# DESIGN AND IMPLEMENTATION OF A GENERAL LEDGER ACCOUNTING MANAGEMENT SYSTEM

A Case Study of Alu – Diz Limited

Danbaba Street Kano, Kano State

By

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#### **DEDICATION**

Dedicated to God Almighty, my twins, Olaide and my darling wife"Yety" for all their trust and confidence in me.

#### **CERTIFICATION**

We agree in every capacity to certify that this project work was produced by the bearer OLANREWAJU, ADEBAYO MOSES in partial fulfillment of the Post Graduate Course in Computer Science.

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Supervisor	
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External Examiner	Date

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iv. The new system is to achieve some set goals that have not been embarked upon before in the institute under the present manual system.

#### 1.4 PROBLEM DEFINITION

General Ledger being an important subset of the entire accounting procedures have been bedeviled by several problems resulting from the improper storage and management of records of accounts information. These problems results from handling accounting records manually. Manual record handling is prone to several errors, which in turn makes the effective management of account records impossible.

#### 1.5 FEASIBILITY STUDY

This is a preliminary stage that determines whether or not the proposed project is desirable. Therefore, it involves the study of the existing system in detail in order to provide the management with information about the proposed computerized system.

The feasibility study covers three major areas:

- (a) Designing the computerized system
- (b) Testing and implementing the computerized system

To test project feasibility, the following are to be considered:

- Operational Feasibility: This relates to the workability of the proposed information system when developed and installed.
- ii. **Technical Feasibility**: This test, seeks to clarify if the proposed project can be done with current equipment, existing software technology and available personnel.
- iii. **Economic Feasibility**: The test for financial feasibility is undertaken to access cost of implementing a proposed project, that is, the benefit from implementing the project.

#### 1.5 FACTS FINDING TECHNIQUE

Three basic methods were employed to collect data:

i. Interview. It is a fact-finding tool used for collecting information from individual. It involves holding discussion with people that are involved in the day to day operation of the system in order to ascertain their suggestions and comments and also the relevance of any

particular report or statement required from the department. Interview is one of the most satisfactory ways of obtaining information about objectives, constraint, allocation of duties, problems and failures in the existing system.

- ii. **Observation**. This involves watching an operation for a period, to see what happens by oneself.
- iii. **Special Purpose Records**. This involves, the examination of records that contains specific records in an organization, which may be files, journals, seminar papers or even textbooks.

#### 1.6 SCOPE AND LIMITATION OF STUDY

This study concentrates on the General Ledger Operations of a business organization. It does not consider other aspects of accounting such as Cash Book Analysis, Assets Management, Accounts Payable and Receivable and Investments.

#### 1.6 Definition of Terms

#### Account

An individual record of specific things a business owns (assets) and owes (liabilities), as well as ownership (owner's equity).

#### Accounting

The art of organizing, maintaining, recording, and analyzing financial information so users of that information can make better decisions.

#### Accounting Equation

The relationship between the assets, liabilities, and capital of a business organization. (Assets=Liabilities+Owner's Equity)

#### Accounting Period

The period of time, no more than one year, covered by the financial statements.

You can have one year open at a given time.

#### Account Payable

A current liability for which an oral promise to pay, made to the creditor, serves as evidence of the debt.

#### Account Receivable

A current asset for which an oral promise to pay, made by the customer, serves as evidence of the debt.

#### Accrual Basis

An accounting system that recognizes the receipt of cash when it is earned rather than when it is actually received and records an expense when it is actually incurred rather than when the cash is disbursed.

#### Adjusting Entries

Journal entries recorded to change the appropriate balances in various accounts for a specific accounting period.

#### Asset

Anything owned and has monetary value.

#### **Bad Debt**

An expense a business recognizes as a result of a customer's failure to pay an obligation usually arising as a direct result of a prior credit sale.

#### Balance

The monetary value or worth of a specific ledger account. An individual account may be said to have a debit balance, a credit balance, or no (zero) balance.

#### **Balance Sheet**

A financial statement showing the financial position of a business at a particular moment in time. A detailed presentation of the assets, liabilities and owner's equity.

#### Bank Reconciliation

The process by which an account's balance as shown on the bank statement is brought into agreement with the balance shown on the depositor's records.

#### **Bank Statement**

A record sent by the bank, usually on a monthly basis, to indicate the bank's record of the activities within an individual account. Activities include, deposits, paid checks, various bank charges, collections made by the bank to the customer's account, and payments authorized from the customer's account.

#### Book Value

The original cost of a fixed asset, less the accumulated depreciation.

#### **Business Transaction**

Any business activity affecting what a business owns or owes, as well as the ownership of the business.

Capital The ownership of the assets of a business by the proprietors.

#### Capital Expenditure

A significant amount of money spent to increase the value or useful life of a fixed asset.

Cash The most liquid asset a business owns. These consist of coins, bills, money orders, checks, certificates of deposit or treasury bills.

#### Cash Basis

An accounting system that recognizes the revenue when the cash is received and the expense when the cash is spent. The system does not match the expense with the related revenue produced during the same accounting period. For example, you would record the revenue from a sale to a customer only when the customer pays you.

#### Cash Discount

A reduction in price offered by a seller to a buyer as an incentive to pay before the buyer is actually required to do so. See also, Discounts.

#### Chart of Accounts

A ledger's table of contents. A listing of the account numbers and account names in the ledger. The chart of accounts is traditionally set up in the order of the accounting equation: assets followed by liabilities, permanent capital and temporary capital accounts.

#### Cheque

An order to the bank on which it is written to pay a specific sum of money to a designated party.

#### **CHAPTER TWO:**

#### LITERATURE RFEVIEW

#### 2.1 HISTORICAL STUDY – GENERAL BOOKKEEPING PRINCIPLES

Accounting and Bookkeeping is the process of identifying, measuring, recording, and communicating economic information about an organization or other entity, in order to permit informed judgments by users of the information. Bookkeeping encompasses the record-keeping aspect of accounting and therefore provides much of the data to which accounting principles are applied in the preparation of financial statements and other financial information.

Personal record keeping often uses a simple single-entry system, in which amounts are recorded in column form. Such entries include the date of the transaction, its nature, and the amount of money involved. Record keeping of organizations, however, is based on a double-entry system, whereby each transaction is recorded on the basis of its dual impact on the organization's financial position or operating results or both. Information relating to the financial position of an enterprise is presented in a balance sheet, while disclosures about operating results are displayed in an income statement. Data relating to an organization's liquidity and changes in its financial structure are shown in a statement of changes in financial position. Such financial statements are prepared to provide information about past performance, which in turn becomes a basis for readers to try to project what might happen in the future.

#### **2.1.1. HISTORY**

Bookkeeping and record-keeping methods, created in response to the development of trade and commerce, are preserved from ancient and medieval sources. Double-entry bookkeeping began in the commercial city-states of medieval Italy and was well developed by the time of the earliest preserved double-entry books, from 1340 in Genoa.

The first published accounting work was written in 1494 by the Venetian monk Luca Pacioli. Although it disseminated rather than created knowledge about double-entry bookkeeping, Pacioli's work summarized principles that have remained essentially unchanged. Additional accounting works were published during the 16th century in Italian, German, Dutch, French, and English, and these works included early formulations of the concepts of assets, liabilities, and income.

The Industrial Revolution created a need for accounting techniques that were adequate to handle mechanization, factory-manufacturing operations, and the mass production of goods and services. With the emergence in the mid-19th century of large, publicly held business corporations, owned by absentee stockholders and administered by professional managers, the role of accounting was further redefined.

Bookkeeping, which is a vital part of all accounting systems, was in the mid-20th century increasingly carried out by machines. The widespread use of computers broadened the scope of bookkeeping, and the term *data processing* now frequently encompasses bookkeeping.

#### 2.2 ACCOUNTING INFORMATION

Accounting information can be classified into two categories: financial accounting or public information and managerial accounting or private information. Financial accounting includes information disseminated to parties that are not part of the enterprise proper—stockholders, creditors, customers, suppliers, regulatory commissions, financial analysts, and trade associations—although the information is also of interest to the company's officers and managers. Such information relates to the financial position, liquidity (that is, ability to convert to cash), and profitability of an enterprise.

Managerial accounting deals with cost-profit-volume relationships, efficiency and productivity, planning and control, pricing decisions, capital budgeting, and similar matters. This information is not generally disseminated outside the company. Whereas the general-purpose financial statements of financial accounting are assumed to meet basic information needs of most external users, managerial accounting provides a wide variety of specialized reports for division managers, department heads, project directors, section supervisors, and other managers.

2.2.1. Specialized Accounting; of the various specialized areas of accounting that exist, the three most important are auditing, income taxation, and nonbusiness organizations. Auditing is the examination, by an independent accountant, of the financial data, accounting records, business documents, and other pertinent documents of an organization in order to attest to the accuracy of its financial statements. Businesses and not-for-profit organizations in the United States engage certified public accountants (CPAs) to perform audit examinations. Large private and public enterprises sometimes also maintain an internal audit staff to conduct auditlike examinations,

including some that are more concerned with operating efficiency and managerial effectiveness than with the accuracy of the accounting data.

The second specialized area of accounting is income taxation. Preparing an income-tax form entails collecting information and presenting data in a coherent manner; therefore, both individuals and businesses frequently hire accountants to determine their taxes. Tax rules, however, are not identical with accounting theory and practices. Tax regulations are based on laws that are enacted by legislative bodies, interpreted by the courts, and enforced by designated administrative bodies. Much of the information required in figuring taxes, however, is also needed in accounting, and many techniques of computing are common to both areas.

