS
SAY M1
SAY M2
SAY M3
I = CAT_CODE
Q = CAT_NAME
SAY CAT_CODE
SAY
CAT_NAME
R = R + 1
SAY ITEM
SAY TYPE
SAY UNITS
SAY M1
SAY M2
SAY M3
A
D


A
D
AVERAGE =
(M1+M2+M3)/3
SAY
AVRG
SKIP
IF
R = 22
.OR. EOF()
NO
R = R + 1
YES
SAY
"PRESS ANY KEY TO
CONTINUE"
WAIT
R = 10
LOOP
STOP

3.5.9 PRINT PROGRAM FLOWCHART FOR LOCAL FOOD ITEMS.




A
IF CAT_CODE <> T .AND. CAT_NAME <> Q
NO
YES
SAY ITEM
SAY TYPE
SAY UNITS
SAY M1
SAY M2
SAY M3
I = CAT_CODE
Q = CAT_NAME
SAY CAT_CODE
SAY CAT_NAME
LINE = LINE+1
SAY ITEM
SAY TYPE
SAY UNITS
SAY M1
SAY M2
SAY M3
SAY AVRG
SKIP
LINE = LINE + 1
LOOP
SET PRINTER OFF
SET DEVICE TO SCREEN
STOP

3.6 FILE STRUCTURE

With Database Management System Softwares, it is possible to create and maintain a data base and extract Information from it. It is important to first identify the format of the data, then design a display format that will permit interactive entry and revision of the database, the data base is the data resource for every Computer-based Information System. Thus, a data base is a collection of files that are in some way logically related to one another. In a data base, the data are integrated and related so that data redundancy is minimized.

To set up a data-entry screen format, it is important to, first, specify the structure of the data base by identifying the characteristics of each field in the data base. This is done by entering the field name, type, width etc. A file is a collection of related records. For example, the employee file contains records of employees. A record is a description of an event or an item. Related data elements describing an event or item are logically grouped to form a record.

The data elements are also refered to as fields. This is the lowest level logical unit in the data hierarch.

3.6.1. DATA BASE FILES

Basically, three categories of items are considered. Namely, Local food items, Processed items and Building Materials. To be able to access the data in each category properly, data base files are created for each.

3.6.1.1. LOC_1_93.DBF

Local food items data for first quarter of 1993 is contained in this file. The fields are described as follow which form a record.

CAT_CODE :- The code identifies each group of items in the data base.

CAT_NAME:- The items are grouped into categories and each category has a group name attached to it.

ITEM:- This represent the name of the item for each record under each group.

TYPE:- The item above are described in a way to deferenciate one item from another.

UNIT:- This refers to the quantity of each item purchased.

MONTH1:- The price for the first month of each quarter.

MONTH2:- Price for the second month of each quarter.

MONTH3:- Price for the third month of each quarter.

All other data base files under local food items contain the same structure and fields. Loc_2_93.DBF, LOC_3_93.DBF and LOC_4_93.DBF contain data for second, third and fourth quarters respectively.

3.6.1.2 PRO_1_93.DBF

Data for 1993 first quarter of processed items are contained in this file. The structure and fields are the same with LOC_1_93.DBF. Data for second, third and fourth quarters are contained in PRO_2_93.DBF, PRO_3_93.DBF and PRO_4_93.DBF respectively.

3.6.1.3 BUD_1_93.DBF

The structure and fields for Building material data base files are the same with the first two described above. Data for first quarter of Building material is contained in this file. BUD_2_93.DBF, BUD_3_93.DBF and BUD_4_93.DBF contain data for second, third and fourth quarters respectively.

3.6.1.4 YEARLY_DBF

Samples are selected from the three categories of items. The yearly average price for each item is calculated, this form the basis for Price Relative analysis. Five years (1989-1993) are considered for comparative analysis.

3.7. MENU DESIGN

To be able to integrate the Programme files adequately, a menu structure is designed. The Menu Programme MENU, is written to serve as an organizing medium for the various components of the Price Analysis Package. On opening MENU Programme, an introductory screen is displayed to introduce users to the package.

3.7.1. THE MENU STRUCTURE

The Menu programme, MENU, contains six functional parts like CREATE, DATA, FILE UPDATE, ANALYSIS, PRINTING and QUIT. The action expected by selecting each of these menu items are expressed in the subsequent part of the paragraph using the characteristical clarity of the dBASE IV Language.

The Create Menu Section named CREATE, calls up other menu items mainly for the creation of data base files. CREA_DF.PRG creates data base file for Local food items, while CREA2_DF.PRG and

CREA3_DF.PRG create data files for processed items and building materials respectively.

The Data browsing Menu Section named GENDATA browses the already existing data base files. These files are opened up for data entry or editing by browsing, depending on whether quarterly or yearly is selected.

The File Update menu section named MODIFY opens up another sub-menu. The popup displays four options like ADD, EDIT, DELETE and VIEW RECORD. The prompts of any of the items above will activate another popup. ADDI, EDITI, DELETEI and VIEWI programmes which are meant to add, edit, delete and view records in the data bases. The ADDI Sub-Menu Section opens other files like ADD_LOC.PRG, ADD_PRO.PRG and ADD_BUD.PRG for entrying records into various data bases.

The EDITI Sub-Menu Section calls other files like EDIT_LOC.PRG, EDIT_PRO.PRG and EDIT_BUD.PRG for editing records in the files.

The DELETEI Sub-menu section opens files like DELE_LOC.PRG, DELE_PRO.PRG and DELE_BUD.PRG for data deletion of any unwanted records from the data base files.

The VIEWI Sub-Menu Section activates the programmes for viewing records in the files. They are VIEW_LOC.PRG, VIEW_PRO.PRG and VIEW_BUD.PRG for each category of items.

Analysis Menu Section called ANALYSIS also activates other menu items mainly for the analysis of the data already in the various files. This menu prompts items like Local, Process,

Building and Relative. Each of these items when selected would run programmes like ANAL_LOC.PRG, ANAL_PRO.PRG, ANAL_BUD.PRG and RELATIVE.PRG which output the result of the analysis on quarterly or yearly basis. The first three analysis programs generate quarterly average while the last program produce Price Relative analysis on yearly basis.

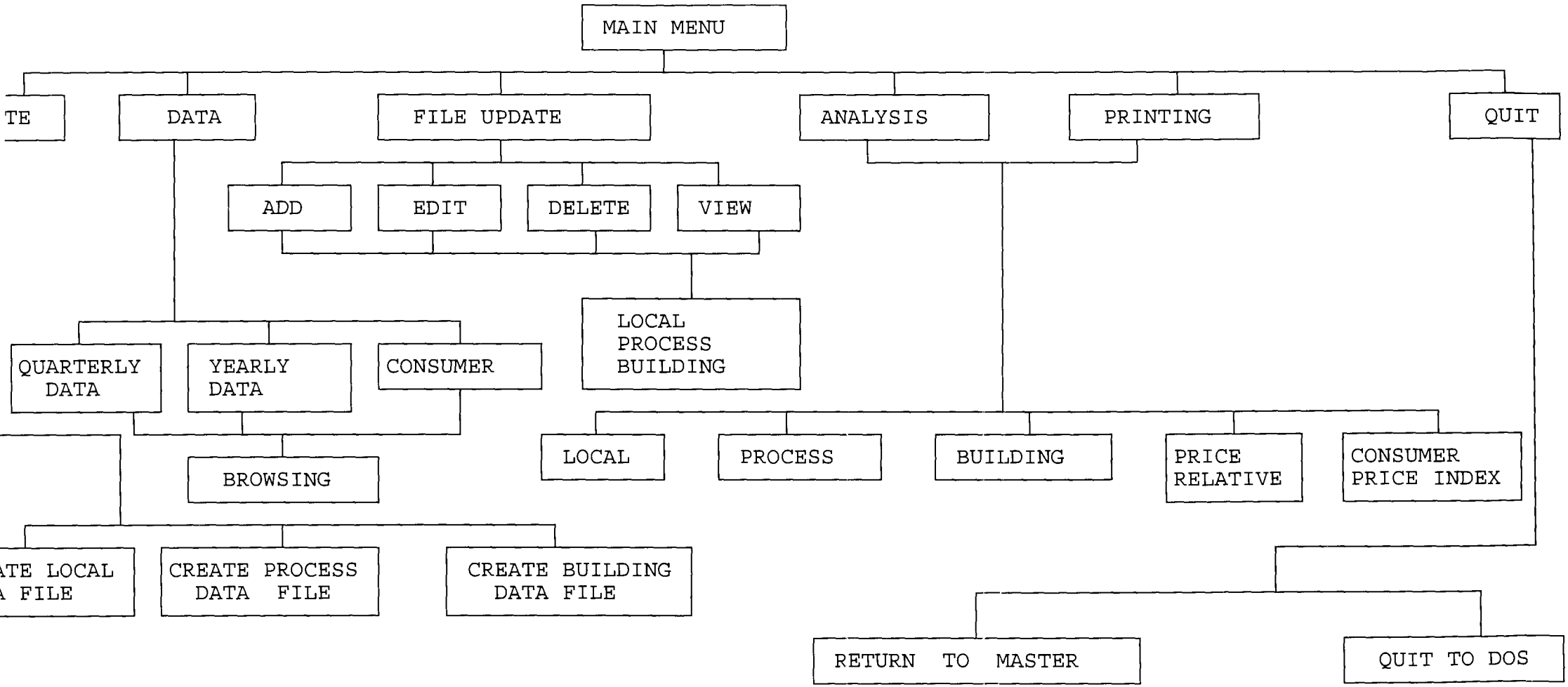
The Printing Menu Section named PRINT activates the program that would generate hard copies of the outputs of the Price analysis Package.

Programs like PRT_LOC.PRG, PRT_PRO.PRG, PRT_BUD.PRG and PRT_RELA.PRG produce the various analysis on the paper.

The item QUIT of the Menu now activates the closure of the application and return of control to dBASE IV or quit to DOS prompt.

3.7.2 PHYSICAL SPECIFICATION

The physical specification depict the system menu. The Menu consists of various activities or tasks to be performed in an application program. The type of menu used in this system is called pull-down menu. Pull-down menu consist of horizontal menu and popup menu.



MAIN MENU BLOCK CHART

CHAPTER FOUR

PRICE ANALYSIS EXPERIMENTATION

4. SYSTEM DEVELOPMENT

The development of the computerisation of price analysis package involves phases of problem definition, procedure and program development. The program development involves the following steps.

4.1 PROGRAM WRITING AND TESTING

This involves designing programs that conform to requirements set out in the system specification. System Testing ensures that all programs have been written correctly and that the system as a whole works i.e. the link between programs in a suite, specifically, the program involves add, edit, delete, view, Analysis and Print routines.

4.1.1 Add Routine: - It is used to enter records into a data base file. It involves creation of formatted screen display, verification of data among other things. The first task was the opening of the data base files to which records are going to be added or entered. This program allows one to enter as many records as desired. This is achieved by setting loops in the programs.

4.1.2 Edit Routine:- It enables data entered incorrectly to be corrected by entering the correct data to overwrite the wrong entry in the data base file.

4.1.3 Delete Routine:- It is used for erazing record that are no more valid in data base file. Loop is established for erazing as many records as possible.

