

**COMPUTER APPLICATION TO ORGANISATION
BUDGETING AND PLANNING.**

(A CASE STUDY OF TEXLON INDUSTRY LTD, LAGOS)

BY

ALFA BABA MUSA

PGD/MCS/96/97/286

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

MARCH, 2000

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

MARCH, 2000

DEDICATION

Specially dedicated to the Glory of Almighty Allah for his blessing.

Also dedicated to my parents, immediate family and relations for their concerns and support.

CERTIFICATION

This project work has been read and certified by the undersigned as meeting the requirements of the department of mathematics/computer Science, Federal University of Technology, Minna.

.....
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Project Supervisor

.....
Date

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Date

sincerely

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implemented by the managers of the company. If there is lack of personal commitment on the part of the formulator inaccurate figure will result and this may impose serious limitations on the result obtained.

- ii. In addition, responsibility may overlap and the administrative cost of the system may out-weigh its benefits.

Nevertheless, for any profit-oriented organisation, budgetary planning and control system are not only desirable but indispensable because they exist in planning the overall policy of the firm co-ordinate its activities so that each is part of an integral total and to control each functional department in order to achieve the best possible results.

1.2 OBJECTIVES OF STUDY

The main objectives of this study are as follows: -

1. To examine the budgetary control system of the company
2. To trade the extent to which the company understudy its practicing the system of budgetary planning and control in its financial and material management
3. To examine the differences between budgetary and actual results obtained and to attempt to identify the cause of the differences.

4. To suggest ways of preventing future variance between budgets and actual results achieved.
5. To evaluate the company's performance for the year.

1.3 WHAT IS A BUDGET?

A budget is the statement in financial and quantitative terms of expenditures for a defined period of time. A budget differs from a "forecast" which is merely an assessment of future events, which are likely to occur if no positive planning action is taken. Forecast, however are a necessary preliminary to budget preparation, it is only when existing trends have been modified to take account of changed conditions that it become possible to take decisions about the actions necessary to alter the forecast results and to establish a budget plan.

Lack of facilities to prepare budgets especially the use of computers over the years has resulted in some point of budget deficit in both the public and private sectors of the economy it is in this light that every effort especially through the latest information technology has to be adopted to ease constraints and extrapolation in both monitoring and preparation of budgets.

- d. To give management a continue reminder of the actions they have decided upon.
- e. To provide a reference point for control purposes.

1.5 DEFINITION OF TERMS

- (1) *Budgeting system* - An accounting subsystem that permits managers to managers to track actual revenues and expense and to compare these amounts to the revenues and expenses that were expected.
- (2) *Capital budget* - An accounting report that contains information about the planned acquisition or disposal of major plant assets during the current year.
- (3) *Cash-flow report* - An accounting report that shows the estimated amount of cash that will be received and spent each month.
- (4) *Corporate planning* - This can be defined as improving the serving of objectives, organizing the work, people and system to enable those objection to be attained.
- (5) *Planning* - A formal systematic, managerial process, organized by responsibility time and information to ensure that operational planning, project planning.

- (6) *Budget* – Is the statement in financial and quantitative terms of expenditures for a defined period of time.
- (7) *Inflation* – A time of generally rising prices for goods and factors of production. Or a situation in which the prices of goods are all continuously rising or the same time.
- (8) *Strategic Planning* – The process of deciding on the objectives of the organisation or changes in these objectives on the resources used to attain these objectives.

CHAPTER TWO

2.1 REVIEW OF RELATED LITERATURE

Accounting is “the language of business”. This is because business facts and events are collected, and reported in accordance with accounting principles and procedures, and in accounting terms. Accounting enable companies and governmental agencies to summarize and report in an understandable fashion a huge number of transactions.

Businessmen use accounting to compute the profit earned by a business firm during a year or other period. Accounting also records and classifies a company asset and liabilities and the interest of the owners. The profession in which accounting principles are used is called accountancy and the members of the profession are known as accountants.

There are three main field of accounting, we have industrial accounting which covers the entire field of accounting for industrial enterprise. These includes, book-keeping, cost accounting financial accounting, Auditing, controllership, book-keeping is the practices and procedures followed in recording and summarizing the transaction intend into by business organisaion, every good business firm must have a book-keeping department to keep it's financial records. Book-keeping operates under the principles of

accounting but new accounting has gone beyond book-keeping. Cost accounting on the other hand deals with the determination of the cost of goods manufactured and sold. Costs are classified as direct material, direct labour and overhead. Direct materials are the raw material that finally appears in the finished product. Direct labour is the cost of paying employees who work directly on a product. Overhead includes all costs such as power light. Cost accountants must know how to collect information about these costs and spread among some products that a company manufactures.

Financial accounting, this word derive its name from the latin word finis. It includes the preparation and interpretation of general financial statements.

Closely related to accounting is auditing, this also derive its name from latin word "Audire". It is concerned with examining and reviewing accounting information to determine whether it is reasonable accurate and presented in an understandable fashion. Auditors are accountants who review the work of other accountants.

CONTROLLERSHIP:

The controllers of a business enterprises, the chief accounting officer and a member of management's. He sees that accounting work done efficiently and that the information use is effectively.

Government accounting, Governments like business accounting to help them obtain information about their actions and financial condition of cost control is relatively new. The idea of budgeting is used by most people, some of who are not directly away but who have to balance their business account at the end of a month in year. Method of cost control i.e. budgetary control concept has been tried and developed in commerce and industry in the united state of America, United Kingdom and Europe. The company understand and have started to practice the use of internal auditing budgets, budgetary controls supervision, graphical and statistical method of controlling costs so as to be able to meet their desire set targets.

2.2 BUDGETING SYSTEM OF THE COMPANY

The accounting system in practice in the company is an integrated financial and cost accounting type. Their budgeting system is a flexible budget system. To achieve their objectives the company is making use of “management accounting expenditure code book” in which all codes relating to a specific operation are listed under a relevant cost center.