A third area of specialization is accounting for nonbusiness organizations, such as universities, hospitals, churches, trade and professional associations, and government agencies. These organizations differ from business enterprises in that they receive resources on some nonreciprocating basis (that is, without paying for such resources), they do not have a profit orientation, and they have no defined ownership interests as such. As a result, these organizations call for differences in record keeping, in accounting measurements, and in the format of their financial statements.

2.2.2 *Financial Reporting* Traditionally, the function of financial reporting was to provide proprietors with information about the companies that they owned and operated. Once the delegation of managerial responsibilities to hired personnel became a common practice, financial reporting began to focus on stewardship, that is, on the managers' accountability to the owners. Its purpose then was to document how effectively the owners' assets were managed, in terms of both capital preservation and profit generation.

After businesses were commonly organized as corporations, the appearance of large multinational corporations and the widespread employment of professional managers by absentee owners brought about a change in the focus of financial reporting. Although the stewardship orientation has not become obsolete, financial reporting in the mid-20th century is somewhat more geared toward the needs of investors. Because both individual and institutional investors view ownership of corporate stock as only one of various investment alternatives, they seek much more future-oriented information than was supplied under the traditional stewardship concept. As investors relied more on the potential of financial statements to predict the results of investment and

disinvestment decisions, accounting became more sensitive to their needs. One important result was an expansion of the information supplied in financial statements.

The proliferation of footnotes to financial statements is a particularly visible example. Such footnotes disclose information that is not already included in the body of the financial statement. One footnote usually identifies the accounting methods adopted when acceptable alternative methods also exist, or when the unique nature of the company's business justifies an otherwise unconventional approach.

Footnotes also disclose information about lease commitments, contingent liabilities, pension plans, stock options, and foreign currency translation, as well as details about long-term debt (such as interest rates and maturity dates). A company having a widely distributed ownership usually includes among its footnotes the income it earned in each quarter, quarterly stock market prices of its outstanding shares of common stock, and information about the relative sales and profit contribution of its different industry segments.

#### 2.3 ACCOUNTING PRINCIPLES

Accounting as it exists today may be viewed as a system of assumptions, doctrines, tenets, and conventions, all encompassed by the phrase "generally accepted accounting principles." Many of these principles developed gradually, as did much of common law; only the accounting developments of recent decades are prescribed in statutory law. Following are several fundamental accounting concepts.

The *entity concept* states that the item or activity (entity) that is to receive an accounting must be clearly defined, and that the relationship assumed to exist between the entity and external parties must be clearly understood.

The *going-concern* assumption states that it is expected that the entity will continue to operate indefinitely.

The *historical-cost principle* requires that economic resources be recorded in terms of the amounts of money exchanged; when a transaction occurs, the exchange price is by its nature a measure of the value of the economic resources that are exchanged.

The *realization concept* states that accounting takes place only for those economic events to which the entity is a party. This principle therefore rules out recognizing a gain based on the appreciated market value of a still-owned asset.

The *matching principle* states that income is calculated by matching a period's revenues with the expenses incurred in order to bring about that revenue.

The *accrual principle* defines revenues and expenses as the inflow and outflow of all assets—as distinct from the flow only of cash assets—in the course of operating the enterprise.

The *consistency criterion* states that the accounting procedures used at a given time should conform with the procedures previously used for that activity. Such consistency allows data of different periods to be compared.

The *disclosure principle* requires that financial statements present the most useful amount of relevant information—namely, all information that is necessary in order not to be misleading.

The *substance-over-form* standard emphasizes the economic substance of events even though their legal form may suggest a different result. An example is the practice of consolidating the financial statements of one company with those of another in which it has more than a 50 percent ownership interest.

The *conservatism doctrine* states that when exposure to uncertainty and risk is significant, accounting measurement and disclosure should take a cautious and prudent stance until evidence shows sufficient lessening of the uncertainty and risk.

a. The Balance Sheet of the two traditional types of financial statements, the balance sheet relates to an entity's position, and the income statement relates to its activity. The balance sheet provides information about an organization's assets, liabilities, and owners' equity as of a particular date (such as the last day of the accounting or fiscal period). The format of the balance sheet reflects the basic accounting equation: Assets equal equities. Assets are economic resources that provide potential future service to the organization. Equities consist of the organization's liabilities together with the equity interest of its owners. (For example, a certain house is an asset worth N70,000; its unpaid mortgage is a liability of N45,000, and the equity of its owners is N25,000.)

Assets are categorized as current or long-lived. Current assets are usually those that management could reasonably be expected to convert into cash within one year; they include cash, receivables, merchandise inventory, and short-term investments in stocks and bonds. Long-lived assets encompass the physical plant—notably land, buildings, machinery, motor vehicles, computers, furniture, and fixtures. Long-lived assets also include real estate being held for speculation and intangibles such as patents and trademarks.

Liabilities are obligations that the organization must remit to other parties, such as creditors and employees. Current liabilities usually are amounts that are expected to be paid within one year, including salaries and wages, taxes, short-term loans, and money owed to suppliers of goods and services. Noncurrent liabilities are usually debts that will come due beyond one year—such as bonds, mortgages, and long-term loans. Whereas liabilities are the claims of outside parties on the assets of the organization, the owners' equity is the investment interest of the owners in the organization's assets. When an enterprise is operated as a sole proprietorship or as a partnership, the balance sheet may disclose the amount of each owner's equity. When the organization is a corporation, the balance sheet shows the equity of the owners—that is, the stockholders—as consisting of two elements: (1) the amount originally invested by the stockholders; and (2) the corporation's cumulative reinvested income, or retained earnings (that is, income not distributed to stockholders as dividends), in which the stockholders have equity.

b. The Income Statement. The traditional activity-oriented financial statement issued by business enterprises is the income statement. Prepared for a well-defined time interval, such as three months or one year, this statement summarizes the enterprise's revenues, expenses, gains, and losses. Revenues are transactions that represent the inflow of assets as a result of operations—that is, assets received from selling goods and rendering services. Expenses are transactions involving the outflow of assets in order to generate revenue, such as wages, rent, interest, and taxes.

A revenue transaction is recorded during the fiscal period in which it occurs. An expense appears in the income statement of the period in which revenues presumably resulted from the particular expense. To illustrate, wages paid by a merchandising or service company are recognized as an immediate expense because they are presumed to generate revenue during the same period in which they occurred. If, however, the wages are paid to process merchandise that will not be sold until a later fiscal period, they would not be considered an immediate expense. Instead, the cost of

these wages will be treated as part of the cost of the resulting inventory asset; the effect of this cost on income is thus deferred until the asset is sold and revenue is realized.

In addition to disclosing revenues and expenses (the principal components of income), the income statement also lists gains and losses from other kinds of transactions, such as the sale of plant assets (for example, a factory building) or the early repayment of long-term debt. Extraordinary—that is, unusual and infrequent—developments are also specifically disclosed.

c. Other Financial Statements: The income statement excludes the amount of assets withdrawn by the owners; in a corporation such withdrawn assets are called dividends. A separate activity-oriented statement, the statement of retained earnings, discloses income and redistribution to owners.

A third important activity-oriented financial statement is the statement of cash flows. This statement provides information not otherwise available in either an income statement or a balance sheet; it presents the sources and the uses of the enterprise's funds by operating activities, investing activities, and financing activities. The statement identifies the cash generated or used by operations; the cash exchanged to buy and sell plant and equipment; the cash proceeds from stock issuances and long-term borrowings; and the cash used to pay dividends, to purchase the company's outstanding shares of its own stock, and to pay off debts.

d. Bookkeeping and Accounting. Cycle Modern accounting entails a seven-step accounting cycle. The first three steps fall under the bookkeeping function—that is, the systematic compiling and recording of financial transactions. Business documents provide the bookkeeping input; such documents include invoices, payroll time cards, bank checks, and receiving reports. Special journals (daily logs) are used to record recurring transactions; these include a sales journal, a purchases journal, a cash-receipts journal, and a cash-disbursements journal. Transactions that cannot be accommodated by a special journal are recorded in a general journal.

#### d1. Step One

Recording a transaction in a journal marks the starting point for the double-entry bookkeeping system. In this system the financial structure of an organization is analyzed as consisting of many interrelated aspects, each of which is called an account (for example, the "wages payable" account). Every transaction is identified in two aspects or dimensions, referred to as its debit (or

left side) and credit (or right side) aspects, and each of these two aspects has its own effect on the financial structure. Depending on their nature, certain accounts are increased with debits and decreased with credits; other accounts are increased with credits and decreased with debits. For example, the purchase of merchandise for cash increases the merchandise account (a debit) and decreases the cash account (a credit). If merchandise is purchased on the promise of future payment, a liability would be created, and the journal entry would record an increase in the merchandise account (a debit) and an increase in the liability account (a credit). Recognition of wages earned by employees entails recording an increase in the wage-expense account (a debit) and an increase in the liability account (a credit). The subsequent payment of the wages would be a decrease in the cash account (a credit) and a decrease in the liability account (a debit).

#### d2. Step Two

In the next step in the accounting cycle, the amounts that appear in the various journals are transferred to the organization's general ledger—a procedure called posting. (A ledger is a book having one page for each account in the organization's financial structure. The page for each account shows its debits on the left side and its credits on the right side, so that the balance—that is, the net credit or debit—of each account can be determined.)

In addition to the general ledger, a subsidiary ledger is used to provide information in greater detail about the accounts in the general ledger. For example, the general ledger contains one account showing the entire amount owed to the enterprise by all its customers; the subsidiary ledger breaks this amount down on a customer-by-customer basis, with a separate subsidiary account for each customer. Subsidiary accounts may also be kept for the wages paid to each employee, for each building or machine owned by the company, and for amounts owed to each of the enterprise's creditors.