4.1.4 View Routine:- It enables records to be viewed to ascertain the correctness of the records.

4.1.5 Analysis Program:- Analyse Price data on Quarterly and Yearly basis to show price increase or decrease from time to time.

Other programs include printing program which is responsible for producing the hard copies of all the output.

4.2 SYSTEM INSTALLATION, IMPLEMENTATION AND MAINTENANCE

(i) Installation:- This is the process of physically placing the software on the Computer system and making it operational. After that, the software is tested by the programmer and handed over for use.

(ii) System Implementation:- This simply means the process of converting the theoretical design into working system. This stage is the most crucial one in achieving a successful new system and in giving the users confidence that the proposed system will work effectively. This stage is a system project in its own right. It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the changeover, training of staff in the changeover procedures and in the new system procedures and evaluation of the changeover methods. Implementation consists of:-

(a) Training

(b) Conversion and changeover

(c) Review and Maintenance

(a) Training:- This involves training of personnel for the new system. The system analyst would be required to ensure that

all persons involved with the new system are capable of making it an operational success.

(b) File conversion:- It involves capturing data and creating a computer files from existing files. This is task involving and usually the most expensive stage. Changeover is a process of changing from old to new system and this can only take place when the following conditions are met.

(i) The system has been proved to the satisfaction of the system analyst and all the other implementation activities have been completed.

(ii) User Managers are satisfied with the results of the new system tests, with the staff training and with reference manuals.

(iii) The operation Manager is satisfied with the performance of the equipment, the operations staff and the timescale.

(iv) The target date for changeover has arrived.

The changeover may be achieved in a number of ways, of which the following are the most common:-

(i) Direct changeover:- This method is the complete replacement of the old system by the new, in one move.It is the least expensive but the most risky.

(ii) Paralel running:- This involves processing current data by both old and new systems to cross-check the results.It allows the results of the new system to be compared with the old system before acceptance by the user, thereby promoting user confidence.

(iii) Pilot running:- This is similar in concept to parallel running. Data from old or more previous periods for the whole or

part of the system is run on the new system after results have been obtained from the old system, and the new results are compared with the old. This method is more like an extended system ,test, but it may be considered a more practical form of changeover for organisational reasons.

(iv) Staged Changeover:- This involves a series of limited-size direct changeover, the new system being introduced piece-by-piece. A complete part, or logical section, is committed to the new system while the remaining parts or sections are processed by the old system. Only when the selected part is operating satisfactorily is the remainder transfered.

(c) Review and Maintenance:- Once the system has become operational, there is a need to examine it to see if it has met its objectives. For example, in terms of cost and benefits. The system will also need to be reviewed and maintained periodically due to the following reasons:-

(i) To deal with unforseen problems arising in operation.

(ii) To confirm that planned objectives are being met and to take action if they are not.

(iii) Adaptability of the software to the environment must also be ensured. The users also must be able to cope with the new system.

Maintenance of the software will normally be the responsibility of the programmer, who ensures that the package is always in good working order or condition and necessary precautions are taken to uphold the integrity of the program.

4.3 SYSTEM OUTPUT

The major purpose of our Program is to enable users to produce information in a desired format when they need it. The information generated from a database system is called data output. The outputs of the new system are categorised into Monthly, quarterly, yearly reports and consumer price index. Details are as explained below.

4.3.1 MONTHLY AND QUARTERLY ANALYSIS

The outputs generated are based on 1993 Price data which is most readily available. Weekly Price data were collected throughout the months. Average of all the weekly prices were calculated, which forms the monthly average price. The averages of all the monthly prices for three consecutive months give rise to quarterly average. Examining the monthly and quarterly average prices, comparison could be made at a glance. Price increase or decrease from month to month or quarter to quarter could be noticed and percentage increase or decrease could be ascertained. Prices of goods continue to increase steadily throughout the year. The outputs for the twelve quarters are as below:-

TABLE 1.1

QUARTER:1 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF LOCAL FOOD ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	JAN	FEB	MAR	AVERAGE
A TUBER						
YAM	WHITE	1KG	4.75	4.80	5.01	4.85
POTATOES	SWEET	1KG	2.00	2.00	2.00	2.00
B GRAINS						
RICE	WHITE	1KG	12.33	12.56	23.66	16.18
BEANS	WHITE	1KG	11.58	13.25	14.74	13.19
BEANS	BROWN	1KG	13.25	13.80	15.53	14.19
GUINEA CORN	RED	1KG	6.44	6.45	6.80	6.56
C FLOUR						
GARI	----	1KG	6.25	6.65	7.34	6.75
YAM	FLOUR	1KG	7.62	8.64	10.00	8.75
D FATS & OIL						
PALM OIL	RED	L.B.B.	18.00	16.50	15.50	16.67
G/NUT OIL	----	L.B.B.	18.60	18.80	19.75	19.05
PLANTAIN	RIPE	1KG	6.61	6.22	6.32	6.38
E MEAT & POULTRY						
BEEF	BONELESS	1KG	35.00	37.50	46.00	39.50
GOAT MEAT	FRESH	1KG	30.00	36.00	42.50	36.17
HEN/FOWL	AGRIC	1KG	45.00	46.00	49.25	46.75
EGGS	AGRIC	I DOZEN	24.00	28.00	30.00	27.33
FISH	ICED	1KG	18.00	20.00	22.60	20.20
F VEGETABLES						
TOMATOES	----	1KG	5.00	5.60	4.00	4.87
ATARODO	FRESH	1KG	8.66	8.80	10.00	9.15
OKRO	FRESH	1KG	4.50	4.00	3.58	4.03
ONION	BULB	1KG	7.33	5.60	4.30	5.74
MELON SEED	SHELLED	MILK TIN	12.50	12.50	13.05	12.68
SALT	----	1KG	4.62	5.00	6.15	5.26

TABLE 1.2

QUARTER:2 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF LOCAL FOOD ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	APR	MAY	JUN	AVERAGE
A TUBER						
YAM	WHITE	1KG	4.92	6.10	8.31	6.44
POTATOES	SWEET	1KG	2.40	2.50	2.90	2.60
B GRAINS						
RICE	WHITE	1KG	24.20	24.66	25.00	24.62
BEANS	WHITE	1KG	16.27	17.09	19.65	17.67
BEANS	BROWN	1KG	18.11	19.30	22.10	19.84
GUINEA CORN	----	1KG	6.05	6.67	7.01	6.58
C FLOUR						
GARI	----	1KG	10.00	11.69	11.04	10.91
YAM	FLOUR	1KG	8.85	10.00	18.57	12.47
D FAT & OIL						
PALM OIL	RED	L.B.B.	14.04	17.33	15.00	15.46
G/NUT OIL	----	L.B.B.	21.20	19.00	21.33	20.51
PLANTAIN	RIPE	1KG	7.76	8.00	8.33	8.03
E MEAT & POURTRY						
BEEF	BONELESS	1KG	52.40	58.33	60.00	56.91
GOAT MEAT	FRESH	1KG	46.00	45.00	51.66	47.55
HEN/FOWL	AGRIC	1KG	55.00	55.00	55.00	55.00
EGGS	AGRIC	1 DOZEN	31.20	36.00	36.00	34.40
FISH	ICED	1KG	24.61	25.00	25.00	24.87
F VEGETABLES						
TOMATOES	----	1KG	4.00	4.33	7.33	5.22
ATARODO	FRESH	1KG	10.00	10.00	11.33	10.44
OKRO	FRESH	1KG	5.00	4.33	5.66	5.00
ONION	BULB	1KG	4.00	4.44	4.21	4.22
MELON SEED	SHELLED	MILK TIN	23.33	23.33	22.33	23.00
SALT	----	1KG	6.52	8.41	9.23	8.05

TABLE 1.3

QUARTER:3 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF LOCAL FOOD ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	JUL	AUG	SEPT	AVERAGE
A TUBER						
YAM	WHITE	1KG	9.15	7.63	6.62	7.80
POTATOES	SWEET	1KG	2.00	2.00	2.00	2.00
B GRAINS						
RICE	WHITE	1KG	25.00	21.66	24.00	23.55
BEANS	WHITE	1KG	19.30	17.89	13.34	16.84
BEANS	BROWN	1KG	23.16	21.34	19.59	21.36
GUINEA CORN	RED	1KG	7.18	7.18	7.18	7.18
C FLOUR						
GARI	WHITE	1KG	9.17	7.50	7.50	8.06
YAM	FLOUR	1KG	20.48	20.00	20.00	20.16
D FATS & OIL						
PALM OIL	RED	L.B.B.	15.00	15.00	18.00	16.00
G/NUT OIL	----	L.B.B.	20.00	20.00	20.00	20.00
PLANTAIN	RIPE	1KG	14.00	15.00	15.00	14.67
E MEAT & POULTRY						
BEEF	BONELESS	1KG	60.00	60.00	60.00	60.00
GOAT MEAT	FRESH	1KG	60.00	60.00	60.00	60.00
HEN/FOWL	AGRIC	1KG	55.00	68.00	68.00	63.67
EGGS	AGRIC	1 DOZEN3	6.00	36.00	36.00	26.00
FISH	ICED	1KG	25.00	30.00	30.00	28.33
F VEGETABLES						
TOMATOES	----	1KG	8.24	6.37	6.67	7.09
ATARODO	FRESH	1KG	9.52	10.00	18.00	12.51
OKRO	FRESH	1KG	7.22	4.81	4.44	5.49
ONION	BULB	1KG	6.00	5.90	6.00	5.97
MELON SEED	SHELLED	1 MUDDLE	27.43	29.78	24.23	27.15
SALT	----	1KG	8.20	7.69	7.69	7.86

TABLE 1.4

QUARTER:4 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF LOCAL FOOD ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	OCT	NOV	DEC	AVERAGE
A TUBER						
YAM	WHITE	1KG	5.56	5.67	6.16	5.80
POTATOES	SWEET	1KG	2.00	2.33	2.00	2.11
B GRAINS						
RICE	WHITE	1KG	24.00	25.33	25.66	25.00
BEANS	WHITE	1KG	13.29	11.02	14.39	12.90
BEANS	BROWN	1KG	16.30	14.02	20.95	17.09
GUINEA CORN	RED	1KG	7.18	7.18	6.49	6.95
C FLOUR						
GARI	----	1KG	6.55	6.66	7.50	6.90
YAM	FLOUR	1KG	20.00	16.09	19.52	18.54
D FATS & OIL						
PALM OIL	RED	L.B.B.	18.50	19.00	20.00	19.17
G/NUT OIL	----	L.B.B.	20.00	20.00	30.00	23.33
PLANTAIN	RIPED	1KG	14.25	19.00	15.00	16.08
E MEAT & POULTRY						
BEEF	BONELESS	1KG	65.75	65.00	65.00	65.25
GOAT MEAT	FRESH	1KG	52.50	60.00	53.33	55.28
HEN/FOWL	AGRIC	1KG	68.00	68.00	68.00	68.00
EGGS	AGRIC	1 DOZEN	36.00	36.00	36.00	36.00
FISH	ICED	1KG	34.00	34.00	34.00	34.00
F VEGETABLES						
TOMATOES	----	1KG	7.38	6.85	6.82	7.02
ATARODO	FRESH	1KG	8.08	9.33	11.33	9.58
OKRO	FRESH	1KG	6.00	5.33	6.22	5.85
ONION	BULB	1KG	7.13	7.50	7.77	7.47
MELON SEED	SHELLED	1 MUDDLE	24.58	26.07	27.78	26.14
SALT	----	1KG	7.69	9.74	9.23	8.89