A. ANNUAL OPERATING BUDGET

The annual budget (Comprising of capital and recurrent expenditure) is a pointer to the whole company’s operation for a particular financial year in which a picture image of the company is portrayed. When approved, it becomes a good

guide for all activities to be embarked upon with all the limitation in order to achieve the company's operation set goals. It is a measure for business protection against failure

B. DETERMINATION OF SELLING PRICES

The price of textiles in the world market most often determines the price achieved by local producers in Nigeria. The company witnesses high prices whenever there is a short fall in production in the world market and conversely, a sharp drop in textile price when surplus in production is recorded. This is the cyclical nature of textile price. The other inter-plays are value of the Naira as well as the custom duty.

METHOD OF RECORDING COSTS

While all costs are recorded in total on the financial accounts, these costs are broken down into operating codes by the aid of a smooth and health cost accounting.

2.3 METHOD OF COST COMPILATION

Finance department is broken down into sub-sections with each section for specific duties as per job description. The major sub-sections are: -

1. Wages section
2. Disbursement section
3. Costing section
4. Stores section
5. Assets section

6. Computer Section (Accounting Machines)
7. Insurance Section.

From each of the above sections, a monthly return of their recording e.g. Bank book, Cash Book, Pay-roll, Stores issues, sales purchasers etc) are made available for posting into the financial control accounts and the details on codes for posting into the cost ledger by costing section.

2.4 MONTHLY COST STATEMENT

For control purposes throughout the company, actual casts are normally compared with the budget on cost statement and variances declared at the end of each month to ensure that all departments keep in keep in step with budget. An disturbing variances are investigated promptly. From time, the management endeavors to improve on its accounting, policy through the dictates of experience. There should be and efficient organisation for budgetary planning and control system to be operated effectively. The following procedures are necessary in company budgeting system.

1. The preparation of an organisaion chart for budgeting planning and control.
2. There should be a budget time
3. The introduction of adequate accounting records.
4. The creation of center for budget
5. The establishment of a budget committee.

In a very large company such as this company under study, a budget committee is appointed to formulate a general programme for preparing budgets and affecting overall control. The committees compose of the chief executive of the company. It should be borne in mind that the aim of budgeting is to produce a complete forecast of how all the various sections of a company should behave. Budgets are prepared by each head of department and it will be submitted to the budget committee for consideration and co-ordination draft master budget is prepared by budget controller and submitted to the budget committee for approval. When it is approved, it then becomes the operating plan of the firm for that period of time, this acts as authority for each departmental head to take the necessary step to implement it. The budget provides the standard by which performance would be judged and it is this aspect of control, which is such an important feature of the system.

Budget can be either fixed or flexible. The company understudy makes use of flexible type of budget. A fixed of budget is one that remain unchanged irrespective of the level of activity actually attained. While flexible budget recognizes the difference between fixed, semi-fixed and variable costs and it changes in relation to the level of activity attained.

Budget period is known as the time covered by a budget. The length of the period depends upon the nature of the plan being made some forecasts can be made

for a relatively long period i.e. up to ten year or even longer in exceptional circumstances. Other can safety cover few month irrespective of the type of budget, the longer the period covered, the less reliable will be the figures obtained. Short period of budget may be incorrect while a long period may be correct simply because the fluctuation experience in different period are averaged out when a number of year is considered. For control purposes the budget period is divided into shored periods.

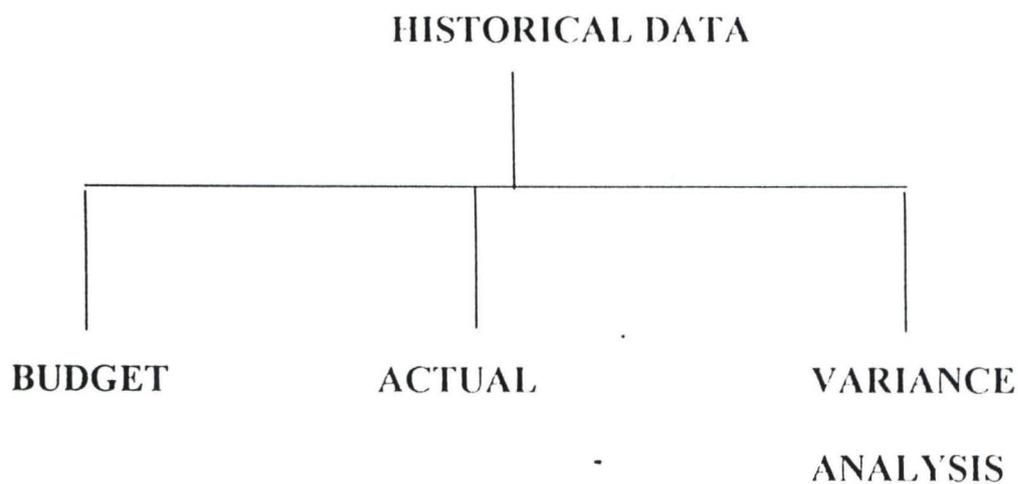
2.5 IMPORTANCE OF BUDGETARY CONTROL

When budgetary control is being use in an organisation as in plan of this policy, plans and action are co-ordinator and controlled. The following are the importance of budgetary control.

1. Corporate planning and budgetary control can be linked i.e. all personnel form the top to the lowest known the part they have to play so as to achieve the target set. The best result are likely to be obtained when there is clear plan of action and there is guiding control through budgetary controller
2. Performance indicators can be developed for all parts of a business measurements of performance production targets, sales quotas and other targets are achieved automatically as part of the system costs are controlled and comparison of actual and budgeted cost are made.

3. Strengths and weakness can be recognised and improvement can be made. The necessary examination of the organisation structure and the study of how costs behave and are incurred usually result in improved efficiency and weakness that exist become apparent, and action taken to eliminate them.
4. Delegation is encouraged: - Budgeting follows sound management principal delegation of responsibilities is given positive recognition budgetary control reduces the possibility of danger due to delegation of responsibility.
5. Weakness can be traced: - the costs variance reveal any weakness that exist more over, they reveal the nature of each weakness. So where the nature of weakness is determined necessary action can be taken quickly and in time

2.6 VARIANCE ANALYSIS



Variance could be deduced arithmetically as variance = Budget – Actual.