#### d3 Step Three

Posting data to the ledgers is followed by listing the balances of all the accounts and calculating whether the sum of all the debit balances agrees with the sum of all the credit balances (because every transaction has been listed once as a debit and once as a credit). This determination is called a trial balance. This procedure and those that follow it take place at the end of the fiscal period.

Once the trial balance has been successfully prepared, the bookkeeping portion of the accounting cycle is concluded.

#### d4 Step Four

Once bookkeeping procedures have been completed, the accountant prepares certain adjustments to recognize events that, although they did not occur in conventional form, are in substance already completed transactions. The following are the most common circumstances that require adjustments: accrued revenue (for example, interest earned but not yet received); accrued expense (wage cost incurred but not yet paid); unearned revenue (earning subscription revenue that had been collected in advance); prepaid expense (expiration of a prepaid insurance premium); depreciation (recognizing the cost of a machine as expense spread over its useful economic life); inventory (recording the cost of goods sold on the basis of a period's purchases and the change between beginning and ending inventory balances); and receivables (recognizing bad-debt expenses on the basis of expected uncollected amounts).

#### d5 Steps Five and Six

Once the adjustments are calculated, the accountant prepares an adjusted trial balance—one that combines the original trial balance with the effects of the adjustments (step five). With the balances in all the accounts thus updated, financial statements are then prepared (step six). The balances in the accounts are the data that make up the organization's financial statements.

Step Seven The final step is to close noncumulative accounts. This procedure involves a series of bookkeeping debits and credits to transfer sums from income-statement accounts into owners' equity accounts. Such transfers reduce to zero the balances of noncumulative accounts so that these accounts can receive new debit and credit amounts that relate to the activity of the next business period.

#### 2.4 BENEFITS OF AN AUTOMATED LEDGER SYSTEM

In bringing about the much needed efficiency in the administration of Ledger information. Computers and other Office Systems need to be applied as a replacement for the manual system.

An automated general ledger systems would offer the following advantages;

- Easy computation of accounting information.
- Finding specific records with little effort by the use of search criteria

- Access to stored information in many different ways
- Generation of multiple reports from databases
- Avoidance of unnecessary duplication of records
- More efficient management of stored information
- Protection of database from authorized access
- Regular back-up of data files

For these advantage to be achieved, an effective data processing system needs to put in place, this should be complemented with an organized office system.

#### 2.5 UNDERLINING CONCEPTS OF AUTOMATED SYSTEMS

Data processing is the analysis and organization of data by the repeated use of one or more computer programs. Data processing is used extensively in business, engineering and science and to an increasing extent in nearly all areas of human activities. Businesses use data processing for such tasks as payroll preparation, accounting, record keeping, inventory control and sales analysis. Engineers and scientists use data processing for a wide variety of applications, including the processing of seismic data for oil and mineral exploration, the analysis of new product designs, the processing of satellite imagery, and the analysis of data from scientific experiments.

Data processing is divided into two kings of processing:

- Database processing
- Transaction processing

#### **Database and Transaction Processing**

A database is a collection of common records that can be searched, and modified such as bank account records, school transcript and income tax data. In database processing a computerized database is used as the central source of reference data for the computations.

Transaction Processing refers to interaction between two computers in which one computer initiates a transaction and another computer provides the first with the data required for that function.

Most modern data processing uses one or more databases at one or more central sites. Transaction Processing is used to access and update the databases when users need to immediately view or add information; other data processing programs are used at regular intervals to provide summary reports

of activity and database status. Examples of systems that involve all of these functions are automated teller machines, credit sales terminals and airline reservation systems.

#### Information Storage and Retrieval

The final step in data processing cycle is the retrieval of stored information at a later time. It is a term used to describe the organization, storage, location and retrieval of encoded information in computer systems.

Important factors in storing and retrieving information are the:

- Type of media
- Storage device used to store information
- The media's storage capacity
- The speed of access and information transfer to and from the storage media
- The number of times new information can be written to the media

This is usually done to access records contained in a database, to apply new data-processing functions to the data, or - in event that some part of the data has been lost – to recreate portions of a database. Examples of data retrieval in the data-processing cycle include the analysis of stored sales receipts to reveal new customer spending patterns and the application of new processing techniques to seismic data to locate oil or mineral fields that were previously overlooked.

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# CHAPTER THREE: SYSTEM ANALYSIS AND DESIGN

#### 3.1 PLANNING FOR A COMPUTER BASED LEDGER SYSTEM

The method selected for the new system is determined by the present set of document used, which is fairly adequate to be modified with the design of new formats to form the basis for the computerized information system. The files and programs are kept as simple as possible to be users friendly in relation to computerization of a ledger system.

The initial step toward system design is the identification of system requirements and the formulation of design alternative. The requirements are those factors or details that have to be incorporated into the proposed system to provide desired output. The following are borne in mind during this system design:

- Identifying areas that require improvements and/or modifications for computerization
- Development of an underlying system to achieve the computerization requirements.
- Ensuring that the proposed system is easy to operate, understood by all user staff, and which requires minimum changes in the existing system.

In designing the system, the following strategies are adopted:

#### 3.1.1 Design Strategies For Implementing Computer Based Ledger System.

- Identification of current system requirements
- Selection and Organization of the data that needs to be stored
- Planning for system Efficiency and Reliability
- Economic Cost comparison: Determination of the cost of implementing the proposed system

#### 3.1.2 Planning System Requirement

- Determination of the information or data to be keep track off.
- Organization strategy of the required information
- Determination of the capacity of current hardware and software that the proposed system would use.
- Determination of the user of the proposed system and the capability of such user.
- Projection of future database needs.

#### 3.1.3 Potential Hurdles

- Apathy of users to computerized systems, leading to the exhibition of system underutilization.
- Over dependency leading to the assumptions that the computerized system is fail-prove.
- Unauthorized access to stored data and information.
- Data lost due to user lack of maintenance culture
- System malfunctioning.
- User adaptation to old system.

#### 3.1.4 Solving Potential Problems

- Adequate training of operators, users and all personnel concerned with the use of the new system.
- Periodic/Routine backup of stored information.
- Access control and user verification methods should be built into the software.
- Management Control: Management should always summarize information, observe trends and performance of variances.

#### 3.2 FEATURES OF USED PROGRAMMING LANGUAGE (VISUAL BASIC 6.0)

The proposed system would be developed with modern Object Oriented Programming Tools (Visual Basic) and would very much help in enhancing any standard operations.

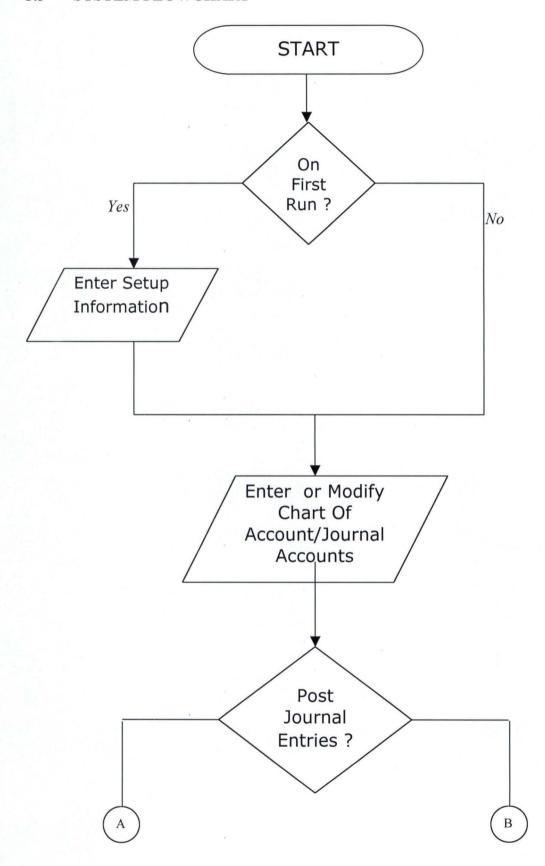
The Visual Basic has a number of features, which in turn are incorporated into the proposed system, this feature includes:

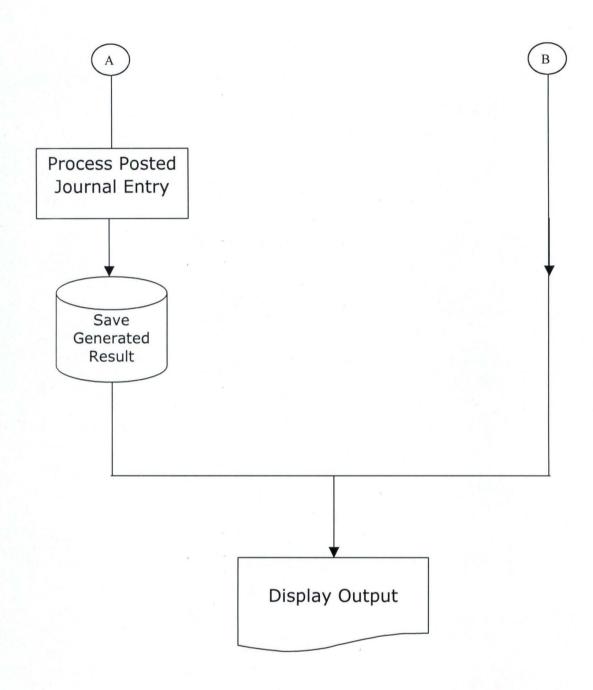
#### **FEATURES**

- Full Windows Compatibility: the software is designed to run in the Ms Windows Operating and any compatible environment, which is the standard for any modern software.
- Mouse Support: apart from keyboard invocations of commands, the software we develop supports the use of the mouse, hence, it is easier to navigate through the software environment and tasks can be executed at the click of a button.
- Menu and Event Driven: the software incorporate Pull Down menus, windows compatible dialogue boxes, prompts and command buttons. This has the added advantage of making the software more user-friendly and interactive.
- Connectivity with other Windows based application: the software has the ability for Dynamic Data Exchange (DDE) and Dynamic Link Library (DLL) for Shared files, with other Ms Windows based software. As such data can be exported or imported to and from it (i.e. communication with other window based software is totally effective).
- Improved Multiple Database Structure: the database structure of any new software developed by us uses the Microsoft Open Database Connectivity (ODBC) style that supports the creation of multiple tables in a single database. This allows for better handling of large volume of related data items while still compact.
- Security: the software is designed such that only valid and authorized users can only gain access; thereby protecting the integrity of your data and the source code of your program being tampered with, which is one of the problems you faced with uncompilable program. Also the databases in the software could encrypted such that they can only be manipulated by the software alone.