TABLE 2.1

QUARTER:1 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF PROCESSED ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	JAN	FEB	MAR	AVERAGE
A MILK FOOD						
PEAK MILK	A TIN	170GM	8.33	8.50	10.83	9.22
NIDO	A TIN	400GM	50.85	52.33	61.00	54.73
S.M.A.	A TIN	454GM	80.91	80.00	92.08	84.33
SIMILAC	A TIN	450GM	87.46	92.33	105.00	94.93
B CEREALS						
CORN FLAKES	1 PKT	350GM	15.00	15.00	15.08	15.03
CERELAC	A TIN	400GM	29.75	31.33	36.21	32.43
C BEVERAGES						
BOURNVITA	A TIN	450GM	35.83	36.33	37.04	36.40
COFFEE	MEDIUM	50GM	34.75	35.00	36.33	35.36
LIPTON TEA	1 PKT	50GM	12.25	12.00	12.83	12.36
D BAKERY PRODUCTS						
CABIN BISCUIT	1 PKT	800GM	20.83	25.00	25.42	23.75
BREAD	1 LOAF	454GM	6.00	6.00	6.00	6.00
E FLOUR						
CUSTARD	A TIN	500GM	19.95	20.67	22.39	21.00
F SUGAR						
TATE & LYLE	1 PKT	475GM	9.00	9.00	12.08	10.03
SUN SWEET	1 PKT	475GM	8.50	8.50	11.95	9.65
G DETERGENT						
OMO	1 PKT	200GM	10.50	10.50	10.50	10.50
FLASH	1 PKT	200GM	10.00	10.00	10.00	10.00
ELEPHANT	1 PKT	200GM	10.00	10.00	10.00	10.00
H TOILETRIES						
BREEZE	1 TABLET	250GM	13.00	13.00	13.00	13.00
LUX	1 TABLET	85GM	6.00	6.00	6.00	6.00
VOGUE	1 TABLET	85GM	6.00	6.00	6.00	6.00
IMPERIAL LEATH.	1 TABLET	90GM	6.00	6.00	6.00	6.00
I BAR SOAP						
KEY SOAP	1 BAR	1 BAR	18.00	18.00	18.00	18.00
DUCK SOAP	1 BAR	1 BAR	18.00	18.00	18.00	18.00
CANOE	1 TABLET	1 TABLET	2.50	2.50	2.50	2.50

TABLE 2.2

QUARTER:2 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF PROCESSED ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	APR	MAY	JUN	AVERAGE
A MILK FOOD						
PEAK MILK	A TIN	170GM	11.85	11.16	11.23	11.41
NIDO	A TIN	400GM	70.00	68.99	79.75	72.91
S.M.A.	A TIN	454GM	116.00	126.44	127.76	123.40
SIMILAC	A TIN	450GM	115.00	95.50	104.23	104.91
B CEREALS						
CORN FLAKES	1PKT	350GM	17.46	25.00	25.00	22.49
CERELAC	A TIN	400GM	39.49	42.89	49.20	43.86
C BEVERAGES						
BOURVITA	A TIN	450GM	42.29	42.94	45.06	43.43
COFFEE	MEDIUM	50GM	35.00	35.11	36.87	35.66
LIPTON TEA	1 PKT	50GM	12.66	13.22	15.03	13.64
D BAKERY PRODUCTS						
CABIN BISCUIT	1 PKT	800GM	25.00	25.00	25.00	25.00
BREAD	1 LOAF	227GM	6.00	6.00	6.00	6.00
E FLOUR						
CUSTARD	A TIN	500GM	25.00	26.44	26.73	26.06
F SUGAR						
TATE & LYLE	1 PKT	475GM	14.33	14.83	15.00	14.72
SUN SWEET	1 PKT	475GM	14.75	14.83	15.00	14.86
G DETERGENT						
OMO	1 PKT	200GM	12.00	12.00	14.03	12.68
FLASH	1 PKT	200GM	10.25	11.00	11.34	10.86
ELEPHANT	1 PKT	200GM	10.00	10.00	11.30	10.43
H TOILETRIES						
BREEZE	1 TABLET	250GM	13.33	13.70	1.00	9.34
LUX	1 TABLET	85GM	6.00	6.00	6.00	6.00
VOGUE	1 TABLET	85GM	6.00	6.00	6.00	6.00
IMPERIAL LEAT.	1 TABLET	90GM	6.00	6.00	6.00	6.00
I BAR SOAP						
KEY SOAP	1 BAR	1 BAR	19.50	19.50	19.50	19.50
DUCK SOAP	1 BAR	1 BAR	19.50	19.50	19.50	19.50
CANOE	1 TABLET	1 TABLET	7.50	7.50	8.80	7.93

TABLE 2.3

QUARTER:3 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF PROCESSED ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	JUL	AUG	SEPT	AVERAGE
A MILK FOOD						
PEAK MILK	A TIN	170GM	11.08	11.75	12.50	11.78
NIDO	A TIN	400GM	124.00	124.00	124.00	124.00
S.M.A.	A TIN	454GM	135.45	174.50	225.00	178.32
SIMILAC	A TIN	450GM	134.33	170.00	180.00	161.44
B CEREALS						
CORN FLAKES	1 PKT	350GM	27.75	27.66	27.00	27.47
CERELAC	A TIN	400GM	47.54	46.26	56.00	49.93
C BEVERAGES						
BOURNVITA	A TIN	450GM	43.99	45.37	45.00	44.79
COFFEE	MEDIUM	50GM	36.25	36.25	65.00	45.83
LIPTON TEA	1 PKT	50GM	15.75	17.13	16.00	16.29
D BAKERY PRODUCTS						
CABIN BISCUIT	1 PKT	800GM	26.63	28.51	30.00	28.38
BREAD	1 LOAF	227GM	6.00	6.00	6.00	6.00
E FLOUR						
CUSTARD	A TIN	500GM	38.11	35.54	32.00	35.22
F SUGAR						
TATE & LYLE	1 PKT	475GM	15.00	15.00	15.00	15.00
SUN SWEET	1 PKT	475GM	15.00	15.00	15.00	15.00
G DETERGENT						
OMO	1 PKT	200GM	15.00	15.00	15.13	15.04
FLASH	1 PKT	200GM	12.00	12.00	14.00	12.67
ELEPHANT	1 PKT	200GM	12.00	12.00	14.00	12.67
H TOILETRIES						
BREEZE	1 TABLET	250GM	14.50	14.50	15.00	14.67
LUX	1 TABLET	85GM	6.50	6.50	7.00	6.67
VOGUE	1 TABLET	85GM	6.50	6.50	6.50	6.50
IMPERIAL LEAT.	1 TABLET	90GM	6.50	6.50	6.50	6.50
I BAR SOAP						
KEY SOAP	1 BAR	1BAR	19.50	19.58	20.00	19.69
DUCK SOAP	1 BAR	1BAR	19.50	19.50	20.00	19.67
CANOE	1 TABLET	1 TABLET	10.00	10.00	10.00	10.00

TABLE 2.4

QUARTER:4 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF PROCESSED ITEMS

PRICES IN NAIRA

ITEM	TYPE	UNITS	OCT	NOV	DEC	AVERAGE
A MILK FOOD						
PEAK MILK	A TIN	170GM	13.63	15.00	15.00	14.54
NIDO	A TIN	400GM	99.75	97.16	99.33	98.75
S.M.A.	A TIN	454GM	235.00	230.00	230.00	231.67
SIMILAC	A TIN	450GM	183.75	187.50	192.00	187.75
B CEREALS						
CORN FLAKES	1 PKT	350GM	27.00	32.92	34.33	31.42
CERELAC	A TIN	400GM	56.00	59.92	65.00	60.31
C BEVERAGES						
BOURNVITA	A TIN	450GM	45.00	45.00	45.00	45.00
COFFEE	MEDIUM	50GM	65.00	62.58	61.66	63.08
LIPTON TEA	1 PKT	50GM	12.50	17.88	19.00	16.46
D BAKERY PRODUCTS						
CABIN BISCUIT	1 PKT	800GM	30.00	32.50	33.33	31.94
BREAD	1 LOAF	227GM	6.00	6.00	6.00	6.00
E FLOUR						
CUSTARD	A TIN	500GM	32.24	53.70	52.00	45.98
F SUGAR						
TATE & LYLE	1 PKT	475GM	15.25	16.25	16.66	16.05
SUN SWEET	1 PKT	475GM	15.25	16.25	16.50	16.00
G DETERGENT						
OMO	1 PKT	200GM	15.50	15.00	15.00	15.17
FLASH	1 PKT	200GM	14.00	14.37	14.00	14.12
ELEPHANT	1 PKT	200GM	14.00	14.37	14.33	14.23
H TOILETRIES						
BREEZE	1 TABLET	250GM	15.00	15.00	18.00	16.00
LUX	1 TABLET	85GM	7.00	6.50	6.50	6.67
VOGUE	1 TABLET	85GM	6.50	6.50	6.50	6.50
IMPERAIL LEAT.	1 TABLET	90GM	6.50	6.50	6.50	6.50
I BAR SOAP						
KEY SOAP	1 BAR	1 BAR	20.00	20.00	20.00	20.00
DUCK SOAP	1 BAR	1 BAR	20.00	20.00	20.00	20.00
CANOE	1 TABLET	1 TABLET	10.00	10.00	10.00	10.00

TABLE 3.1

QUARTER:1 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF BUILDING MATERIALS