There are two types of variance; these are favorable variance and adverse unfavorable variance.

- (a) Favorable variance-this occurs when a budget is achieved with a resultant surplus budget surplus is called favorable variance.
- (b) Adverse or unfavorable Variance: - This occurs where a budget is not implemented to the latter, thereby leaving funds idle or diverting for unbudgeted or invariable project.

2.7 POSSIBLE CAUSES OF UNFAVOURABLE VARIANCE

- (1) Poor monitoring and implementation
- (2) Cost over run.
- (3) Bureaucratic red-tapism
- (4) Inadequate funding by use of unskilled contractors
- (5) Inappropriate technology.

2.8 ELEMENT OF COST

Analysis and classification of cost for the purpose of budgetary planning and control. It is important to analyse and classify cost into their appropriate classes. The cost accountant is responsible for the allocation of suitable method for controlling the purchase and to make use of material production cost can be divided into 3 types i.e. material cost, labour cost and over head cost.

MATERIAL COSTS

Are the total cost of material used in production. It comprises of material price and material usage i.e. material used up in production.

LABOUR COSTS

Are the total cost paid to worker that are engage in production of a products.

OVERHEAD COST

Overhead cost is defined as the total cost of indirect material. Indirect labour an indirect expenses. Indirect cost in this connection mean that cost which cannot be allocated to a particular cost unit or cost center. Overhead may be analysed by this various function.

1. Production Overhead.
2. Administrative Overhead.
3. Selling and distribution overhead, for the purpose of budgetary control overhead may be incorporated into department budgeted, overhead could be actual or pre-determine to overhead because, the cost of the product will not be accurate until it bear and appropriate proportion of the overhead cost.

2.9 STANDARD COSTING

Standard cost are carefully determined, pre-computer costs which support to be estimates of costs as they should be the standard cost may be forecast of cast to a production of a number of products. Standard costs are more scientifically determined and are more detailed. So that off standard cost performance can be pre-pointed. Standard costs are support to represent costs they should be so that any

deviation such cost represents measure of performance. The differences between the actual and standard is known as variance.

An actual cost is the actual amount of cost to be used while standard is the amount expected to be use and the different between them give variance.

ADVANTAGES OF STADARD COSTS

1. It provides a current range of performance or measure of efficiency.
2. It establish goal or incentives for improvement of performance and enhancement of morale.
3. They affect economy's in accounting record-keeping.
4. If standard costs are comparable to a par for a golf coarse yard sticks against which to measured performance currently.

2.10 TYPES OF BUDGET

The followings are the different types of budgets,

1. Fixed budget or standard Budget- this type of budget is not subject to review.
2. Flexible budget – This type of budget is subject to review.
3. Balanced budget – is such budget where every expenditure item is matched by sufficient revenue or income.
4. Deficit budget – where expenditure are other wise matched.

2.11 STEPS IN THE PREPARATION OF BUDGET

In the preparation of budget both in the public and private sector, consideration has to be made on the following factors: -

1. The political economy, social and technology this is in view of the fact that the political situation of the can by or of the environment has to be considered. The economy ofcourse, must as well comes into focus as well as the social and the technology of the time.
2. Step would be to the review of the previous budget, this plays a significant role in measuring the achievements so far of the previous budget as well as in ha biting factors that militate against achievement of the previous budget.
3. The forecast of the two items.

2.12 THE ADMINISTRATION OF BUDGETARY CONTROL

The information which must be available to enable budget to be prepared by all executives on a consistent basis and in forms which facilities consolidation into the master budget are: -

- (a) The organization structure of the company, setting out clearly the responsibilities of each officer and the limits of his authority.
- (b) The classification and coding of the various items of income and expenditure to be covered by the budget.

- (c) Copies of the forms to be used in submitting budgets. Wherever possible, the layout of budget forms should be similar to that of the management reports, which will be used later to compare budgeted and actual results.

2.13 COORDINATION OF BUDGETS

In order that an acceptable master budget can be prepared, it is necessary to ensure that the various subsidiary or individual budgets are coordinated. The most obvious example of this is the need to ensure that the quantities, which for example the sales department of a company is forecasting that they will sell, are in line with the quantities which production department are budgeting to produce.

In addition to the areas where it is necessary to check that quantities of a production department agree with quantities budgeted to be used by another department, it is also necessary to ensure that financial implications of the individual budgets are coordinated e.g. capital expenditure proposed by operating departments must be reconciled with the cash available for capital expenditure as shown the cash budget.

ZERO BASE BUDGETING

Zero – base budgeting expressed very simply, means going back to the start. The basic idea is that a manager should ignore what has been done in the past and should attempt to justify every item of expenditure by asking what purpose an activity is intended to achieve.

Zero – based budgeting is an approach to cost planning which rejects the view of budgeting as an incremental process where by past years budget and actual figures become the basis for the next budget. It attempts to deal with deficiencies of traditional approaches to budgeting, which use current costs as a guide and look for a percentage increase on the current figures.

The advantages of zero-base budgeting compared with traditional method of budgeting include: -

1. Introducing change which should provide benefits
2. Creating a questioning attitude.
3. Moving towards allocation of resources by need and benefit.

BUDGETING FOR CAPITAL EXPENDITURE

In the same manner, other individual budgets are prepared. Budgeting for capital expenditure could well be prepared in the either given pre-written software or written program. The control of capital expenditure project falls into five stages: -

- Budgeting
- Project authorization
- Implementation
- Reporting and review
- Audit of results achieved

The main purpose of the capital expenditure budget therefore is to provide a forecast of the amount of cash likely to be needed for investment projects during the year ahead.