- Client-Server Network System (Optional): the software is designed to work on Network
  environment of any architecture. It makes database access in the multi-user environment
  totally efficient, protecting data Integrity and Redundancy.
- Output Control: the software controls the output to Screen, Printer or directly to a file in the format of any Ms Windows base standard software. (E.g. Access, Excel, Ms Word)
- Practical WYSIWYG (What-You-See-Is-What-You-Get) Report Display: the display screen shows you exactly what your final report will look like when your print
- Multiple Size Page Views: View as many report pages at Actual, Double or Half size.
- Pictorial Data Representation: data charting in our software gives view enhancement.
- Multi-Media Effects: Visual and Audio multi-media are available optionally, also they
  use all your current Operating System Settings like Sound, Screen Color, Date & Time
  e.t.c.
- *Utility Features:* pop-up on screen Calculator & Calendar.
- Communication (Internet): automatic E-mailing of Report/Data available as an additional report route.
- Online-Help: Help is available for users on virtually every command of our software.
   Appropriate error trapping messages are included in our systems.

#### 3.3 SYSTEM FLOWCHART





#### 3.4 INPUT SPECIFICATION

The input requirements of a computerized ledger system are analyzed and specified as below:

Table Name: GLCHART

Field Name	Field Type	Field Width
Glcode	Text	8
Glname	Text	255
Gltype	Number	Single
Glcontrol	Text	8
Glcustno	Text	255
Glstatus	Yes/No	
Gllevel	Text	255

Index:

The Table is index upon glcode with a Unique attribute

Table Name: GLLEDGER

Field Name	Field Type	Field Width
GLCODE	Text	8
Glp01	Currency	
Glp02	Currency	
Glp03	Currency	
Glp04	Currency	
Glp05	Currency	
Glp06	Currency	
Glp07	Currency	
Glp08	Currency	
Glp09	Currency	
Glp10	Currency	
Glp13	Currency	
Glyear	Number	Long Integer

### Table Name: GLJNLBUP

Field Name	Field Type	Field Width
AcctYear	Num	Long Integer
Aperiod	Num	Long integer
AcctInType	Text	3
AcctSerial	Number	Long Integer
AcctCode	Text	8
Ref. No	Text	50
Desc	Text	100
DR	Currency	
CR	Currency	
Source	Text	50
Date	Date/Time	Medium Date
Posted	Yes/No	
User	Text	30
Name	Text	40

# Table Name: AcctLevel

Field Name	Field Type	Field Width
Code	Text	4
Desc	Text	100

Index:

The Table is index on both fields (code and desc.)

# Table Name: glJournal

Field Name	Field Type	Field Width
AcctYear	Num	Long Integer
Aperiod	Num	Long integer
AcctjnType	Text	3
AcctSerial	Number	Long Integer

AcctCode	Text	8
Ref. No	Text	50
Desc	Text	100
DR	Currency	
CR	Currency	
Source	Text	50
Date	Date/Time	Medium Date
Posted	Yes/No	
User	Text	30
Name	Text	40

# Table Name: AcctType

Field Name	Field Type	Field Width
Code	Number	Single
Desc	Text	100

*Index:* The Table is index on both fields (code and desc.)

# Table Name: JnHist

Field Name	Field Type	Field Width
AcctYear	Num	Long Integer
Aperiod	Num	Long integer
AcctjnType	Text	3
AcctSerial	Number	Long Integer
AcctCode	Text	8
Ref. No	Text	50
Desc	Text	100
DR	Currency	
CR	Currency	
Source	Text	50
Date	Date/Time	Medium Date

Posted	Yes/No	
User	Text	30
Name	Text	40

# Table Name: AcctType

Field Name	Field Type	Field Width
Code	Text	100
Code	Text	3

# Table Name: GlBudget

Field Name	Field Type	Field Width
GLCODE	Text	8
Glp01	Currency	
Glp02	Currency	
Glp03	Currency	
Glp04	Currency	
Glp05	Currency	
Glp06	Currency	
Glp07	Currency	
Glp08	Currency	
Glp09	Currency	
Glp10	Currency	
Glp13	Currency	
Glyear	Number	Long Integer

# Table Name: Users

Field Name	Field Type	Field Width
Username	Text	100
Password	Text	100

AccessLevel	Number	Long Integer

Index:

The Table is indexed on the Username and Password fields.

#### 3.5 OUTPUT SPECIFICATION

For the output of processing to be view (on Paper or Screen) they have to be first written to a file (Database Table) before they are sent to any output medium (Printer- for Hardcopy or Screen – for Softcopy). It is however pertinent to pre-empt and specify the output of the Computerized general ledger system.

It should be noted that most (in fact all) of this Table are generic, with the sole aim of 'dumping' Report data/information and are deleted afterwards. It is also note-worthy that a generated table could be used for/by many Reports.

Since the Tables are generated and deleted, they are given the same name "TRASHBIN"

The Output specifications for some Reports are:

Table Name: TrashBin

Field Name	Field Type	Field Width
CurBal	Currency	
Pbal	Currency	
GlCode	Text	255
GlYear	Number	Single
GlName	Text	255

Index:

The Table is indexed on the Username and Password fields.

#### 3.5.1 INPUT DESIGN

The Design of Screens (FORMS as called in Visual Basic) is important in any system development process, because it is through this Forms (interface) that the User actually communicates with the program, thus, the efficiency or robustness of a program is firstly determined by the User interface (Forms). It is the user friendliness of the Forms in a program that determines whether is Software is good or not. With this taken into consideration, the following input designs are used.

#### Form Name: FRMPASSA.FRM

**Screen Purpose:** This Form allows the user to enter his/her name and password. The software verifies that the user is dully registered and if the user is authorized, the software loads the main form.



#### Form Name: FRMMAINLEDGER.FRM

**Screen Purpose:** This is the Main menu Form that contains the different activities the system can do. Different operational options are available on the main menu form for users to choose. The main menu contains the following Main options and sub-menus:



MHlegder 2000<sup>+</sup> Main Screen is a simple interface that contains typically:

Menu bar, Toolbar and a Status bar.

#### **MENU BAR**

The Menu Bar is the top most bar on the screen, it consist of the following main menu items:

#### FILE

- o *Backup/Restore*: This is a command option for Data file backup and restore. The Software utilize the WinZip Zip utility which is shipped with MHlegder 2000<sup>+</sup>
- O Set Default Printer: This sub-menu option sets an installed Printer as the default printer to be used for reports to be displayed on screen or paper. The type of printer chosen would sometimes determines the setting of the paper to be used in printing. All reports are designed using DeskJet A4 paper settings
- o Exit Package: This option closed the software session.

#### MAINTAIN

 Chart of Account: The Chart of Account menu option is the command option that invokes the Chart of Account setup form for either new account registration, recent account modification or account deletion.

- o Journal Entry: This is the option that invokes the journal entry main form.
- o Budgets: The Budget sub menu option invokes Budget control module.
- Account Type: The Account type setup routine is invoked using this menu option.
   However, as explained above, for obvious reasons, this menu option is visible but disabled, the menu option can be enabled be double clicking the main menu form.
- o *Journal Type*: This option invokes the form for entry, editing, deleting and displaying Journal types.
- Account Level: The Account Level setup routine is invoked using this menu option.
   As explained above, for obvious reasons, this menu option is visible but disabled, the menu option can be enabled be double clicking the main menu form.
- Delete All Files: The Option deletes all records in the database. However, this
  operation is VERY dangerous and very much unnecessary unless unavoidably
  required.

#### **PROCESS**

- o Post Journal: This Option invokes a routine for Posting current Journal transactions.
- o Year End: This option performs End Of Year operations

#### REPORTS

The various reports are sub-menu to this main menu, the reports are:

- Budget List
- GL Activities
- Vote Book
- Audit Trail
- Income Statement
- Profit & Lost Account
- Trial Balance
- Balance Sheet

#### TOOLS

- Password Maintenance: This option invokes the authorization routine, where the software users can be registered.
- Calculator: This option invokes a calculator utility.

#### **HELP**

#### TOOL BAR

Legder Tool bar consist of 6 different icons, each for different purpose. The Toolbar contains frequently accessed procedure and routines, the tool bar consist of:



This is the Tool bar item that invokes the Chart of Account form.



Displays the Journal Entry Screen



Displays the Budget control routine form



Invokes the Journal Posting procedure



Performs the End-of-Year operation



Exit Package

#### **STATUS BAR**

The Status Bar is the last bar and it is at the bottom of the screen, it consist such information like the:

- User name
- Current System date
- o Current System Time
- Software Programmer Details

The information on the Status bar are displayed for the verification of the above information since they would be used as record 'stamps'.