PRICES IN NAIRA

ITEM	TYPE	UNITS	JAN	FEB	MAR	AVERAGE
CEMENT						
CEMENT	ELEPHANT	50KG	130.00	150.00	180.00	153.33
CEMENT	PORTLAND	50KG	130.00	150.00	180.00	153.33
ROOFING MATERIALS						
IRON SHEET	PZ COM. BRAND	I BUNDLE	950.00	1300.00	1500.00	1250.00
ASBESTOS(CEILING)	1.2 X 2.4M	1 SHEET	60.00	62.50	65.00	62.50
DOOR WIND.&FRAMES						
LOUVRE FRAME	WITH 7 BLADES	ONE	85.00	90.00	110.00	95.00
LOUVRE FRAME	WITH 10 BLADES	ONE	105.00	125.00	150.00	126.67
LOUVRE GLASS	PLAIN 91.4CM	ONE	27.50	27.00	27.00	27.17
LOUVRE GLASS	OBSCURE 91.4CM	ONE	28.00	27.50	24.50	26.67
IRON(DOOR)	2 SECTIONS	ONE	450.00	400.00	350.00	400.00
FLUSH DOOR	75 X 180 X4.4CM	ONE	350.00	350.00	350.00	350.00
SANITARY FITTINGS						
SINC	60 X 90CM	ONE	900.00	900.00	850.00	883.33
HAND BASIN	60 X 90CM	ONE	600.00	500.00	450.00	516.67
WATER CLOSET	10CM DIAMETER	ONE	1500.00	1650.00	1900.00	1683.33
BATH(IRON)	7.5CM DIAMETER	ONE	2200.00	2500.00	3000.00	2566.67
PAINTS						
GLOSS	DULUX(WHITE)	4 LITRES	100.00	100.00	100.00	100.00
EMULSION	DULUX(WHITE)	4 LITRES	130.00	130.00	130.00	130.00
SOLIGNUM	DULUX(WHITE	4 LITRES	350.00	420.00	450.00	406.67
WOOD/PLANKS						
IROKO	5 X 8 X 30CM	ONE	25.00	29.00	35.00	29.67
MAHOGANY	5 X 8 X 30CM	ONE	25.00	30.00	45.00	33.33
OTHER BUILD. MAT.						
IRON ROD	2CM X 9M	1 BAR	100.00	106.00	110.00	105.33
WALL TILES	CERAMIC(PLAIN)	1 SHEET	8.00	8.00	8.00	8.00
FLOOR TILES	PLASTIC 23CM	1 SHEET	6.00	6.00	8.00	6.67
MARBLE TILES	SMALL CHIP	1 BAG	29.00	30.00	30.00	29.67
GRAVELS	WASHED	1 LOAD	500.00	500.00	500.00	500.00
SAND	EROSION	1 LOAD	170.00	185.00	300.00	218.33
STONES	LATERITE	1 LOAD	140.00	160.00	200.00	166.67
HOLLOW BLOCKS	25X22.5X22.5CM	ONE	13.00	13.00	13.00	13.00
BURNT BRICKS	5 X 10 X 15CM	ONE	13.00	13.00	13.00	13.00

TABLE 3.2

QUARTER:2 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF BUILDING MATERIALS

PRICES IN NAIRA

ITEM	TYPE	UNITS	APR	MAY	JUN	AVERAGE
CEMENT						
CEMENT	ELEPHANT	50KG	179.00	172.00	170.00	173.67
CEMENT	PORTLAND	50KG	180.00	171.00	170.00	173.67
ROOFING MATERIALS						
CORR.IRON SHEET	PZ COM. BRAND	I BUND.	1500.00	1450.00	1460.00	1470.00
ASBESTOS(CEILING)	1.2 X 2.4M	1 SHEET	75.00	75.00	80.00	76.67
DOOR WIND.&FRAMES						
LOUVRE FRAME	7 BLADES	ONE	140.00	130.00	130.00	133.33
LOUVRE FRAME	10 BLADES	ONE	190.00	150.00	150.00	163.33
LOUVRE GLASS	PLAIN 91.4CM	ONE	28.00	29.00	30.00	29.00
LOUVRE GLASS	OBSCURE 91.4CM	ONE	29.00	30.00	31.00	30.00
IRON FRAME(DOOR)	2 SECTIONS	ONE	350.00	350.00	350.00	350.00
FLUSH DOOR	75 X 180 X4.4CM	ONE	330.00	350.00	350.00	343.33
SANITARY FITTINGS						
SINC	60 X 90CM	ONE	825.00	860.00	900.00	861.67
WASH HAND BASIN	60 X 90CM	ONE	625.00	550.00	555.00	576.67
WATER CLOSET	10CM DIAMETER	ONE	1850.00	1550.00	1550.00	1650.00
BATH TUBE(IRON)	7.5CM DIAMETER	ONE	3000.00	4000.00	4010.00	3670.00
PAINTS						
GLOSS	DULUX(WHITE)	4 LIT.	150.00	200.00	200.00	183.33
EMULSION	DULUX(WHITE)	4 LIT.	125.00	150.00	180.00	151.67
SOLIGNUM	DULUX(WHITE)	4 LIT.	520.00	530.00	550.00	533.33
WOOD/PLANKS						
IROKO	5 X 8 X 30CM	ONE	35.00	35.00	35.00	35.00
MAHOGANY	5 X 8 X 30CM	ONE	35.00	35.00	38.00	36.00
OTHER BUILD. MAT.						
IRON ROD	2CM X 9M	1 BAR	170.00	170.00	170.00	170.00
WALL TILES	CERAMIC(PLAIN)	1 SHEET	10.00	13.00	15.00	12.67
FLOOR TILES	PLASTIC 23CM	1 SHEET	9.00	9.00	10.00	9.33
MARBLE TILES	SMALL CHIP	1 BAG	35.00	36.00	37.00	36.00
GRAVELS	WASHED	1 LOAD	550.00	550.00	550.00	550.00
SAND	EROSION	1 LOAD	250.00	250.00	250.00	250.00
STONES	LATERITE	1 LOAD	200.00	200.00	200.00	200.00
HOLLOW BLOCKS	25X22.5X22.5CM	ONE	13.00	14.00	15.00	14.00
BURTN BRICKS	5 X 10 X 15CM	ONE	10.00	10.00	10.00	10.00

TABLE 3.3

QUARTER:3 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF BUILDING MATERIALS

PRICES IN NAIRA

ITEM	TYPE	UNITS	JUL	AUG	SEPT	AVERAGE
CEMENT						
CEMENT	ELEPHANT	50KG	170.00	163.00	190.00	174.33
CEMENT	PORTLAND	50KG	170.00	160.00	190.00	173.33
COOFING MATERIALS						
CORR.IRON SHEET	PZ COM. BRAND	1 BUND.	1400.00	1450.00	1420.00	1423.33
ASBESTOS(CEILING)	1.2 X 1.2M	1 SHEET	80.00	75.00	75.00	76.67
DOOR/WIND.& FRAME						
LOUVRE FRAMES	7 BLADES	ONE	130.00	120.00	150.00	133.33
LOUVRE GLASS	PLAIN 91.4CM	ONE	28.00	32.00	29.00	29.67
LOUVRE GLASS	OBSCURE 91.4CM	ONE	29.00	33.00	36.00	32.67
IRON FRAMES(DOOR)	2 SECTIONS	ONE	0.00	0.00	0.00	0.00
FLUSH DOOR	75 X 180 X4.4CM	ONE	375.00	350.00	350.00	358.33
SANITARY FITTINGS						
SINC	60CM X 90CM	ONE	1000.00	1300.00	1300.00	1200.00
WASH HAND BASIN	60CM X 90CM	ONE	560.00	590.00	600.00	583.33
WATER CLOSET	10CM DIAMETER	ONE	1500.00	1600.00	1650.00	1583.33
BATH TUBE(IRON)	7.5CM DIAMETER	ONE	4100.00	4100.00	4250.00	4150.00
PAINTS						
GLOSS	DULUX(WHITE)	4 LIT.	200.00	200.00	200.00	200.00
EMOSION	DULUX(WHITE)	4 LIT.	180.00	150.00	150.00	160.00
SOLIGNUM	DULUX(WHITE)	4 LIT.	550.00	550.00	600.00	566.67
WOOD/PLANKS						
IROKO	5 X 8 X 30CM	ONE	37.00	40.00	40.00	39.00
MAHOGANY	5 X 8 X 30CM	ONE	35.00	35.00	40.00	36.67
OTHER BUILD.MAT.						
IRON ROD	2CM X 9M	1 BAR	130.00	130.00	130.00	130.00
WALL TILES	CERAMIC(PLAIN)	1 SHEET	0.00	0.00	0.00	0.00
FLOOR TILES	PLASTIC (23CM)	1 SHEET	0.00	0.00	0.00	0.00
MARBLE TILES	SMALL CHIP	1 BAG	30.00	35.00	35.00	33.33
GRAVELS	WASHED	1 LOAD	550.00	600.00	650.00	600.00
SAND	EROSION	1 LOAD	245.00	250.00	250.00	248.33
STONES	LATERITE	1 LOAD	180.00	200.00	200.00	193.33
HOLLOW BLOCKS	25X22.5X22.5CM	ONE	20.00	16.00	18.00	18.00
BURNT BRICKS	5 X 10 X 15CM	ONE	10.50	10.00	13.00	11.17

TABLE 3.4

QUARTER:4 1993

MONYHLY AND QUARTERLY AVERAGE PRICES OF BUILDING MATERIALS

PRICES IN NAIRA

ITEM	TYPE	UNITS	OCT	NOV	DEC	AVERAGE
CEMENT						
CEMENT	ELEPHANT	50KG	170.00	163.00	190.00	174.33
CEMENT	PORTLAND	50KG	170.00	160.00	190.00	173.33
COOFING MATERIALS						
CORR.IRON SHEET	PZ COM BRAND	1 BUND.	1400.00	1450.00	1420.00	1423.33
ASBESTOS(CEILING)	1.2 X 2.4M	1 SHEET	80.00	75.00	75.00	76.67
DOOR WIND.FRAMES						
LOURVE FRAMES	7 BLADES	ONE	130.00	120.00	150.00	133.33
LOURVE FRAMES	10 BLADES	ONE	155.00	140.00	185.00	160.00
LOURVE GLASS	PLAIN 91.4CM	ONE	28.00	32.00	29.00	29.67
LOURVE GLASS	OBSCURE 91.4CM	ONE	29.00	33.00	36.00	32.67
FLUSH DOOR	75 X 180 X4.4CM	ONE	375.00	350.00	350.00	358.33
SANITARY FITTINGS						
SINC	60 X 90CM	ONE	1000.00	1300.00	1300.00	1200.00
WASH HAND BASIN	60 X 90CM	ONE	560.00	590.00	600.00	583.33
WATER CLOSET	10CM DIAMETER	ONE	1200.00	1500.00	1500.00	1400.00
BATH TUBE(IRON)	7.5CM DIAMETER	ONE	4300.00	5500.00	5550.00	5116.67
PAINTS						
GLOSS	DULUX(WHITE)	4 LIT.	200.00	280.00	225.00	235.00
EMULSION	DULUX(WHITE)	4 LIT.	160.00	150.00	160.00	156.67
BOLIGNUM	DULUX(WHITE)	4 LIT.	610.00	550.00	626.00	595.33
WOOD/PLANKS						
IROKO	5 X 8 X 30CM	ONE	39.50	45.00	45.00	43.17
MAHOGANY	5 X 8 X 30CM	ONE	40.50	45.00	46.00	43.83
OTHER BUILD. MAT.						
IRON ROD	2CM X 9M	1 BAR	129.00	300.00	300.00	243.00
WALL TILES	CERAMIC(PLAIN)	1 SHEET	0.00	0.00	0.00	0.00
FLOOR TILES	PLASTIC 23CM	1 SHEET	0.00	0.00	0.00	0.00
MABLE TILES	SMALL CHIPS	1 BAG	35.00	45.00	0.00	26.67
GRAVELS	WASHED (RED)	1 LOAD	650.00	900.00	900.00	816.67
SAND	EROSION	1 LOAD	250.00	400.00	400.00	350.00
STONES	LATERITE	1 LOAD	200.00	350.00	350.00	300.00
HOLLOW BLOCKS	25X22.5X22.5CM	ONE	19.50	19.50	19.50	19.50
BURN BRICKS	5 X 10 X 15CM	ONE	13.00	13.00	13.00	13.00