BENEFITS OF THE PROPOSED SYSTEM

A lot of benefits will be derived from the proposed system, some of which are: -

- (a) Accuracy –when a computer is properly programmed, it will do the intended work with high degree of accuracy. This is because, computer does not get bored, so that the errors that human beings might easily commit is easily avoided.
- (b) Speed – The computer can perform calculations and process data more quickly than other alternative methods. Work which might take a very long time to be finished can be done within a short period by the computer. As a result of speed, large volume of transactions can be handled within a short period.
- (c) Retention and storage – computer can store and search massive files of data and programs and the contents of these files cannot fade away or get lost.
- (d) Reliability – Computer can work for almost 24 hours in a day except a little time out for equipment checkup and maintenance.
- (e) Wide Applicability – Computer can be used to solve a wide range of problems and can be used to do a lot of things that seem impossible manually.

CHAPTER THREE

3.0 SYSTEM ANALYSIS AND DESIGN

3.1 INTRODUCTION

Systems Analysis is the practice of evaluating an existing system to see how it works and how it meets users' needs. While system design is the process of planning a new system based on the findings of system analyst. Therefore, systems analysis is a fact – funding process and these facts are later on analyzed with a view to deriving the requirement for a new or unproved system that is from the short comings of the current system.

3.2 PROBLEM IDENTIFICATION AND DEFINITION

The problems highlighted in this project were first observed by the writer from his experience in the Company Accounts Section/department with particular emphasis on budget and planning and planning section of the company.

The Manual system which is used is inefficient because of the following problems:-

- (1) Much time is wasted in retrieving past records of the company
- (2) These records might have been misplaced. This leads to the problem of not getting accurate information.
- (3) Duplication of certain items/Heads

- (4) Inclusion of non- realisable income in the budget.
- (5) Frequent omission of relevant items for planning.
- (6) A lot of time is wasted when the management wants immediate information
- (7) Looking at the growth of the company, manual system will become inadequate for the management.

It is in this light that a proposal for an automated system is anticipated.

3.3 FEASIBILITY STUDY

Based on the feasibility study that was carried out by the analyst, the strength and weakness of the existing system was discovered.

It was concluded that inaccurate and slow compilation and preparation of budget can be solved by computerising the system.

It was also discovered that the existing system is full of errors and in efficiency and the desire to increase productivity in the company and reduce cost by eliminating these deficiencies constitute the move for more effective and useful structure of information, for better organization and decision making.

3.4 TESTING THE PROJECT FEASIBILITY:

Preliminary investigation was carried out with the sole aim of examining the project feasibility, the likelihood that system can be useful to the organization. The following tests of feasibility studies were carried out.

- (1) **OPERATIONAL FEASIBILITY:-** The management is in support of the project because of the inefficiency of the manual system. The project is operationally feasible, based on the facts that was discovered during investigation; which revealed the desire of those concerned with operations as well as the users of the system, to have strongly supported the proposal of an automated system. AS this will reduce errors and inefficiency and increase productivity in the company.
- (2) **TECHNICAL FEASIBILITY:-** Personal computers can adequately take care of the operation of the system and the necessary data used in the system. Also it can provide adequate response to all inquiries, it can be expanded such that the way of processing can be completely on time.
- (3) **ECONOMIC FEASIBILITY:-** The cost of purchasing the necessary hardware, software and trained personnel will be light at first. The benefit will be an increased processing for the user's satisfaction, reduce time, wastage and lost of valuable information that will be needed in the process of transaction.

3.5 COST AND BENEFITS ANALYSIS OF THE NEW SYSTEM

(1) HARDWARE PROCUREMENT

		N	K
486 Dx 2/66/MH2 Processor	-	150,000.00	
14" Colour Monitor	-	45,000.00	
CPU	-	160,000.00	
102, UK KEYBOARD	-	20,000.00	
LASER JET PRINTER (6L MODEL)	-	55,000.00	
UPS (1000 K. V)	-	50,000.00	
Stabilizer (1000 k. v. A)	-	25,000.00	
Mouse PAD	-	5,000.00	
		<u>N510,000.00</u>	

(2) SOFTWARE:

WORD PROCESSOR (6.1 VERSION)	-	20,000.00	
Dbase Program	-	25,000.00	
Current Window	-	15,000.00	
	-	<u>60,000.00</u>	

(3) DEVELOPMENT COST

N K

Systems Analysis and Design

For 4 weeks at 6,000/week - 24,000.00

Software Development for

4 weeks at 5,000 - 20,000.00

Personnel Training & Development - 40,000.00

For 4 weeks at 5,000 - 84,000.00

(4) OPERATING COST

Consumables for 1 year - 60,000.00

Utilities - 100,000.00

2 A/C (2½HP) - 100,000.00

Miscellaneous Expenses - 30,000.00
290,000.00

Grand Total = ₦944,000.00

SYSTEMS BENEFITS

(1) Reduction in the use of stationaries

(2) Sorting and arranging of information in various ways can be done easily and quickly.

- (3) Reduction in printing of Bin cards, ledgers and Kalamazzo binders.
- (4) Recovery from overtime
- (5) Elimination of many repetitive work of budgeting and planning
- (6) Automatic updating of records and maintenance.

3.6 STEPS IN CORPORATE PLANNING

Corporate planning process according to James Whittaker involves the following:-

- (1) **Select the Goal** – Setting the goal of the organisation is the most criteria step because goals selected take up a large amount of the organisation's resources. For this reason strategic goals are usually set by upper level or top manager after a number of possible goals have been carefully considered. Such goals can include desired sales volume, developing a new product or service.
- (2) **Analyse the Environment** – This is the consideration of the problems and opportunities the environment presents. This is crucial because whatever the goals establish they will be affected by factors outside the organisation. For instance, it would be unrealistic to plan for rapid expansion in a period of economic stagnation. An analysis of the environment lets planners know how feasible and attainable their goals are.
- (3) **Select the best Alternatives** – While manager may develop a number of alternatives they think will become part of the corporate plan not all of them

will be feasible since not all will be necessary. Alternative that help close the gap are those management's should be most interested in.