## Legder<sup>+</sup> Utility Operations

Ledger<sup>+</sup> has some operations that are independent of the accounting procedures but nevertheless important to the overall efficiency of the entire Software.

The utility operations includes:

o Backup/Restore

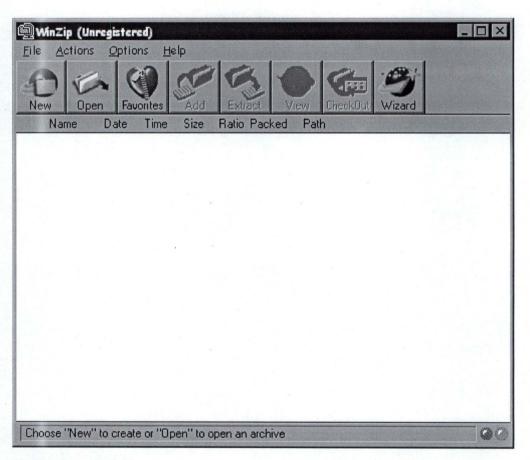
- Setting of Default Printer
- o Password Maintenance
- Calculator

#### BACKUP/RESTORE

This Utility routine allows the backing up of data files while compressing it the data file adequately to fit into a storage medium. The zipped data file can also be unzipped to Restore it for use by Ledger<sup>+</sup>.

The Zip utility WinZip which is shipped with Legder <sup>+</sup> is used for this utility routine.

To Backup or Restore Click on the File menu and Backup/Restore sub-menu of Legder 2000<sup>+</sup>. The interface below is displayed



#### To Backup and Zip

1. Click on the **New** Icon on the Toolbar of the WinZip menu

- 2. In the dialog box that appears enter the Path and Filename to zip the database into and click OK.
- 3. Another dialog box appears, select the database to Backup. Legder<sup>+</sup> database (Ledger.mdb) is found in C:\Ledger

#### To Restore and Unzip

- 1. Click on the Open Icon on the Toolbar of the WinZip menu
- 2. In the dialog box that appears select the zipped file that contains database and click OK.
- 3. Click on the Extract Icon on the Toolbar of the WinZip menu
- 4. In the dialog box that appears select the path (C:\Ledger) to unzip the database into and click OK.

#### **CALCULATOR**

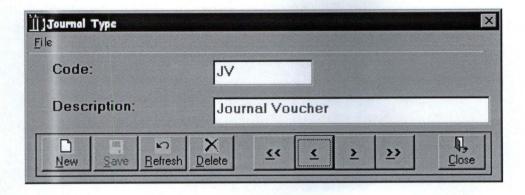
The Calculator utility is invoked be clicking on Tools and Calculator



The calculator is a system calculator that can display Standard and Scientific calculating functions.

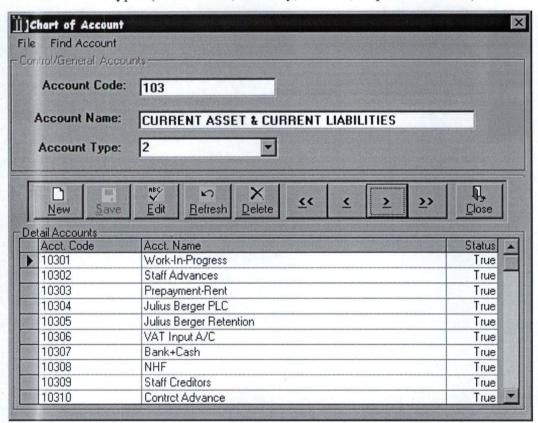
#### Form Name: FRMJTTYPE.FRM

Screen Purpose: This Setup requires that the various Journal Types to be defined prior to transaction. The Journal Code and Description are required in this setup.



#### Form Name: FRMCHART.FRM

Screen Purpose: The Chart of Account defines all the various accounts that will be transacted. It is the Chart of Account setup that allows for the entering of both General and Detail accounts of various account types (Fixed Asset, Liability, Income, Expenditure e.t.c.).



The Chart of Account setup screen is divided into two sections;

 The First section allows entry of General/Control accounts, where it is expected that the Account Code, Account Description and the Account Type should be supplied. • The Second section allows the entry of Detail accounts that is controlled be the current General account. In the grid, it is expected that the Detail Account Code, Detail Account Description and the Status (Sets active or Inactive status of the account) be entered. A Detail account with a FALSE Status would not be transact-able until set TRUE, the default is FALSE.

A Detail Account can only have one Control Account, and its account type is the account type of the Controlling General account.

No two accounts, whether General or Detail must have the same Account Code.

On the Chart of Account screen is a menu 'File' and 'Find Account'.

The *File* menu allows the display of the Chart of Account on Screen or Printer.

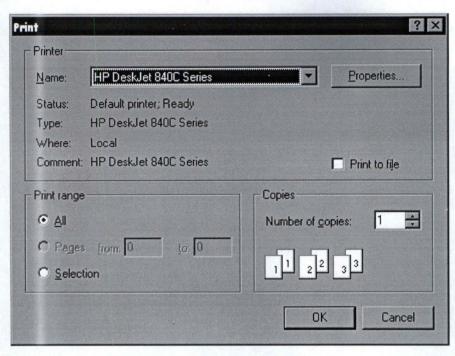
The *Find Account* menu allows the 'quick' searching of accounts either using Account code or Account name referencing. Wild cards (\*, ?) can be used in the search string.

#### SETTING DEFAULT PRINTER

This routine sets the an installed printer as the default to be used in report display/printing, The type of printer chosen would sometimes determines the setting of the paper to be used in printing. All reports are designed using DeskJet A4 paper settings.

To set default printer:

- Click on File menu
- Click on set Default Printer



Note that the print dialog that appears depends on the standard print dialog of the installed printer or the operating systems print dialog box.

#### PASSWORD MAINTENACE

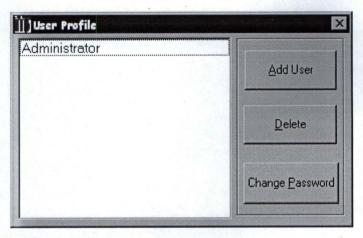
The System Administrator must register any user of Ledger<sup>+</sup> before the user can have access to the program. All registered users can be deleted except the Administrator.

The password maintenance routine allows for new user registration, recent user deletion and user password editing.

To invoke Password maintenance routine:

- Click on Tools
- Click on set Password Maintenance

Form Name: FRMPASSP.FRM

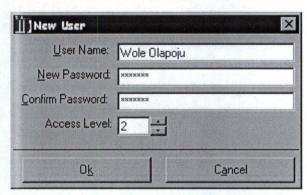


Screen Purpose: The User Profile screen appears where a new user can be added, Change Password or Delete.

#### Form Name: FRM.PASSP.FRM

#### **Adding New User**

Click the Add User command button on the User Profile screen.



To add a new user profile the User name, the New Password, Confirm Password and the Access Level must be supplied.

The New Password and the Confirm Password must be the same for the registration information to be accepted. The Access Level is an index that defines the scope the software operation of the new user.

#### **Deleting User Profile**

Select the User name to delete in the User Profile screen then click the Delete command button.

#### Form Name: frmPassC.frm

#### **Change Password**

Select the User name to edit its Password in the User Profile screen clicking the Change Password button command.



To change an existing user profile the Old Password, the New Password, Confirm Password must be supplied.

The New Password and the Confirm Password must be the same for the registration information to be accepted. The Access Level is an index that defines the scope the software operation of the new user.

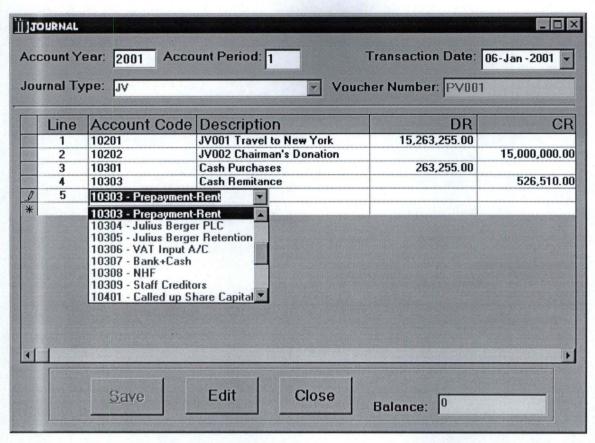
The Old Password must be the same as the password that requires changing.

The New Password and the Confirm Password must be the same for the editing information to be accepted.

#### JOURNAL MANGEMENT

Form name: FrmJournal.frm

Screen Purpose: Allows a user define select account code and enter transaction particulars.



For a Ledger processing the Journal entry form provides the forum for entry all relevant information required in any standard Ledger operation. The Journal entry form requires the following information:

- Account Year by default Ledger uses the current system year
- Account Period by default Ledger<sup>+</sup> uses the current system month representing them as numerals (i.e. 1 – Jan, 2 – Feb, 3 – Mar etc.)
- Transaction Date by default Ledger uses the current system date
- Journal type this is selection of the type of journal from the various types defined in the Journal Type setup.
- Voucher Number this is a unique number used in identifying Journal Vouchers. No two
  vouchers number must be the same.
- Line Number this is an automatically generated number that itemizes the various transacted accounts in a Ledger.
- Account Code this is the code of the account to be transacted in the Ledger.
- o Description this is the additional information about the transacted account in the Ledger.
- $\circ$  DR this is the Debit amount of the transaction

○ CR – this is the Credit amount of the transaction

#### Form Name: FRMNEW.FRM

Screen Purpose: Allows a user to create a new voucher. If the supplied Voucher number existing, an error prompt is displayed.