4.3.2 PRICE RELATIVE

The report generated here is a yearly analysis of prices. It only shows the percentage increase or decrease of the current period compared with the base period. Price relative is analysed on yearly average prices. A base year is chosen which serves as basis for comparison. The percentage for the base (zero) year is always 100%. The pecentage of the subsequent years are calculated based on the base year prices. The price relative analysis was based on yearly average Prices for five years i.e 1989 - 1993, while 1989 serves as base year on which all other years were compared. The output for the Price Relative for the five years is shown below:-

TABLE 4

PRICE RELATIVES OF ESSENTIAL COMMODITIES 1989-1993

BASE YEAR: 1989 = 100% PRICES IN NAIRA

ITEM	TYPE	UNITS	1989	1990	1991	1992	1993
LOCAL FOOD							
YAM	WHITE	1KG	100	134.11	147.29	283.72	483.72
RICE	WHITE	1KG	100	92.05	129.54	190.98	270.34
BEANS	WHITE	1KG	100	106.44	129.18	161.57	304.63
GARI	WHITE	1KG	100	57.84	70.38	151.92	286.06
PALM OIL	RED	L.B.B.	100	93.95	109.15	157.36	261.24
PROCESS							
PEAK MILK	170GM	A TIN	100	138.55	174.91	252.73	426.91
BOURNVITA	450GM	A TIN	100	120.68	176.47	237.86	402.37
LIPTON TEA	50GM	1 PKT	100	156.25	160.00	306.25	459.06
BREAD	454GM	1 LOAF	100	98.43	216.54	311.02	236.22
MAGGI	50 CUBES	1 PKT	100	135.07	221.48	333.49	662.40
BUILDING							
CEMENT	ELEPHANT	50KG	100	92.59	143.86	211.25	416.85
CORR.IRON SH	PZ COMB-BRAND	1 BUND	100	82.66	108.58	175.27	293.77
FLUSH DOOR	3 SECTIONS	ONE	100	109.09	147.85	284.85	305.56
ZINC	60CM X 90CM	ONE	100	106.25	147.31	285.36	351.18
GLOSS PAINT	DULUX/NIGERLUX	4 LITR	100	148.76	153.01	153.44	169.35

4.3.3 CONSUMER PRICE INDEX

The Consumer Price Index measures average change in prices of goods and services consumed by households and consequently may be used as a measure of inflation.

To obtain the Price Index, weight is attach to price relative (i.e quantity of each item consumed), a weighted average of these price relative is calculated. The importance of this various commodities are called weights which will be proportion to the expenditure on each item consumed. Before the weights could be ascertained, Household survey on Income and Expenditure has to be conducted throughout the state or country. This will enable us to know the quantity of each item consumed by each household or the importance attach to each. Those items such as rice, beans, bread, beef etc, on which households spend considerable part of their income have high weights. Others such as refridgerator, ratios, television sets, cars etc, that were purchased by few households, in the sample have relatively small weights. Accordingly, the items having high weights contribute more to the overall index.

In order to make this new system fully operational and to serve as useful tool in the near future, some basic assumptions are made on weights for all items. All the quantity purchased (weights) through the years are merely based on assumption. The report generated is the consumer price index for each year. This could be seen in the main menu when consumer is activated under Analysis sub-menu.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY AND CONCLUSION

State Planning Commission has the overall responsibility for coordinating the state socio-economic development planning; It also liases with the National Planning Commission on behalf of the State Government on all economic development matters. All these activities are aimed at providing developmental indicators which are essential in the overall administration of the State.

The problems affecting the development of Statistical production persist since the early days in the State. Briefly, the problems are:-

(i) Manpower shortage

(ii) Inadequate funding

(iii) Lacks of facilities and Equipment

(iv) Lack of awareness on the part of the policy makers on the relevance of data for planning purpose.

Manual data processing is currently used in the analysis of price data. The introduction of computer into the system as regards its capabilities, will go a long way in eliminating the delay in the production of Statistical products. Government, individual likewise fail to see the importance of Statistics as a vital tool in policy formulation and decision making. To integrate Planning with Statistics as been a problem which is drawing back the progress of the State. To move the State or country forward, Statistics must be adequately staffed, funded and accorded the due

recognition and provided with modern tools to function satisfactorily e.g.computers.

The location of the Statistics Directorate continues to change with the exit of the various administrations. The position remains precarious and unpredictable. This scenario does not appear to be good enough as it distabilises effective planning. Since Statistics is a tool for planning, then authorities must learn to give the subject-matter the prominence it deserves.

The report shows there is a significant drop in the standard of living of this country. Hyper inflation has also eaten deep into our economy. The prices of goods and services have gone up skyrocketedly which has reduced the real income of every household and nation at large. The standard of living of Nigerians is falling at an alarming rate. This calls for urgent measures from the government to rescue the nation from collapsing economically and prevent social-ills e.g. armed robbery, crimes etc, that could results from economic imbalance of individuals.

5.2 RECOMMENDATION

It is pertinent to know that price Statistics shows the movement and direction of our economy. The behaviour of our economy affect all sectors either positively or negatively depending on the direction of movement. The importance of price Statistics to the economy of any nation, calls for serious attention to be given to the following:-

(a) Price data on wholesale, Industrial and agricultural products must be collected and analysed for wider

exposure of the behaviour of our economy.

(b) Number of markets covered must be increased to cover all the Local Government Area (local markets) for comparative analysis.

(c) Standard measuring tools must be provided for measuring all the items considered in the questionaire e.g. weighing scale. All these must be standardised for easy analysis i.e kilogram, Litre, metre etc.

(d) Price collectors or enumerators must be properly trained in the collection of prices.

(e) Household survey on income and expenditure must be conducted as soon as possible. Though, it is an expensive survey, but the gain derive from the exercise is worth it. Through this, the behaviour of the economy could be determined.

5.2.1 DATA BANKS AND WAREHOUSE

Data banks house data bases which can be accessed, updated, validated and protected. The difference between data bank and warehouse is that, while raw data are stored in the data banks data bases, validated information is stored in the data warehouse. This will enable the Ministries and Parastatals to have access to both the data and information at any time. The very essence of data banking makes it crucial in the data dissemination. For Statistics branch to function as data bank and warehouse for the State, it must be well equipped with necessary infrastructure such as computers to enable it hold huge volumes of data and information

and the software must be carefully selected.

5.2.2 COST - BENEFIT ANALYSIS

The cost-benefit analysis should be examined to enable the policy makers make decision on how to plan towards the changeover procedures for this new package. The costs that could be incurred are in the area of acquisition of computers and other peripherals, training of personnel and provision of air condition room for the computer to be installed. The benefits derive are prompt generation of information, dissemination of relevant, reliable, valid and timely information to decision makers. The benefits outweigh the cost if measured in monetary term. Wrong decision based on wrong data or information could distablised a whole system and the damage could be irreparable. It is therefore, necessary for Government to see the relevance of this research work as a tool in the accomplishment of their goals and objectives in the area of delivery of quality Statistical products on prices.

5.2.3 DATA DISSEMINATION

The progress made by Statistical products producers in their dissemination effort is far short of what is expected of them, in view of the role of their product in planning for the rapid growth of economy. In view of the advance Technology now available, dissemination of data should no longer be limited to printed materials. Data could be sold in diskettes. The possibility of developing on line data accessibility should be explored. Each producer should be able to access each others output within the State through some networking arrangement (LAN). This will

eventually pave way for linking producers to various users thoughout the country (WAN) and the whole world at large (INTERNET).

5.2.4 HARDWARE REQUIREMENT

For the effective running of the new system, the following hardware specification will be needed.

386 DX.

Hardware, min. 40 MB.

Ram 4 MB.

Monitor (either VGA or Monochrome).

Floppy disk (3.5 and $5^{1}/_{4}$ drives).

Speed Min. (33 MHZ).

Enhanced Keyboard.

Operating System

DOS 6.20.