- (4) Measure and control the progress of the plan – The process of controlling is a critical part of any plan. Managers need to check the progress of their plan so as to remedy where necessary of charge unrealistic original plan.

CHAPTER FOUR

4.0 PROGRAM DEVELOPMENT / IMPLEMENTATION

4.1 INTRODUCTION

A program is defined as an instruction set describing the logical steps the computer will follow to solve a particular problem.

The introduction of computers in organisation and the ever increase sophistication of data processing system have highlighted the importance of data as one of the most valuable organisational resources.

The art of program writing involves a program definition; that is before a program can be written to perform a particular task the nature and complexity of the problem or task must be known.

4.2 CHOICE OF LANGUAGE

The new system is intended to be a completed database system which is a collection of data, usually files. The arrangement of the files is usually in such a way that it is independent of any particular application and data redundancy is totally eliminated.

4.3 BENEFITS OF A DATABASE SYSTEM

- 1 *Maintainability*- most important and gives it the ability to impose centralized control over to operational data. It is a lot easier to maintain one data base than maintaining many similar fields.
- 2 *Accessing the Required Database* – it is easy to access the existing database so that records could be added, deleted, modified etc.
- 3 *Working with more than one file* – Database enables the transfer of one file to another.
- 4 *Information retrieval* – It is possible to get back information from a collection of data.
- 5 *Report generation* - A report which is a summary of information which appears in accordance with how you want it comes out from a database.

4.3 FEATURES OF LANGUAGE CHOSEN

Database system has a lot of features, which makes for easy usage thereby making it a choice language in programming. The features include: -

- (a) **SECURITY** – Data will be protected from unauthorized users.
- (b) **DATA INTEGRATION** – This enables two or more applications to be sharing compatible data thereby allowing the users to gain valuable information by linking data across the organization
- (c) **DATA REDUNDANCY**: -This is reduced or ever totally eliminated.
Redundancy occurs in a file processing systems when data cannot be arranged to suit all the application programs accessing these data.
- (d) **DATA INDEPENDENCE**: - This is the insulation of application programs from the physical or logical storage of data. Any changes to the data are accommodated by changes to the database management system without any changes to the application program being necessary.
- (e) **DATA INTEGRITY**- Can be maintained in an environment where is duplication of data, problems concerning the updating and delaying of data often arise since a change in any of the duplicated data will necessitate a change in every file that contains the same data otherwise inconsistency will result.

4.5 TRAINING

All those that will use the system have to undergo some training so that they will be familiar with the system.-In this respect, the entire staff in the Accounts department will be involved in the training because they are the ones to use the new system, more so that they will provided data receiving information and actually the equipment.

This training will cover areas like operation guidelines and how to detect malfunctions and the steps to take when such occurs.

The training will be in two aspects: -

- (a) Familiarisation with system itself i.e. equipment used for data entry, and using the application program, which is the software that accepts data, process it and give result (output)
- (b) the user needs to acquire elementary training and on how to handle minor hardware faults the training is suggested to be an in-house training.

4.6 INSTALLATION

The following tools will be used to check on the quality of the system.

1. Test for the system involving code-testing and specification (examine what the program should do and how it should do it in live with the result obtained)
2. Verification testing- By executing the software in a simulated environment (using some assumptions, testing a data for error funding).
3. Certification testing- software endorsement for correctness.
4. Validation test -this refers to the process of using a software in live environment for the purpose of listing a software in live environment for the purpose sporting error.

4.7 REQUIREMENT SPECIFICATION FOR THE PROPOSED SYSTEM:

(1) HARDWARE AND ACCESSORIES

Processor - 486 Dx 33 MH2 (IBM Compatible)

RAM	-	16 MB
MONITOR	-	VGA
MASS STORAGE OPTION	-	1.44 MB/ 3.5" Diskette
HARD DISK	-	540 MB
OUTPUT DEVICE	-	HP LASERJET (6 L Model)
UPS	-	1000 K. V. A
STABILIZER	-	1000 K. V. A.

(2) OPERATING SOFTWARES:

MS – DOS 6.1 above version

Dbase IV

Word Perfect 6.0

Or Microsoft Word.

4.8 SECURITY MEASURES

Computer system security encompassed the security of all the information assets that constitute the system be it manual or automated.

Most organisation should see security measure beyond just the physical access and passwords. Hence it should be noted that if hardware fails then the information system has failed therefore adequate measures should taken regarding both the software and hardware

Security involves the need to protect the corporate information database, its integrity and accessibility. While privacy involves prohibiting an infringement on individuals file.

Also, strict access to the computer room should be enforced using either a key and a guard. Also register should be provided to show the movement in and out of the computer room.

4.9 SYSTEM CONVERSION

Conversion is process of changing from old system to new method. There are

4 methods of change over procedures namely: -

5 Parallel changeover : - Here the old and new systems are run concurrently using the same inputs the outputs are compared and reasons for differences resolved.

Outputs from the old system continue to be distributed until the new system has proved very satisfactory. After which the old components gives way to the new.

6 Phased changeover this is a gradual systems conversion. Here component of the new system are implemented one at a time into the old system, and the old system is phased out piece by piece.

- 7 Direct changeover within this approach, an entire new system is installed. The old system is completely dismantled and the new system becomes operational immediately
- 8 Pilot conversion / changeover the changeover would involve the changing over of part of the system; either parallel or directly. One subsystem is chosen as the lead system and implemented before all others. Only when that subsystem is completely operational can conversion of the next system be considered

4.10 INPUT SPECIFICATION

In terms of accuracy, the data that are to be inputted into the system must be validated to ensure that decisions are made with the information obtained from accurate data, which implies that the information should reflect the current situation.

Also with the aid of computer a huge volume of data which involve sorting, updating information, and merging of data could be done without stress. This is because of the ability of the computer to perform repetitive tasks which makes things easier.