After the supplied Voucher number verification is successful (when non-existent) then the Journal type is requested, note if the Journal type is not specified then the grid to accept other information will not be enabled.

In the grid it is expected that the Account Code (which can be pick from the combo that contains both account code and description), transaction description and the Dr or Cr amount be supplied for every line of transaction. The line number is generated and cannot be supplied by the user; they are no course for alarm if the line number takes a wrong sequence.

While entering the transaction lines in the Ledger, Ledger<sup>+</sup> automatically calculated the balance and the result of such calculation decides whether the transaction could be saved or not. THE LEDGER TRANSACTION CAN ONLY BE SAVED IF THE BALANCE IS ZERO (0).

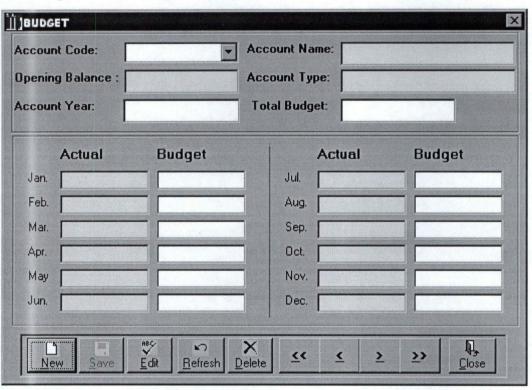
Editing of Current Ledger (i.e. Ledger transactions not yet Posted) is possible in the Journal Entry form be clicking the Edit command button. A request of the voucher number of the Ledger to edit is made, and if found it is displayed on the Journal entry form. NOTE THAT AFTER THE CALL FOR EDITTING ALWAYS SAVE EVEN WHEN MODIFICATION WAS NOT MADE.

It is note worthy to know that all line of transaction is 'stamped' with the user name of the user that login into the program.

### Form Name: FRMBUDGE\T.FRM

Screen Purpose: The Budget control allows Ledger<sup>+</sup> to monitor budgeted amount for all defined accounts, and compare such amounts with the actual amount expended on such account. The Budget control allows a one-view comparison of the Actual and Budgeted amount of an account. The budget control takes in budget per annum and splits them into the 12 periods in the year.

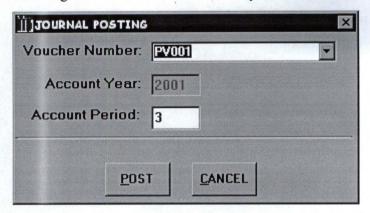
The Budget control management allows for the analysis of account in the Vote book.



#### Form Name: FRMPOST.FRM

This form allows a user to post a transaction. A Journal transaction is of no consequence if not ultimately posted – just like the manual processing. Posting of Journal transaction is recommended

to be performed by an accounting officer that did not enter such ledger. This is expected to provide a check against errors made maliciously or otherwise.



For posting, it is required to supply the Voucher number and the Account Period, but the Account year is not optional, it has to be during the accounting year (system date year). Posting can be made into any account period within the accounting year.

Posting can only be made of current Journals. All current Journals are added to the list of voucher numbers in the combo box requesting the voucher number. Apart from selecting the voucher numbers one at a time, one can Post all pending current vouchers at a time by selecting "ALL" from the voucher number list.

If they are errors while posting, the Journal that causes the error is not posted.

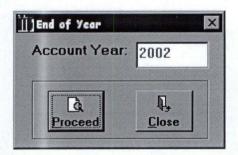
**WARNING** It should be noted that posting is not reversible.

## Form Name: FRMCONFIRM.FRM

Screen Purpose: This from is used to initiate the end of year financial operation. This routine is suppose to be the last operation of a financial year. The routine automatically write and updates records in readiness of the next accounting year.

The process involved here is the computation of Closing Balances for the current Accounting year, which is written onto the database as the Opening Balance for the next accounting year.

This process is also not reversible and must be carried out only when necessary.

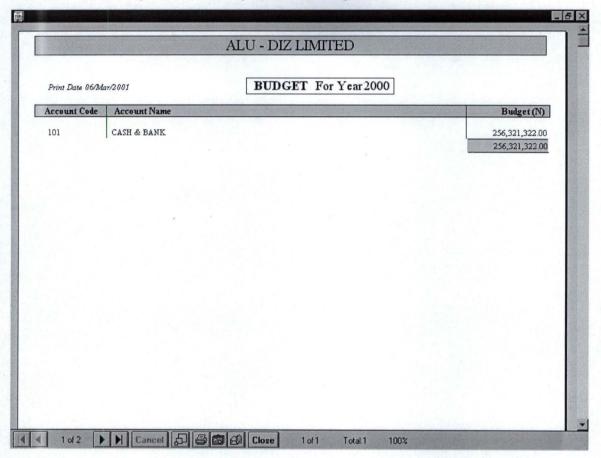


### 3.6 OUTPUT DESIGN

Output Design (REPORTS as called in Visual Basic) is also important in any system development process. A good report is a basic instrument for management decision making, thus for a report to be alright it has to contain all bit of information required in it. The following output designs are used.

### Report Name: Budget.rpt

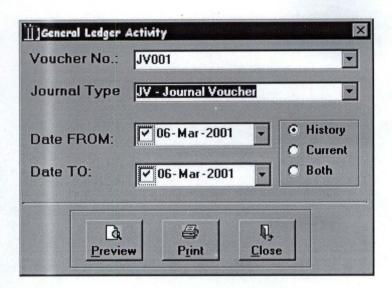
Report Purpose: This report displays the Budgeted amount of accounts per annum. All accounts that is budgeted for are displayed in this report.



## Report Name: Gledger.rpt

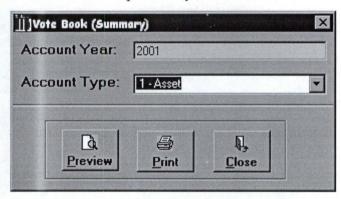
Report Purpose: This report displays the ledger transaction activities at any point in time. The activities of the ledger can be displayed even after posting it (History), or if it is not yet posted (Current) or both (i.e. locates the journal if posted or not).

If display option is 'History' the voucher number combo only displays the voucher numbers of posted ledger. If display option is 'Current', the voucher number combo only displays the voucher numbers of ledgers not yet posted, but when the 'Both' option is chosen, all transacted vouchers are displayed.

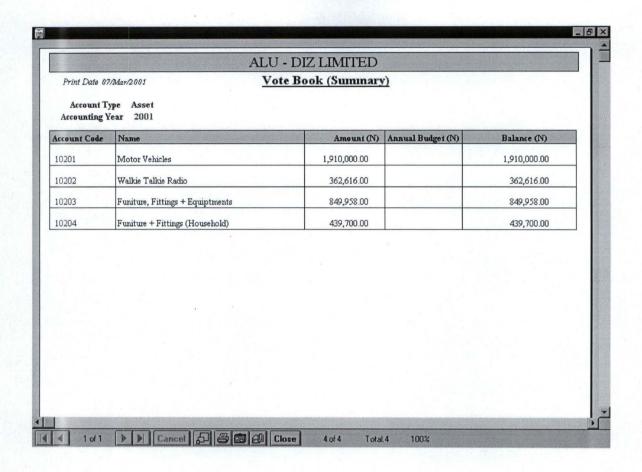


## Report Name: VoteBook.Rpt

Report Purpose: The Vote Book report analysis and displays the budget of an account with the current amount expended by the account.



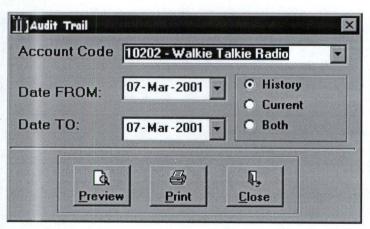
The Vote book report requires the supply the Account year and Account type.

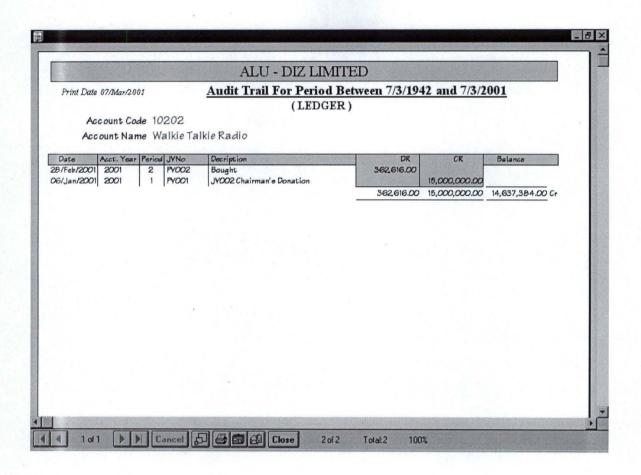


## Report Name: Audit.Rpt

**Report Purpose:** This report displays a particular account transaction activity at any point in time. The account activities can be displayed even after posting it (History), or if it is not yet posted (Current) or both (i.e. locates the account if posted or not).