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LIST OF APPENDICES

PROGRAMS

1. MENU.PRG
2. CREA_DF.PRG
3. ADD_LOC.PRG
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APPENDIX 1

```
*-------------------------------------------------------------
* APPLICATION NAME: MENU
* THIS APPLICATION CONNECTS  ALL THE PRICE ANALYSIS PROGRAMMES
*-------------------------------------------------------------
CLEAR
CLOSE ALL
CLEAR MEMORY
CLEAR SCREEN
SET TALK OFF
SET SAFETY OFF
SET ECHO OFF
SET CATA OFF
SET DBTR OFF
SET SCORE OFF
SET STAT OFF

*-------- OPENING ADDRESS
@2,5 TO 18,72 DOUB COLOR R/G+
@5,15 SAY 'WELCOME TO COMPUTERISED PRICE ANALYSIS SYSTEM'
@7,14 SAY 'STATE PLANNING COMMISSION, ILORIN, KWARA STATE.'
@9,26 SAY 'DESIGNED AND DEVELOPED'
@10,35 SAY 'BY'
@11,27 SAY 'OLAJIDE E.S.(035/96)'
@13,20 SAY 'UNDER THE SUPERVISION OF DR.S.A.REJU'
@15,24 SAY 'ONCE AGAIN, YOU ARE WELCOME.'
@20,23 SAY 'PRESS ANY KEY TO CONTINUE'
WAIT""
CLEAR

*-------- PERSONAL INTRODUCTION
@1,4 TO 22,76 DOUB COLOR RB+
@3,18 SAY 'TOPIC :- COMPUTERISATION OF PRICE ANALYSIS'
@5,8 SAY 'CASE STUDY:-STATE PLANNING COMMISSION,STATISTICS BRANCH,
ILORIN.'
@7,38 SAY 'BY'
@9,28 SAY 'EYITAYO SOFIYAT OLAJIDE'
@10,32 SAY 'PGD/MCS/035/96'
@12,12 SAY 'THIS PROJECT WORK IS PRESENTED TO THE DEPARTMENT OF'
@14,22 SAY 'MATHEMATICS AND COMPUTER SCIENCE'
@16,13 SAY 'IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE'
@18,13 SAY 'AWARD OF POST-GRADUATE DIPLOMA IN COMPUTER SCIENCE'
@20,35 SAY 'MARCH 1997'
@23,25 SAY 'PRESS ANY KEY TO CONTINUE'
WAIT""
CLEAR

*-----------APPLICATION DEFINITION AND ACTIVATION
@5,6 TO 17, 67 DOUBLE COLOR RG+/BG
@6,8 FILL TO 16,66 COLOR N
@9,20 SAY 'COMPUTERISATION OF PRICE ANALYSIS'
@11,7 TO 11,66 DOUB COLOR RG+/BG
```

```
@13,14 SAY 'PROGRAM DEVELOPER: EYITAYO SOFIYAT OLAJIDE (MRS)'
@20,10 SAY 'PRESS ESCA TO ABANDON OR ANY OTHER KEY TO CONTINUE'
WAIT""
CLEAR
DEFINE WINDOW WIN1 FROM 0,0 TO 22,79

*-----------MAIN MENU DEFINITION
DEFINE MENU M_MENU
     DEFINE PAD CREATE OF M_MENU PROMPT "CREATE" AT 5,2
     DEFINE PAD DATA OF M_MENU PROMPT "DATA" AT 5,15
     DEFINE PAD UPDATE OF M_MENU PROMPT "FILE UPDATE" AT 5,26
     DEFINE PAD ANALYSIS OF M_MENU PROMPT "ANALYSIS" AT 5,43
     DEFINE PAD PRINTING OF M_MENU PROMPT "PRINTING" AT 5,58
     DEFINE PAD QUIT OF M_MENU PROMPT "QUIT" AT 5,72
ON SELECTION PAD CREATE OF M_MENU ACTIVATE POPUP CREATE
ON SELECTION PAD DATA OF M_MENU ACTIVATE POPUP GENDATA
ON SELECTION PAD UPDATE OF M_MENU ACTIVATE POPUP MODIFY
ON SELECTION PAD ANALYSIS OF M_MENU ACTIVATE POPUP ANALYSIS
ON SELECTION PAD PRINTING OF M_MENU ACTIVATE POPUP PRINT
ON SELECTION PAD QUIT OF M_MENU ACTIVATE POPUP END

*---------- CREATE MENU DEFINITION
DEFINE POPUP CREATE FROM 7,1 TO 11,27
     DEFINE BAR 1 OF CREATE PROMPT 'CREATE LOCAL DATA FILE'
     DEFINE BAR 2 OF CREATE PROMPT 'CREATE PROCESS DATA FILE'
     DEFINE BAR 3 OF CREATE PROMPT 'CREATE BUILDING DATA FILE'
ON SELECTION POPUP CREATE DO A1

*----------- GENDATA ENTRY DEFINITION
DEFINE POPUP GENDATA FROM 7,9 TO 11,24
     DEFINE BAR 1 OF GENDATA PROMPT 'QUARTERLY DATA'
     DEFINE BAR 2 OF GENDATA PROMPT 'YEARLY DATA'
     DEFINE BAR 3 OF GENDATA PROMPT 'CONSUMER INDEX'
ON SELECTION POPUP GENDATA DO B0

DEFINE POPUP QTERLY FROM 7,25 PROMPT FILES LIKE ??????93.DBF;
            MESSAGE "Data Browsing"
ON SELECTION POPUP QTERLY DO B1
DEFINE POPUP YEARLY FROM 7,25 PROMPT FILES LIKE YEAR??.DBF;
            MESSAGE "Data Browsing"
ON SELECTION POPUP YEARLY DO B1
DEFINE POPUP CONSUMER FROM 7,25 PROMPT FILES LIKE CONSU???.DBF;
            MESSAGE "Data Browsing"
ON SELECTION POPUP CONSUMER DO B1

*--------- MODIFY SECTION DEFINITION
DEFINE POPUP MODIFY FROM 7,26 TO 12,40
     DEFINE BAR 1 OF MODIFY PROMPT 'ADD RECORD'
     DEFINE BAR 2 OF MODIFY PROMPT 'EDIT RECORD'
     DEFINE BAR 3 OF MODIFY PROMPT 'DELETE RECORD'
     DEFINE BAR 4 OF MODIFY PROMPT 'VIEW RECORD'
ON SELECTION POPUP MODIFY DO C1
```

```
*---------- ADD1 SECTION DEFINITION
DEFINE POPUP ADD1 FROM 7,41 TO 11,50
     DEFINE BAR 1 OF ADD1 PROMPT 'LOCAL'
     DEFINE BAR 2 OF ADD1 PROMPT 'PROCESS'
     DEFINE BAR 3 OF ADD1 PROMPT 'BUILDING'
ON SELECTION POPUP ADD1 DO C11

*---------- EDIT1 SECTION DEFINITION
DEFINE POPUP EDIT1 FROM 8,41 TO 12,50
     DEFINE BAR 1 OF EDIT1 PROMPT 'LOCAL'
     DEFINE BAR 2 OF EDIT1 PROMPT 'PROCESS'
     DEFINE BAR 3 OF EDIT1 PROMPT 'BUILDING'
ON SELECTION POPUP EDIT1 DO C12

*---------- DELETE1 SECTION DEFINITION
DEFINE POPUP DELETE1 FROM 9,41 TO 13,50
     DEFINE BAR 1 OF DELETE1 PROMPT 'LOCAL'
     DEFINE BAR 2 OF DELETE1 PROMPT 'PROCESS'
     DEFINE BAR 3 OF DELETE1 PROMPT 'BUILDING'
ON SELECTION POPUP DELETE1 DO C13

*---------- VIEW1 SECTION DEFINITION
DEFINE POPUP VIEW1 FROM 10,41 TO 14,50
     DEFINE BAR 1 OF VIEW1 PROMPT 'LOCAL'
     DEFINE BAR 2 OF VIEW1 PROMPT 'PROCESS'
     DEFINE BAR 3 OF VIEW1 PROMPT 'BUILDING'
ON SELECTION POPUP VIEW1 DO C14

*---------- ANALYSIS MENU DEFINITION
DEFINE POPUP ANALYSIS FROM 7,43 TO 13,58
     DEFINE BAR 1 OF ANALYSIS PROMPT 'LOCAL'
     DEFINE BAR 2 OF ANALYSIS PROMPT 'PROCESS'
     DEFINE BAR 3 OF ANALYSIS PROMPT 'BUILDING'
     DEFINE BAR 4 OF ANALYSIS PROMPT 'PRICE RELATIVE'
     DEFINE BAR 5 OF ANALYSIS PROMPT 'CONSUMMER'
ON SELECTION POPUP ANALYSIS DO D1

*---------- PRINT MENU DEFINITION
DEFINE POPUP PRINT FROM 7,58 TO 12,73
     DEFINE BAR 1 OF PRINT PROMPT 'LOCAL'
     DEFINE BAR 2 OF PRINT PROMPT 'PROCESS'
     DEFINE BAR 3 OF PRINT PROMPT 'BUILDING'
     DEFINE BAR 4 OF PRINT PROMPT 'PRICE RELATIVE'
ON SELECTION POPUP PRINT DO E1

*---------- END MENU DEFINITION
DEFINE POPUP END FROM 7,59 TO 10,76
     DEFINE BAR 1 OF END PROMPT 'RETURN TO MASTER'
     DEFINE BAR 2 OF END PROMPT 'QUIT TO DOS'
ON SELECTION POPUP END DO F1

*---------- ACTIVATION OF MAIN MENU
@1,15 TO 3,55 DOUBLE COLOR R/B
@2,19 SAY 'COMPUTERISATION OF PRICE ANALYSIS'
```

```
@4,1 TO 6,76 DOUBLE COLOR RG/BG
ACTIVATE MENU M_MENU
CLEAR
RETURN

*----------- ACTIVATION OF CREATE DATA SECTION
PROCEDURE A1
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
      CASE GN_BROW = 1
         DO CREA_DF
      CASE GN_BROW = 2
         DO CREA2_DF
      CASE GN_BROW = 3
         DO CREA3_DF
ENDCASE
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF GENDATA SECTION
PROCEDURE B0
GN_BROW = BAR()
DO CASE
      CASE GN_BROW = 1
         ACTIVATE POPUP QTERLY
      CASE GN_BROW = 2
         ACTIVATE POPUP YEARLY
      CASE GN_BROW =3
         ACTIVATE POPUP CONSUMER
ENDCASE
RETURN

*---------- ACTIVATION OF QTERLY & YEARLY (BROWSING OF FILES)
PROCEDURE B1
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
USE PROMPT()
BROWSE
DEACTIVATE WINDOW WIN1
CLOSE PROCEDURE
CLOSE DATA
RETURN

*----------- ACTIVATION OF MODIFY SECTION
PROCEDURE C1
GN_BROW = BAR()
DO CASE
      CASE GN_BROW = 1
      ACTIVATE POPUP ADD1
      CASE GN_BROW = 2
```

```
      ACTIVATE POPUP EDIT1
      CASE GN_BROW = 3
      ACTIVATE POPUP DELETE1
      CASE GN_BROW = 4
      ACTIVATE POPUP VIEW1
ENDCASE
CLOS PROCE
RETURN

*----------- ACTIVATION OF ADD1 SECTION
PROCEDURE C11
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
      CASE GN_BROW = 1
         DO ADD_LOC
      CASE GN_BROW = 2
         DO ADD_PRO
      CASE GN_BROW = 3
         DO ADD_BUD
ENDCASE
CLOS DATA
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF EDIT1 SECTION
PROCEDURE C12
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
      CASE GN_BROW = 1
         DO EDIT_LOC
      CASE GN_BROW = 2
         DO EDIT_PRO
      CASE GN_BROW = 3
         DO EDIT_BUD
ENDCASE
CLOS DATA
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF DELETE1 SECTION
PROCEDURE C13
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
      CASE GN_BROW = 1
         DO DELE_LOC
```

```
     CASE GN_BROW = 2
        DO DELE_PRO
     CASE GN_BROW = 3
        DO DELE_BUD
ENDCASE
CLOS DATA
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF VIEW1 SECTION
PROCEDURE C14
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
     CASE GN_BROW = 1
        DO VIEW_LOC
     CASE GN_BROW = 2
        DO VIEW_PRO
     CASE GN_BROW = 3
        DO VIEW_BUD
ENDCASE
CLOS DATA
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF ANALYSIS SECTION
PROCEDURE D1
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
     CASE GN_BROW = 1
        DO ANAL_LOC
     CASE GN_BROW = 2
        DO ANAL_PRO
     CASE GN_BROW = 3
        DO ANAL_BUD
     CASE GN_BROW = 4
        DO RELATIVE
     CASE GN_BROW = 5
        DO CONSUMER
ENDCASE
CLOS DATA
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF PRINT SECTION
PROCEDURE E1
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
```

```
CLEAR
DO CASE
     CASE GN_BROW = 1
        DO PRT_LOC
     CASE GN_BROW = 2
        DO PRT_PRO
     CASE GN_BROW = 3
        DO PRT_BUD
     CASE GN_BROW = 4
        DO PRT_RELA
ENDCASE
CLOS DATA
DEACTIVATE WINDOW WIN1
RETURN

*----------- ACTIVATION OF END SECTION
PROCEDURE F1
GN_BROW = BAR()
ACTIVATE WINDOW WIN1
ACTIVATE SCREEN
CLEAR
DO CASE
     CASE GN_BROW = 1
        CLOSE ALL
        DEACTIVATE WINDOW ALL
        RETURN TO MASTER
     CASE GN_BROW = 2
        DEACTIVATE WINDOW WIN1
        QUIT
ENDCASE
RETURN
```

APPENDIX 2

```
*ON ESCAPE RETURN TO MASTER
SET TALK OFF
SET SAFETY OFF
SET SCORE OFF
SET STAT OFF
CLEAR
*PROGRAM FOR CREATING DATABASE FILE FOR LOCAL FOOD ITEMS
STORE 0 TO MYEAR,MQUART
CLEA
ON KEY LABEL F1 RETURN
@8,15 TO 14,60 DOUBLE COLOR R/B
CH='Y'
@11,20 SAY 'CREATE A NEW DATA BASE FILE? (Y/N)' GET CH PICT '!'
VALID CH $ 'YN'
READ
@11,20 CLEA TO 11,56
IF CH='Y'
  USE LOCAL
  @10,25 SAY 'ENTER YEAR' GET MYEAR PICT '99'
  @12,25 SAY 'ENTER QUARTER' GET MQUART PICT '9'
  READ
  @10, 25 CLEA TO 12,55
  MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
  COPY STRU TO &MYFILE
  USE &MYFILE
  @11,25 SAY 'DATABASE FILE IS CREATED'
  @16,27 SAY 'PRESS F1 TO RETURN'
  WAIT""
ENDIF
ON KEY LABEL F1
RETURN
```