4.11 OUTPUT SPECIFICATION

It should be noted that the most important features of an information system is the output it produces. The user is more concerned with the output. The output specification is essentially about how or the form in which it is formatted. Outputs are produced in two major forms, which is known as report, it can be (I) on the screen and (ii) printed reports (hard copy). There is every need for the report, for it will be needed in order to know records of the company past budgets

4.12 EVALUATION OF SYSTEM DESIGN

The two operational goals for evaluating systems are: -

1. *RELIABILITY* – A system is reliable if it does not produce dangerous or costly failure when used normally. And two ways of ensuring system reliability are:
 - (a) Ensure that the system requirements are met
 - (b) Ensure that the system is actually working.

Thus the three available approaches to reliability are: -

- (a) *Error Avoidance* – the system design should prevent error from occurring in the software that is used: -
 - (i) By careful identification of requirement
 - (ii) Using structured methods and techniques
- (b) Error detection and correction – this must be built into the system.

- (2) *MAINTAINABILITY*: - The possibility of keeping the system working under any condition. This involves proper identification of system features.

4.13 STARTING THE PROGRAM

Load the Dbase program by typing Dbase from the DOS prompt.

C: \>CD Dbase press enter key

Go to the Dbase directory

C:\DBASE\>DBASE press enter

This loads the dbase program. From the dot prompt, type "do budget"

.DO BUDGET.

The program is then activated and the main menu is displayed.

The main menu consists of

- (1) Add records
- (2) Delete records
- (3) Modify record
- (4) View records
- (5) Report summary
- (6) Exit.

Depending on your choice from the main menu, the appropriate subprogram is loaded.

The report menu is loaded when option 5 is selected. From the report menu, one can choose the appropriate report to be generated.

ADD RECORDS

To add records, the computer prompts the user for the operation code of that particular record. After being entered, the computer checks to ascertain whether it already exists; if it does it flashes a message that it does else it allows the user to enter other fields of the record; operation date. Description amount, operation type income or expenditure. This goes on until the user responds negatively to the computer's asking if he/she wants to enter more records.

DELETE RECORDS

Just like adding records the computer prompts for the operation code after which it searches for a match. On finding one, it asks the user if he/she is sure of wanting to delete that particular record. If yes it deletes it and if no it prompts for any other record to delete.

MODIFY RECORDS

After procedure of prompting for the operation code and searching for a match if a match is found it then allows the user to modify the relevant field else it prompts that record does not exist. The user is then allowed to enter another operation code if he/she wants to modify more records.

VIEW RECORDS

Here, the user is allowed only a glimpse of the record. A search is made of the operation code of the record, which the user enters. If found, all the fields of the records are displayed else the system prompts that the record does not exist

REPORT SUMMARY

REPORT EXPENDITURE:

This gives a summary of expenditure (heading parameter 1) and generates a summary of all amounts as shown in the output

REPORT INCOME:

This also generates a summary of records (heading parameter 2) if operation type "income" and sums up the total of amounts for all records of this type also as shown in the output.

REPORT BOTH (INCOME AND EXPENDITURE)

This gives a summary of a combination of records both of type "income" and "expenditure, showing the total amount in each case.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 CONCLUSION

The project has focussed on the importance of budgetary planning and control on the cost and material management of business organization. It is known on how effective the companies are able to use this budgetary control to determine its success.

Without effective implementation of budgetary planning and control a plan may become ineffective on the business that formulated it.

5.2 RECOMMENDATIONS

It is hoped that all these recommendations would help the company in making effective usage of budgetary planning and control system in terms of achieving a good target project level.

1. The company should rely heavily on locally grown material and reduce importation of materials.
2. The company should fully adopt computer into all her budgetary planning henceforth for faster preparation and quick result.
3. The company should rely on budgets figure for its operation

4. Efforts should be made to minimize the cost of production and expenditure incurred
5. It is also recommended that except where personnel problems are involved or the amount of capital is very large, the introduction of a profit improvement capital expenditure should not be delayed

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* BUDGETING

```
SET TALK OFF
SET SAFETY OFF,
SET SCORE OFF
SET CONFIRM ON
SET ESCAPE ON
SET MESSAGE TO ""
SET DEVICE TO SCREEN
SET STATUS OFF
CLEA ALL
SET COLOR TO GR+, G, G
CLEAR
DO MAINBUD
STOPPER = ''
DO WHILE STOPPER = ''
DO DEFIN
DO MAIN
CLEAR
ENDDO
RETURN
```

PROCEDURE DEFIN

IF ISCOLOR()

```
    SET COLOR OF BOX TO GR+/BG
    SET COLOR OF NORMAL TO W+/B
    SET COLOR OF HIGHLIGHT TO GR+/BG
    SET COLOR OF MESSAGES TO W+/N
    SET COLOR OF TITLES TO W/B
    SET COLOR OF FIELDS TO N/BG
    SET COLOR OF INFORMATION TO B/W
```

ENDIF

SET BORDER TO DOUBLE

* SET BORDER TO DOUBLE

```
DEFINE POPUP MAINMENU FROM 1,25
DEFINE BAR 1 OF MAINMENU PROMPT "M A I N   M E N U" SKIP
DEFINE BAR 2 OF MAINMENU PROMPT "===== " SKIP
DEFINE BAR 3 OF MAINMENU PROMPT "ADD RECORD(s)";
    MESSAGE "Addition of record(s) to the database file"
DEFINE BAR 4 OF MAINMENU PROMPT "DELETE RECORD(s)";
    MESSAGE "This option allows deletion of record(s)"
DEFINE BAR 5 OF MAINMENU PROMPT "MODIFY RECORD(s)";
    MESSAGE "This option allows modificatio of record(s)"
DEFINE BAR 6 OF MAINMENU PROMPT "VIEW RECORD(s) ";
    MESSAGE "This option allows you to view records"
DEFINE BAR 7 OF MAINMENU PROMPT "REPORT SUMMARY";
    MESSAGE "This option allows Generation of reports"
DEFINE BAR 8 OF MAINMENU PROMPT "E X I T ";
```