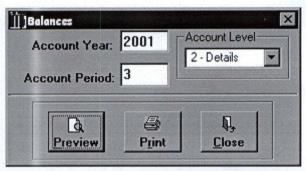
To display this report the Account Code number is necessary and a date range is needed to help the search

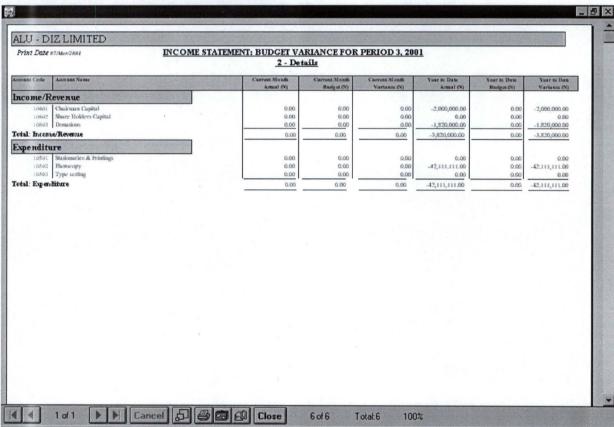




## Report Name: IncomeStat.rpt

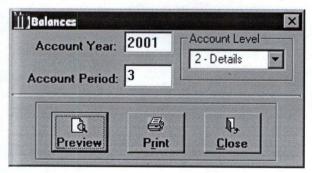
Report Purpose: This report analysis income/revenue and expenditure using the budget index to determine the variance between the income/revenue, expenditure and the budget within a particular date range. To display this report the Account year, Account period and Account level required.

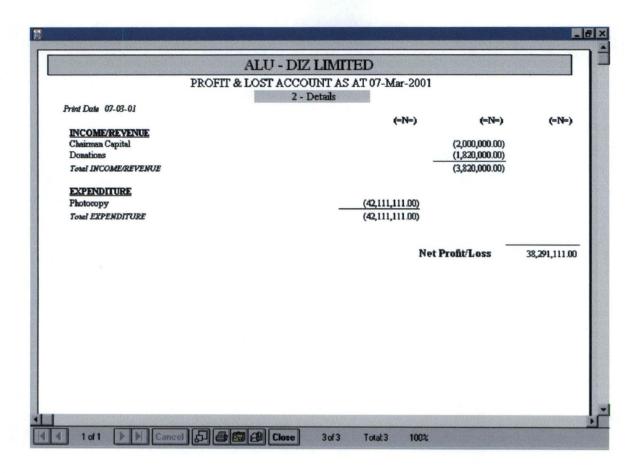




## Report Name: ProfitLoss.Rpt

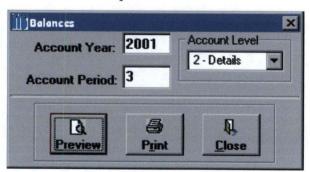
This report generate the profit and lost account using income/revenue and expenditure accounts. To display this report the Account year, Account period and Account level required.

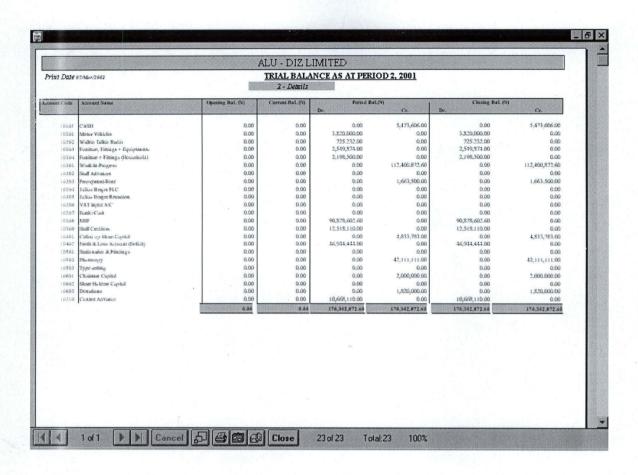




## Report Name: TrialBal.Rpt

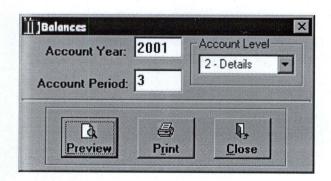
Report Purpose: This report generates the trial balance of transaction of the specified account year, account period and the account level. To display this report the Account year, Account period and Account level required.

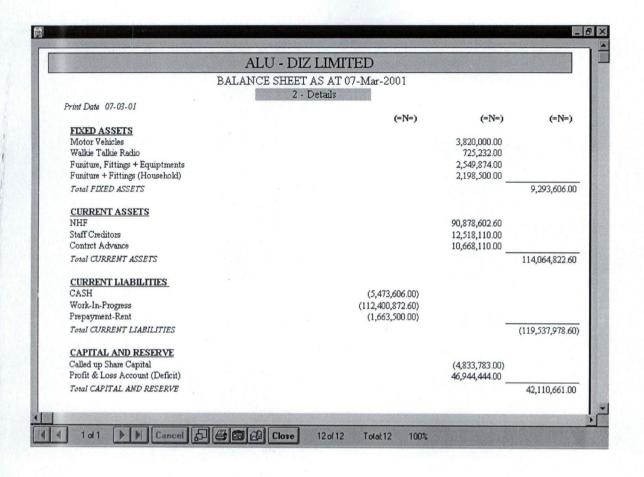




## Report Name: BalanceSheet.Rpt

Report Purpose: This report generates the trial balance of transaction of the specified account year, account period and the account level. To display this report the Account year, Account period and Account level required.





#### **CHAPTER FOUR**

#### SYSTEM IMPLEMENTATION

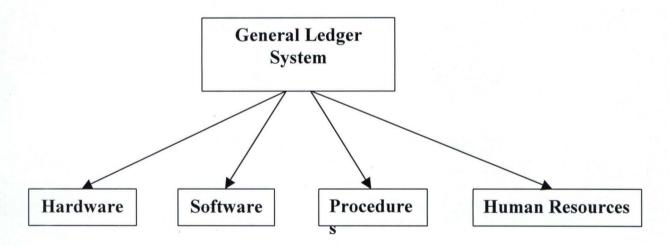
#### 4.1 INTRODUCTION

Implementation is the process of applying the developed system for the purpose it is meant for. System implementation involves the development of quality assurance procedures, including data security, back-up, recovery and system control system implementation objective is to complete the orderly and unobtrusive installation of the new system. During the system implementation, the new system is installed and users have the opportunity to operate the new system in "parallel" with the existing system.

The system implementation comprises the following task:

- Application system installation
- Documentation to provide user manuals
- Users Training on the new system
- Parallel system testing
- Data conversion/migration
- Acceptance of Testing
- System setup

# 4.2 REQUIREMENTS FOR IMPLEMENTING A COMPUTERIZED LEDGER SYSTEMS



#### 4.2.1 HARDWARE REQUIREMENT

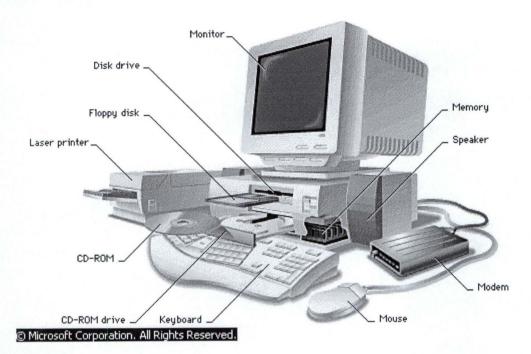
Computer hardware consists of the components that can be physically handled. The function of these components is typically divided into three main categories: input, output and storage. Components in

these categories connect to microprocessors, specifically, the computer's Central Processing Unit (CPU), which is the electronic circuitry, that provides the computerized ability and control of the computer, via wires or circuitries.

In recent years microcomputers have been designed to pack within them more computing powers, in years past this was the exclusive preserve of minis and mainframes, but it is now possible to use microcomputers (as a Stand-alone or in a Network) for more demanding task.

For Ledger Control System, a complete Microcomputer System would be ideal. Such a system should also have along, a Printer for the production of hardcopy.

## Computer Hardware Components



### Hardware Configuration

Full System

- Pentium PIII 550 Processor
- 6.4 GB Hard Disk
- 15" Digital Color Monitor
- ATX Mini Tower Casing
- 120-Watts Speakers (Optional)
- 54x CD-ROM (Optional)
- 64 MB RAM

Printer

DeskJet or Epson Line Printer

**UPS** 

APC or Sun Pac UPS (640KV)

### 4.2.2 SOFTWARE REQUIREMENT

Software are computer programs – instructions that cause the hardware – the machine – to do work. Software as a whole can be divided into a number of categories based on the types of work done by

the programs. Two primary software categories are Operating System (System Software), which control the workings of the computer and Application Software which addresses the multitude of tasks for which people use computers. System software thus handles such essential, but often invisible chores as maintaining disk files and managing the screen (display), whereas Application software perform word processing, database management, and the like. Two additional categories that are neither System nor Application software, although they contain elements of both, are network software, which enables groups of computers to communicate, and Language software, which provide programmers with the tools they need to write programs.

For a Ledger system, the System software (Operating System) required is the Windows Operating System, while the Application software can either be:

Customized Ledger Automation Software

This is a software written with the sole aim of managing a ledger system. It is referred to as customized because it is particularly tailored to meet the specific need or requirement of the organization, ministry, or state that requires it. It can be gotten by commissioning a team of programmers (consultants) or qualified computer analyst to understudy the manual system and design computer application software that would simulate the manual procedures.

In doing this cognizance is always taken of the:

- Need for the software to reflect effectively, the operations of the manual procedures.
- User friendliness such software should be easy for the user to use
- Eliminate the shortcoming of the manual procedures
- Reliability meet the design objective

The objective of this project is to develop this type of Application software to replace the manual mode of general ledger management

#### 4.2.3 PROCEDURES

Procedures are step-by-step method(s) of using a system to be able to achieve result. A procedure in the context of this project is a physical component because they are provided in a physical form such as manual and instruction booklets. The major types of procedures that are required are:

- User instructions
- Instruction for preparation of input
- Operating instructions for the computer center personnel.

#### 4.2.4 PEOPLE (HUMAN RESOURCES)

Human resources are the most important of any data processing system, because it is its responsibility to control and coordinate all other component that makes up the entire system.