APPENDIX 3

```
ON ESCA RETURN TO MASTER
SET TALK OFF
SET STAT OFF
SET SCORE OFF
*SET DBTR OFF
CLEAR
*FORMATING DATA ENTRY SCREEN
STORE 0 TO MYEAR,MQUART
DO WHILE .T.
@0,8 TO 22,70 DOUBLE COLOR NW+
STORE 0 TO MYEAR,MQUART
@10,25 SAY "ENTER YEAR" GET MYEAR PICT "99"
@12,25 SAY "ENTER QUARTER" GET MQUART PICT "9"
READ
MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
USE &MYFILE
@10,20 CLEA TO 12,65
@2,20 SAY "DATA ENTRY FORM FOR LOCAL FOOD"
@3,20 TO 3,49 DOUBLE
GCAT=SPACE(1)
GMCAT=SPACE(14)
DO WHILE .T.
GCAT=SPACE(1)
GMCAT=SPACE(14)
@10,25 SAY "ENTER CAT_CODE" GET GCAT PICT "@!"
@12,25 SAY "ENTER CAT_NAME" GET GMCAT PICT "@!"
READ
@10,25 CLEAR TO 12,62
@4,20 SAY 'YEAR:'+STR(MYEAR,2)
@4,28 SAY "QUARTER:"+STR(MQUART,1)
@5,20 TO 5,36
@6,20 SAY GCAT
@6,23 SAY GMCAT
@7,20 TO 7,37
MITEM = SPACE(12)
MTYPE = SPACE(15)
MUNIT = SPACE(8)
STORE 0 TO M1,M2,M3
DO WHILE .T.
MITEM =SPACE(12)
MTYPE =SPACE(15)
MUNIT = SPACE(8)
STORE 0 TO M1,M2,M3
APPEND BLANK
@8,23 SAY "ITEM" GET MITEM PICT '@!'
@10,23 SAY "TYPE" GET MTYPE PICT '@!'
@12,23 SAY "UNITS" GET MUNIT PICT '@!'
@14,23 SAY "MONTH1" GET M1 PICT "99.99"
@16,23 SAY "MONTH2" GET M2 PICT "99.99"
@18,23 SAY "MONTH3" GET M3 PICT "99.99"
```

```
READ
REPL CAT_CODE WITH GCAT, CAT_NAME WITH GMCAT, ITEM WITH MITEM
REPL TYPE WITH MTYPE, UNITS WITH MUNIT, MONTH1 WITH M1
REPL MONTH2 WITH M2, MONTH3 WITH M3
RELEASE MITEM,MTYPE,MUNIT,M1,M2,M3
CH="Y"
@20,15 SAY "ENTER MORE RECORD INTO THIS GROUP? (Y/N)" GET CH PICT
"!" VALID CH $ "YN"
READ
IF CH = "Y"
  @20,15 CLEA TO 20,65
  @8,18 CLEA TO 18,40
  LOOP
ELSE
   EXIT
ENDIF
ENDDO
@20,15 CLEA TO 20,60
CH="Y"
@20,15 SAY "ENTER RECORD INTO ANOTHER GROUP? (Y/N)" GET CH PICT "!"
VALID CH $ "YN"
READ
RELEASE GCAT,GMCAT
IF CH="Y"
  @6,14 CLEAR TO 20,65
  LOOP
ELSE
  EXIT
ENDIF
ENDDO
@20,15 CLEA TO 20,65
CH="Y"
@20,15 SAY "ENTER RECORD INTO ANOTHER QUARTER? (Y/N)" GET CH PICT
"!" VALID CH $ "YN"
READ
RELEASE MQUART,MYEAR
IF CH="Y"
  @4,14 CLEA TO 20,65
  LOOP
ELSE
  EXIT
ENDIF
ENDDO
CLOSE DATA
RETURN
```

APPENDIX 4

```
SET TALK OFF
SET SCORE OFF
SET STAT OFF
SET SAFETY OFF
CLEAR
*FORMATING EDITING SCREEN
@1,8 TO 21,70 DOUBLE COLOR NR+
@3,18 SAY "DATA EDITING ROUTINE FOR LOCAL FOOD"
@4,18 TO 4,53 DOUBLE
STORE 0 TO MQUART,MYEAR
DO WHILE .T.
STORE 0 TO MQUART,MYEAR
@10,25 SAY 'ENTER YEAR' GET MYEAR PICT '99'
@12,25 SAY 'ENTER QUARTER' GET MQUART PICT '9'
READ
MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
USE &MYFILE
@10,20 CLEA TO 12,60
MITEM = SPACE(12)
MTYPE = SPACE(15)
DO WHILE .T.
MITEM=SPACE(12)
MTYPE=SPACE(15)
@8,23 SAY "ENTER ITEM" GET MITEM
@10,23 SAY "ENTER TYPE" GET MTYPE
READ
@8,23 CLEA TO 10,60
KK=UPPER(MITEM)
TT=UPPER(MTYPE)
SET FILTER TO ITEM = KK .AND.TYPE = TT
GO TOP
IF .NOT.EOF()
  @5,15 SAY "YEAR:"+STR(MYEAR,2)
  @5,23 SAY "QUARTER:"+STR(MQUART,1)
  @6,15 TO 6,31
  DO WHILE .T.
  @7,25 SAY "ITEM" GET ITEM
  @9,25 SAY "TYPE" GET TYPE
  @11,25 SAY "UNITS" GET UNITS
  @13,25 SAY "MONTH1" GET MONTH1 PICT "99.99"
  @15,25 SAY "MONTH2" GET MONTH2 PICT "99.99"
  @17,25 SAY "MONTH3" GET MONTH3 PICT "99.99"
  READ
  CH="N"
  @19,20 SAY "IS ABOVE DATA OKAY?(Y/N)" GET CH PICT "!" VALID CH $
"NY"
  READ
  IF CH="N"
    LOOP
```

```
  ELSE
    EXIT
  ENDIF
ENDDO
ELSE
  @12,25 SAY "RECORD NOT FOUND"
  @23,10 SAY "PRESS AND KEY TO CONTINUE"
  WAIT""
  @12,25 CLEA TO 12,65
  @23,10 CLEA TO 23,65
ENDIF
*@12,23 CLEA TO 12,55
*@23,10 CLEA TO 23,50
CH = "Y"
@19,20 SAY "EDIT ANOTHER RECORD? (Y/N)" GET CH PICT "!" VALID CH $
"YN"
READ
RELEASE MITEM,MTYPE
IF CH = "Y"
   @7,17 CLEA TO 20,60
   LOOP
ELSE
   EXIT
ENDIF
ENDDO
@19,20 CLEA TO 19,60
CH= 'Y'
@19,18 SAY 'EDIT ANOTHER RECORD IN ANOTHER QUARTER? (Y/N)' GET CH
PICT '!' VALID CH $ "YN"
READ
RELE MQUART
@19,18 CLEA TO 19,68
IF CH='Y'
  @5,15 CLEA TO 17,65
  LOOP
 ELSE
  EXIT
ENDIF
ENDDO
CLOSE DATA
RETURN
```

APPENDIX 5

```
SET TALK OFF
SET SCORE OFF
SET STAT OFF
*SET DBTR OFF
SET SAFETY OFF
CLEAR
*FORMATING DELETING SCREEN
@1,8 TO 22,70 DOUBLE COLOR NR+
@3,18 SAY "DATA DELETING ROUTINE FOR LOCAL FOOD"
@4,18 TO 4,53 DOUBLE
STORE 0 TO MQUART,MYEAR
DO WHILE .T.
STORE 0 TO MQUART,MYEAR
@10,25 SAY 'ENTER YEAR' GET MYEAR PICT '99'
@12,25 SAY 'ENTER QUARTER' GET MQUART PICT '9'
READ
MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
USE &MYFILE
@10,20 CLEA TO 12,60
MITEM = SPACE(12)
MTYPE = SPACE(15)
DO WHILE .T.
MITEM=SPACE(12)
MTYPE=SPACE(15)
@8,23 SAY "ENTER ITEM" GET MITEM
@10,23 SAY "ENTER TYPE" GET MTYPE
READ
@8,23 CLEA TO 10,60
KK=UPPER(MITEM)
TT=UPPER(MTYPE)
SET FILTER TO ITEM=KK .AND. TYPE=TT
GO TOP
IF .NOT.EOF()
  @5,15 SAY "YEAR:"+STR(MYEAR,2)
  @5,23 SAY "QUARTER:"+STR(MQUART,1)
  @6,15 TO 6,31
  @7,25 SAY "ITEM" GET ITEM
  @9,25 SAY "TYPE" GET TYPE
  @11,25 SAY "UNITS" GET UNITS
  @13,25 SAY "MONTH1" GET MONTH1 PICT "99.99"
  @15,25 SAY "MONTH2" GET MONTH2 PICT "99.99"
  @17,25 SAY "MONTH3" GET MONTH3 PICT "99.99"
  CLEAR GETS
  CH="Y"
  @19,25 SAY "TO DELETE THIS RECORD? (Y/N)" GET CH PICT "!" VALID
CH $ "YN"
  READ
  @19,25 CLEA TO 19,60
  IF CH="Y"
   DELETE
   CH="Y"
```

```
   @20,33 SAY "WARNING!"
   @21,15 SAY "ARE YOU SURE YOU WANT TO DELETE THIS RECORD? (Y/N)"
GET CH PICT "!" VALID CH $ "YN"
   READ
     IF CH="Y"
       PACK
       @7,15 CLEA TO 21,68
       @15,25 SAY "RECORD IS DELETED"
       @23,15 SAY "PRESS ANY KEY TO CONTINUE"
       WAIT""
       @15,25 CLEA TO 15,60
       @23,15 CLEA TO 23,60
     ELSE
       RECALL
       @19,15 CLEA TO 20,60
     ENDIF
  ELSE
    EXIT
  ENDIF
ELSE
  @12,25 SAY "RECORD NOT FOUND"
  @23,10 SAY "PRESS AND KEY TO CONTINUE"
  WAIT""
  @12,25 CLEA TO 12,65
  @23,10 CLEA TO 23,65
ENDIF
CH = "Y"
@19,20 SAY "DELETE ANOTHER RECORD? (Y/N)" GET CH PICT "!" VALID CH
$ "YN"
READ
RELEASE MITEM,MTYPE
IF CH = "Y"
   @7,17 CLEA TO 20,60
   LOOP
ELSE
   EXIT
ENDIF
ENDDO
@19,20 CLEA TO 19,60
CH= 'Y'
@19,18 SAY 'DELETE ANOTHER RECORD IN ANOTHER QUARTER? (Y/N)' GET CH
PICT '!' VALID CH $ "YN"
READ
RELE MQUART
@19,18 CLEA TO 19,68
IF CH='Y'
  @5,15 CLEA TO 17,65
  LOOP
 ELSE
  EXIT
ENDIF
ENDDO
CLOSE DATA
RETURN
```