MESSAGE "You want to Shutdown"
ON SELECTION POPUP MAINMENU DO MAIN_PARA

*-----> Popup for Report
DEFINE POPUP REPOM FROM 6,45
DEFINE BAR 1 OF REPOM PROMPT " R E P O R T M E N U" SKIP
DEFINE BAR 2 OF REPOM PROMPT "===== " SKIP
DEFINE BAR 3 OF REPOM PROMPT "EXPENDITURE SUMMARY";
MESSAGE "Generate report of expenditure "
DEFINE BAR 4 OF REPOM PROMPT "INCOME SUMMARY ";
MESSAGE "Generate report of income "
DEFINE BAR 5 OF REPOM PROMPT "BOTH SUMMARY ",
MESSAGE "Generate report of expenditure & income "
ON SELECTION POPUP REPOM DO REPO_PARA

*-----> Popup for Exit
DEFINE POPUP EXITM FROM 7,45
DEFINE BAR 1 OF EXITM PROMPT " E X I T M E N U" SKIP
DEFINE BAR 2 OF EXITM PROMPT "===== " SKIP
DEFINE BAR 3 OF EXITM PROMPT "EXIT TO PROMPT";
MESSAGE "Return to the Dbase Prompt"
DEFINE BAR 4 OF EXITM PROMPT "EXIT TO DOS ";
MESSAGE "Shutdown and return to DOS"
ON SELECTION POPUP EXITM DO EXIT_PARA

PROCEDURE MAINBUD

* -----> This section design the screen
DEFINE WINDOW MAINSC FROM 1,1 TO 22,78 NONE COLOR W+/B
DEFINE WINDOW WORK_IN FROM 7,5 TO 21,75 DOUBLE COLOR W+/B
ACTIVATE WINDOW MAINSC
@1,20 to 3,60 double
@2,24 say "B U D G E T I N G" COLOR W+
ACTIVATE WINDOW WORK_IN
RETURN

PROCEDURE MAIN
ACTIVATE POPUP MAINMENU
RETURN

PROCEDURE MAIN_PARA

DO CASE
CASE BAR() = 3
DO ADDREC
CASE BAR() = 4
DO DELREC
CASE BAR() = 5
DO MODREC
CASE BAR() = 6
DO VIEWREC

```
CASE BAR() = 7
  ACTIVATE POPUP REPOM
  DEACTIVATE POPUP
CASE BAR() = 8
  ACTIVATE POPUP EXITM
  DEACTIVATE POPUP
ENDCASE
RETURN
```

```
PROCEDURE REPO_PARA
DO CASE
  CASE BAR() = 3
    DO REPEXP
  CASE BAR() = 4
    DO REPINC
  CASE BAR() = 5
    DO REPBOTH
ENDCASE
RETURN
```

```
PROCEDURE EXIT_PARA
DO CASE
  CASE BAR() = 3 '
    STOPPER = 'Q'
    CANCEL
  CASE BAR() = 4
    QUIT
ENDCASE
RETURN
```

```
Procedure ADDREC
store 'Y' to ans
set stat off
use budget
do while ans = 'Y'
  clear
  store space(7) to mcodeno
  @1,10 Say "Enter Operation Code: " get mcodeno Pict "!!-9999"
  read
  locate all for codeno = mcodeno
  if found()
    @8,20 say 'Record already exist'
  else
    store 0 to mamount
    store space(25) to mdescrip
    store space(11) to moptype
    store space(10) to mopdate
    DQ GETDATA
    READ
    clear
```

```

append blank
replace codeno with mcodeno
replace descrip with mdescrip
replace amount with mamount
replace optype with moptype
replace oupdate with mopdate
endif
@10,10 to 12,50
store 'N' to ans
@11,12 say 'Are there more records? (Y/N)' get ans pict '!';
      valid ans $ 'YN' error 'Invalid entry !!!'
read
enddo
CLEAR
close databases
return

```

Procedure DELREC

```

store 'Y' to ans
use budget
do while ans= 'Y'
  clea
  @2,15 to 4,55
  @3,20 say 'Deletion of record'
  store space(7) to mcodeno
  @1,10 Say "Enter Operation Code: " get mcodeno Pict "!!-9999"
  read
  locate all for codeno = mcodeno
  if found()
    @10,10 to 12,50
    store 'N' to reply
    @11,12 say 'Are you sure? (Y/N)' get reply pict '!';
      valid reply $ 'YN' error 'Invalid entry!!!'
    read
    if reply = 'Y'
      .dele
      pack
    endif
  endif
else
  @8,20 say 'Record does not exist'
  endif
  @10,10 clea to 12,50
  @10,10 to 12,50
  store 'N' to ans
  @11,12 say 'Delete more records? (Y/N)' get ans pict '!';
  read
enddo
CLEAR
close data
return

```

Procedure MODREC

```
use budget
store 'Y' to ans
do while ans = 'Y'
  clea
  store space(7) to mcodeno
  @1,10 Say "Enter Operation Code: " get mcodeno Pict "!!-9999"
  read
  locate all for codeno = mcodeno
  if found()
    store descrip to mdescrip
    store amount to mamount
    store optype to moptype
    store opdate to mopdate
  DO GETDATA
  READ
  clear
  replace codeno with mcodeno
  replace descrip with mdescrip
  replace amount with mamount
  replace optype with moptype
  replace opdate with mopdate
else,
  @8,20 say 'Record does not exist'
endif
@10,10 to 12,50
store 'N' to ans
@11,12 say 'Modify more record? (Y/N)' get ans pict '!';
  valid ans $ 'Y/N' error 'Invalid entry!!!'
  read
enddo
CLEAR
close databases
return
```

Procedure VIEWREC

```
use budget
store 'Y' to ans
do while ans = 'Y'
  clea
  store space(7) to mcodeno
  @1,10 Say "Enter Operation Code: " get mcodeno Pict "!!-9999"
  read
  locate all for codeno = mcodeno
  if found()
    store descrip to mdescrip
    store amount to mamount
    store optype to moptype
    store opdate to mopdate
```

```

DO GETDATA
WAIT
clear
else
  @8,20 say 'Record does not exist'
endif
  @10,10 to 12,50
  store 'N' to ans
  @11,12 say 'View more record(s)? (Y/N)' get ans pict '!';
  valid ans $ 'Y/N' error 'Invalid entry!!!'
  read
enddo
CLEAR
close databases
return

```

Procedure REPEXP

```

define window user from 1,1 to 22,78 none color W+,B
activate window user
set stat off
set alternate to 'exp.out'
set device to screen
  set alternate on
  set space on
  DO HEADING with 1
  use budget
  go top
  ct = 1
  mtot = 0
do while .not. eof()
if left(optype,1) = 'E'
  ? '|',str(ct,3),'| '|',codeno,'|'.opdate,'| '|',descrip,'| '|',amount,'|'
  ct = ct + 1
  mtot = mtot + amount
  ? replicate('-',75)
endif
skip
enddo
? space(54),'TOTAL = ',str(mtot,9,2)
?
set alternate off
wait
close data
deactivate window user
return

```

Procedure REPINC

```

define window user from 1,1 to 22,78 none color W+,B
activate window user
set stat off
set alternate to 'inc.out'

```

```

set device to screen
  set alternate on
  set space on
  DO HEADING with 2
  use budget
  go top
  ct = 1
  mtot = 0
do while .not. eof()
if left(optype,1) = 'I'
  ? '|',str(ct,3),'|','codeno,'|',opdate,'|',.descrip,'|',amount,'|'
  ct = ct + 1
  mtot = mtot + amount
  ? replicate('-',75)
endif
  skip
enddo
? space(54),'TOTAL = ',str(mtot,9,2)
?
set alternate off
wait
close data
deactivate window user
return

```

Procedure REPBOTH

```

define window user from 1,1 to 22,78 none color W+,B
activate window user
set stat off
set alternate to 'both.out'
set device to screen
  set alternate on
  set space on
  DO HEADING with 3
  use budget
  go top
  ct = 1
  mtot1 = 0
  mtot2 = 0
do while .not. eof() ,
  ? '|',str(ct,2),'|','codeno,'|',opdate,'|',.descrip,'|'
if left(optype,1) = 'I'
  ?? space(9),'|',amount,'|'
  mtot1 = mtot1 + amount
else'
  ?? amount,'|',space(9),'|'
  mtot2 = mtot2 + amount
endif
  ct = ct + 1
  ? replicate('-',81)
  skip

```

```
enddo
? space(48), 'TOTAL = ', str(mtot2,9,2), ' ', str(mtot1,9,2)
?
```

```
set alternate off
wait
close data
deactivate window user
return
```

PROCEDURE GETDATA

CLEAR

```
@ 3,5 SAY "OPERATION CODE:" + MCODENO
@ 5,5 SAY "OPERATION DATE:" GET MOPDATE PICT "99/99/9999"
@ 7,5 SAY "DESCRIPTION:" GET MDESCRIP PICT "@"
@ 9,5 SAY "EXPEND/INCOME:" GET MOPTYPE PICT "@M Expenditure,Income".
MESSAGE "Press SPACE to view options and RETURN to select"
@11,5 SAY "AMOUNT:" GET MAMOUNT PICT "@"
RETURN
```

PROCEDURE HEADING

PARAMETER LL

```
? space(17), "*****"
? space(17), "* B U D G E T I N G *"
? space(17), "*****"
?
?
IF LL = 1
? space(27), "*****"
? space(27), "* SUMMARY OF EXPENDITURE *"
? space(27), "*****"
?
? REPLICATE(" ",75)
? "*" * OPERATION * OPERATION * * *
? "S/NO * CODE * DATE * DESCRIPTION * AMOUNT *"
? REPLICATE(" ",75)
ELSE
IF LL = 2
? space(30), "*****"
? space(30), "* SUMMARY OF INCOME *"
? space(30), "*****"
?
? REPLICATE(" ",75)
? "*" * OPERATION * OPERATION * * *
? "S/NO * CODE * DATE * DESCRIPTION * AMOUNT *"
? REPLICATE(" ",75)
ELSE
? space(23), "*****"
? space(23), "* SUMMARY OF INCOME & EXPENDITURE *"
? space(23), "*****"
?
? REPLICATE(" ",81)
```

.....
 * B U D G E T I H G *

.....
 * SUMMARY OF INCOME & EXPENDITURE *

SN	OPERATION CODE	OPERATION DATE	DESCRIPTION	EXPEND. AMOUNT	INCOME AMOUNT
1	EX-1001	10/02/19	PURCHASE OF STATIONERIES	12000.00	
2	IN-1021	11/06/19	SALES OF PRODUCT		34500.00
3	EX-2300	21/07/19	PAYMENT OF SALARIES	45000.00	
4	IN-2455	22/07/19	STAFF TAX DEDUCTION		13560.00
5	EX-2339	30/12/19	PURCHASE OF VEHICLE	210000.00	
6	EX-2900	04/02/20	PURCHASE OF RAW MATERIALS	46020.00	
7	IN-4322	05/02/20	SALES AND SUPPLY		867900.00
TOTAL =				313020.00	915960.00

B U D G E T I N G

SUMMARY OF EXPENDITURE

S/NO	OPERATION CODE	OPERATION DATE	DESCRIPTION	AMOUNT
1	EX-1001	10/02/19	PURCHASE OF STATIONERIES	12000.00
2	EX-2300	21/07/19	PAYMENT OF SALARIES	45000.00
3	EX-2339	30/12/19	PURCHASE OF VEHICLE	210000.00
4	EX-2900	04/02/20	PURCHASE OF RAW MATERIALS	46020.00
TOTAL =				313020.00