APPENDIX 6

```
SET TALK OFF
SET SCORE OFF
SET STAT OFF
SET SAFETY OFF
CLEAR
*FORMATING VIEWING SCREEN
@1,8 TO 21,70 DOUBLE COLOR GB+
@3,18 SAY "DATA VIEWING ROUTINE FOR LOCAL FOOD"
@4,18 TO 4,53 DOUBLE
STORE 0 TO MQUART,MYEAR
DO WHILE .T.
STORE 0 TO MQUART,MYEAR
@10,25 SAY 'ENTER YEAR' GET MYEAR PICT '99'
@12,25 SAY 'ENTER QUARTER' GET MQUART PICT '9'
READ
MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
USE &MYFILE
@10,20 CLEA TO 12,60
MITEM = SPACE(12)
MTYPE = SPACE(15)
DO WHILE .T.
MITEM=SPACE(12)
MTYPE=SPACE(15)
@8,23 SAY "ENTER ITEM" GET MITEM
@10,23 SAY "ENTER TYPE" GET MTYPE
READ
@8,23 CLEA TO 10,60
KK=UPPER(MITEM)
TT=UPPER(MTYPE)
SET FILTER TO ITEM=KK .AND. TYPE=TT
GO TOP
IF .NOT.EOF()
  @5,15 SAY "YEAR:"+STR(MYEAR,2)
  @5,23 SAY "QUARTER:"+STR(MQUART,1)
  @6,15 TO 6,31
  @7,25 SAY "ITEM" GET ITEM
  @9,25 SAY "TYPE" GET TYPE
  @11,25 SAY "UNITS" GET UNITS
  @13,25 SAY "MONTH1" GET MONTH1 PICT "99.99"
  @15,25 SAY "MONTH2" GET MONTH2 PICT "99.99"
  @17,25 SAY "MONTH3" GET MONTH3 PICT "99.99"
  CLEAR GETS
ELSE
  @15,25 SAY "RECORD NOT FOUND"
  @23,10 SAY "PRESS ANY KEY TO CONTINUE"
  WAIT""
  @15,25 CLEA TO 15,60
  @23,10 CLEA TO 23,68
ENDIF
```

```
CH="Y"
@19,15 SAY "DO YOU WANT TO VIEW ANOTHER RECORD? (Y/N)" GET CH PICT
"!" VALID CH $ "YN"
READ
@19,10 CLEA TO 19,68
IF CH="Y"
   RELEASE MITEM,MTYPE
   @7,25 CLEA TO 17,68
   LOOP
ELSE
   EXIT
ENDIF
ENDDO
CH= 'Y'
@19,18 SAY 'VIEW ANOTHER RECORD IN ANOTHER QUARTER? (Y/N)' GET CH
PICT '!' VALID CH $ "YN"
READ
RELE MQUART
@19,15 CLEA TO 19,68
IF CH='Y'
  @5,15 CLEA TO 17,65
  LOOP
ELSE
  EXIT
ENDIF
ENDDO
CLOSE DATA
RETURN
```

APPENDIX 7

```
SET TALK OFF
SET SAFETY OFF
SET SCORE OFF
SET STATUS OFF
*ANALYSIS OF LOCAL FOOD ITEMS
STORE 0 TO MYEAR,MQUART
CLEA
DO WHILE .T.
STORE 0 TO MYEAR,MQUART
@8,15 TO 18,60 DOUBLE COLOR RB
*ACTIVATE THE DATABASE FILE
@12,25 SAY 'ENTER YEAR' GET MYEAR PICT '99'
@14,25 SAY 'ENTER QUARTER' GET MQUART PICT '9'
READ
MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
USE &MYFILE
CLEAR
*DISPLAY THE COLUMN HEADINGS
@2,30 SAY 'QUARTER:'+STR(MQUART,1)
@2,41 SAY '19'+STR(MYEAR,2)
@3,30 TO 3,44
@4,6 SAY 'MONYHLY AND QUARTERLY AVERAGE PRICES OF LOCAL FOOD ITEMS'
@5,6 TO 5,61
@6,55 SAY 'PRICES IN NAIRA'
@7,1 TO 7,70
@8,2 SAY 'ITEM'
@8,17 SAY 'TYPE'
@8,30 SAY 'UNITS'
DO CASE
  CASE MQUART=1
    @0,35 SAY 'TABLE 1.1'
    @1,35 TO 1,43
    @8,39 SAY 'JAN'
    @8,47 SAY 'FEB'
    @8,54 SAY 'MAR'
  CASE MQUART=2
    @0,35 SAY 'TABLE 1.2'
    @1,35 TO 1,43
    @8,39 SAY 'APR'
    @8,47 SAY 'MAY'
    @8,54 SAY 'JUN'
  CASE MQUART=3
    @0,35 SAY 'TABLE 1.3'
    @1,35 TO 1,43
    @8,39 SAY 'JUL'
    @8,47 SAY 'AUG'
    @8,54 SAY 'SEPT'
  CASE MQUART=4
    @0,35 SAY 'TABLE 1.4'
    @1,35 TO 1,43
    @8,39 SAY 'OCT'
```

```
    @8,47 SAY 'NOV'
    @8,54 SAY 'DEC'
ENDCASE
@8,61 SAY 'AVERAGE'
@9,1 TO 9,70
@10,0 SAY CAT_CODE
@10,2 SAY CAT_NAME
STORE 0 TO AVRG
*TRANSFER FIELDS CONTENTS TO MEMORY VARIABLES
M1=MONTH1
M2=MONTH2
M3=MONTH3
T = CAT_CODE
Q = CAT_NAME
R=11
DO WHILE .NOT. EOF()
IF CAT_CODE <>T .AND. CAT_NAME <>Q
  T = CAT_CODE
  Q = CAT_NAME
  M1=MONTH1
  M2=MONTH2
  M3=MONTH3
  @R,0 SAY CAT_CODE
  @R,2 SAY CAT_NAME
  R=R+1
  @R,2 SAY ITEM
  @R,17 SAY TYPE
  @R,30 SAY UNITS
  @R,39 SAY M1 PICT '99.99'
  @R,47 SAY M2 PICT '99.99'
  @R,54 SAY M3 PICT '99.99'
  AVRG =(M1+M2+M3)/3
  @R,61 SAY AVRG PICT '99.99'
  REPL AVERAGE WITH AVRG
  SKIP
ELSE
  M1=MONTH1
  M2=MONTH2
  M3=MONTH3
  @R,2 SAY ITEM
  @R,17 SAY TYPE
  @R,30 SAY UNITS
  @R,39 SAY M1 PICT '99.99'
  @R,47 SAY M2 PICT '99.99'
  @R,54 SAY M3 PICT '99.99'
  AVRG =(M1+M2+M3)/3
  @R,61 SAY AVRG PICT '99.99'
  REPL AVERAGE WITH AVRG
  SKIP
ENDIF
IF R=22 .OR. EOF()
  @23,10 SAY 'PRESS ANY KEY TO CONTINUE'
  WAIT""
  @10,0 CLEA TO 23,70
```

```
  R=10
ELSE
  R=R+1
ENDIF
ENDDO
CLEA
CH='Y'
@8,16 TO 12,65 DOUB COLO RW
@10,19 SAY 'DO YOU WANT TO ANALYSE MORE QUARTER? (Y/N)' GET CH PICT
'!' VALID CH $ 'YN'
READ
IF CH='Y'
  CLEA
  LOOP
ENDIF
IF CH='N'
  EXIT
ENDIF
ENDDO
CLOSE DATA
RETURN
```

APPENDIX 8

```
SET TALK OFF
SET SAFETY OFF
SET SCORE OFF
SET STATUS OFF
*PRINTING OF LOCAL FOOD ITEMS
STORE 0 TO MYEAR,MQUART
CLEA
@8,15 TO 18,60 DOUBLE COLOR RB
*ACTIVATE THE DATABASE FILE
@12,25 SAY 'ENTER YEAR' GET MYEAR PICT '99'
@14,25 SAY 'ENTER QUARTER' GET MQUART PICT '9'
READ
IF MQUART=1
J="JAN"
F="FEB"
M="MAR"
TABLE="TABLE 1.1"
ENDIF
IF MQUART=2
J="APR"
F="MAY"
M="JUN"
TABLE="TABLE 1.2"
ENDIF
IF MQUART=3
J="JUL"
F="AUG"
M="SEPT"
TABLE="TABLE 1.3"
ENDIF
IF MQUART=4
J="OCT"
F="NOV"
M="DEC"
TABLE='TABLE 1.4'
ENDIF
MYFILE='LOC_'+STR(MQUART,1)+'_'+STR(MYEAR,2)
USE &MYFILE
CLEAR
SET DEVICE TO PRINTER
*DISPLAY THE COLUMN HEADINGS
@0,35 SAY TABLE
@1,35 SAY REPL("-",9)
@2,30 SAY 'QUARTER:'+STR(MQUART,1)
@2,41 SAY '19'+STR(MYEAR,2)
@3,30 SAY  REPL("-",14)
@4,6 SAY 'MONYHLY AND QUARTERLY AVERAGE PRICES OF LOCAL FOOD ITEMS'
@5,6 SAY REPL("-",56)
@6,55 SAY 'PRICES IN NAIRA'
@7,1 SAY REPL("-",75)
@8,2 SAY 'ITEM'
@8,19 SAY 'TYPE'
```

```
@8,29 SAY 'UNITS'
@8,40 SAY J
@8,48 SAY F
@8,56 SAY M
@8,65 SAY 'AVERAGE'
@9,1 SAY REPL("-",75)
@10,0 SAY CAT_CODE
@10,2 SAY CAT_NAME
STORE 0 TO AVRG
*TRANSFER FIELDS CONTENTS TO MEMORY VARIABLES
M1=MONTH1
M2=MONTH2
M3=MONTH3
T = CAT_CODE
Q = CAT_NAME
LINE=11
DO WHILE .NOT. EOF()
IF CAT_CODE <>T .AND. CAT_NAME <>Q
   T = CAT_CODE
   Q = CAT_NAME
   M1=MONTH1
   M2=MONTH2
   M3=MONTH3
   @LINE,0 SAY CAT_CODE
   @LINE,2 SAY CAT_NAME
   LINE=LINE+1
   @LINE,2 SAY ITEM
   @LINE,19 SAY TYPE
   @LINE,29 SAY UNITS
   @LINE,40 SAY M1 PICT '99.99'
   @LINE,48 SAY M2 PICT '99.99'
   @LINE,56 SAY M3 PICT '99.99'
   AVRG =(M1+M2+M3)/3
   @LINE,65 SAY AVRG PICT '99.99'
   SKIP
ELSE
   M1=MONTH1
   M2=MONTH2
   M3=MONTH3
   @LINE,2 SAY ITEM
   @LINE,19 SAY TYPE
   @LINE,29 SAY UNITS
   @LINE,40 SAY M1 PICT '99.99'
   @LINE,48 SAY M2 PICT '99.99'
   @LINE,56 SAY M3 PICT '99.99'
   AVRG =(M1+M2+M3)/3
   @LINE,65 SAY AVRG PICT '99.99'
   SKIP
ENDIF
LINE=LINE+1
ENDDO
SET PRINT OFF
SET DEVICE TO SCREEN
RETURN
```