It is necessary to have qualified personnel whose responsibility it will be to manage the system. Such personnel needs to be trained effectively on:

- The use of the computer.
- Manipulation of office systems.
- Use and operation of database software to be used

#### 4.3 SYSTEM TESTING

After the installation of the new system, the system must undergo a test, once all the programs have been written and the training of the personnel to use the system is completed. The system testing is to ensure that all the sub-programs have been efficiently and correctly written. The system testing entails the execution of the program with test data so as to enable the system developer and the management to know the operational efficiency of the system.

The system testing will also enable the designer to correct errors and delete programs or modules that are not efficient or relevant by a process called debugging, using test data input into the programs so as to produce the desired output reports. Test data of all possible type/kind are used in other that all likely behaviors of the system to the input is ascertained before actual system implementation.

During this task, the Programmers or the System designer(s) assists the project staff in conducting the testing of the developed system so as to ensure that the system meets all the users needs and requirements. System testing entails the testing and certification of the system developed. This phase ensures that all required features, functions and capabilities are present in the system developed, and that all other requirements are met. Any necessary revisions are made during the system testing.

It is note-worthy that test data should be of 'real-live' nature.

#### 4.4 SYSTEM SET-UP

After the successful System Testing, and the system output or requirements are mutually accepted by the Users of the system, the System Analyst and System Programmer(s), the next thing in the system implementation line is the setting up of the installed system, that is, putting in place or entering the basic information necessary for the system smooth take off.

Setup information in this new system include:

- Authorization Setup: Here it is required to identify the users of the new system and Password assigned to them. It is also note-worthy that not every user can have unlimited access to the entire system, thus, access levels would also be determined for each user of the system. Authorization need not be done every time the system is ran, but only when new users are to be given access to the system or if modification is necessary changing password or access level. The assignment of access to users can only be done be the System Administrator.
- Table Maintenance: Frequently used information are kept in a database table so that they are not always supplied by the users, example is when entering information of personnel, such information like the State of Origin, Designation, Grade Levels are usually within a known range, therefore they are pre-entered into a table so that users entering such data would only need to pick/select from the list.
- User Information: The new system is an 'open-system', and can be used by any other organization or company that uses or want to use the same method in this system for its general ledger management. Thus it is pertinent that the user information is supplied once, upon the first running of the system.

#### 4.5 CHANGE-OVER & DATA MIGRATION

The change over from old to new system may take place when the system has been proved to the satisfaction of the new System Analyst and the other implementation activities have been completed. The method and approach used for the change over is the parallel running system. The parallel system testing means processing current data by both the old and new system concurrently, to cross check the result and compares them. The main advantage is that the old system is kept alive and operational until the new system has been proved for at least one system circle. Using 'real-live' data in the real operational environment of the equipments, people and data, the results of the new system will be compared with old system to ensure the efficiency, capability and durability before acceptance by the user.

The change over task is designed to ensure that the software developed replicate the functionality of the system to be replaced.

Once the change over ends, the user staff complete their training and the parallel system testing are successful, the conversion of records of the old system to the file format of the new system, which involve data entry/capture of several forms of data using the software (*Data Migration*), is necessary.

#### 4.6 SYSTEM INSTALLATION

Ledger<sup>+</sup> comes either on Diskettes or CD-ROM, the installation of Ledger<sup>+</sup> is similar to any major installation of applications developed for Windows 9x Operating System e.g. Microsoft Office. A wizard takes you through the installation process, on strict adherence to the instructions or questions needed to complete the installation process, then the installation would go without a hitch.

**NOTE** it is required at a point, when asked, to change the Directory which Ledger<sup>+</sup> would be installed to **C:\MHLedger**, because by default the wizard would want to install it in the Programme Folder.

Ledger<sup>+</sup> Installation provides for re-installation, but to keep the old database for use by the program it is required to back it up and restore it into the *C:\MHLedger* Folder after the re-installation, otherwise the Old database would be over written during the re-installation. Just like any other windows based software Ledger<sup>+</sup> can also be un-installed using the appropriate Uninstall facility in the Operating System.

#### SYSTEM SETUP AND CONFIGURATION

This section explains how to install and setup the General Ledger Accounting Management Software for your particular use. There are a few things that must be configured for your use in other to help you correctly enter data into the databases.

**WARNING:** If you make changes to any database used in a report after previous reports have been ran. The reports will no longer match.

The following items need to be setup before entering student information into the database:

#### 4.7 ACCOUNT TYPE DEFINITION

The Account Type setup is a requirement for the running of the program. The software requires to know the various types of accounts to be transacted, hence it determines the various transact-able accounts positions in some reports like Balance Sheet.

Account setup must be defined as types:

Code			Description	
(i)	1	- ,	Fixed Asset	
(ii)	2	-	Current Assets or Current Liability	
(iii)	3	-	Income/Revenue	
(iv)	4	-	Expenditure	
(v)	5	-	Capital & Reserves	

It should be noted that a definition order than this might cause abnormal behavior of the entire system. Having this in mind, it is thus pertinent that this setup is shipped with the package, and the option of changing the Account Type discouraged by disabling this option in the main program.

#### 4.8 ACCOUNT LEVEL DEFINITION

The Account Level configuration is another important procedure that must be undertaken if the software is to function well.

The Account Level determines the category of transact-able item/accounts in the General Ledger. The Software defaults any account into either of two levels viz:

	Code		Description
(i)	1	-	General
(ii)	2	_	Detail

**General Account** is the Control Account in the Chart of Account, the accounts with a General (1) Level is a Heading to other Detail accounts; thus, a General account cannot be transacted directly. The General account accumulates the various transactions of all Detail accounts it controls.

**Detail Account** is an account that can be transacted directly, all detail accounts MUST have a Control account which is a General account. The Detail accounts are expected to be more than the General accounts.

Like the Account Type setup, the Account Level is also restricted to this two levels and thus changes is impossible directly except by with the programmer's involvement.

#### **CHAPTER FIVE:**

#### CONCLUSION AND RECOMMENDATION

#### 5.1 CONCLUSION

The automated general ledger system is an indispensable tool for a complete accounting system management especially in Nigeria. With the crave for technological advancement in the entire world, the appropriate technological tool such as this Ledger Management system should be highly embraces and applied.

The success of any organisation is dependent on how well such organisation is managed. Management in turn relies on the information supplied to it to make decisions. Thus the use of an effective General Ledger System that shows the proper accounting status of organisation finance would be very much desirable. This because it would help in no small way in enhance the organisation efficiency and its total well-being.

#### 5.1 RECOMMENDATION

The automated general ledger system is highly recommended for use by government agency, corporations and organization and small and medium scale businesses.

In today's business there is a gradual transition from manual to electronic information management. This trend has also affected the accounting system. Most manual accounting procedure are how being handled use computer and other automated accounting devices. Therefore the automated general ledger system would be most useful for most business.

For further development the automated ledger system can be redesigned to incorporate such modules as;

- Cash Book Analysis.
- Account receivable and Payable.
- Investments.
- Asset Classification and Management.

The inclusion of these would make it a total and complete accounting package.

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#### **Public The Title As String**

#### Private Sub Cmd1New Click()

On Error GoTo handler

Data1.Recordset.AddNew

Text1.Enabled = True

Text2.Enabled = True

Cmd1Save.Enabled = True

Cmd1Delete.Enabled = False

Cmd1New.Enabled = False

Text1.SetFocus

Exit Sub

handler:

MsgBox Err.Description

**End Sub** 

#### Private Sub Cmd1Save Click()

On Error GoTo handler

Data1.UpdateRecord

Data1.Recordset.Bookmark =

Data1.Recordset.LastModified

Text1.Enabled = False

Text2.Enabled = False

Cmd1Save.Enabled = False

Cmd1Delete.Enabled = True

Cmd1New.Enabled = True

**Exit Sub** 

handler:

MsgBox Err.Description

End Sub

Private Sub Cmd1Refresh Click()

On Error GoTo handler

If Data1.Recordset.EditMode = 1 Then

Data1.Recordset.Cancel

End If

Text1.Enabled = True

Text2.Enabled = True

Data1.Refresh

Cmd1New.Enabled = True

Cmd1Save.Enabled = False

Exit Sub

handler:

MsgBox Err.Description

**End Sub** 

#### Private Sub Cmd1Delete\_Click()

On Error GoTo handler

resp = MsgBox("Deletion of the current record" + Chr(13) +

"Continue (y/n)", vbYesNo + vbCritical)

If resp = vbYes Then

Data1.Recordset.Delete

Data1.Refresh

End If

Exit Sub

handler:

MsgBox Err.Description

#### **End Sub**

#### Private Sub CmdClose Click()

Unload Me

**End Sub** 

#### Private Sub CmdFirst Click()

On Error Resume Next

Data1.Recordset.MoveFirst

**End Sub** 

#### Private Sub CmdLast Click()

On Error Resume Next

Data1.Recordset.MoveLast

**End Sub** 

#### Private Sub CmdNext Click()

On Error Resume Next

Data1.Recordset.MoveNext

**End Sub** 

#### Private Sub CmdPrevious\_Click()

On Error Resume Next

Data1.Recordset.MovePrevious

**End Sub** 

#### Private Sub Data1 Reposition()

Data1.Caption = Data1.Recordset.AbsolutePosition + 1

**End Sub** 

#### Private Sub Form\_Load()

Data1.DatabaseName = ThePath

**End Sub** 

#### Private Sub mnuPreview Click()

If UCase(Data1.RecordSource) = UCase("AcctLevel") Then

CR1.ReportFileName = ThePath1 + "AcctLev.rpt"

Else

CR1.ReportFileName = ThePath1 + "AcctCode.rpt"

End If

CR1.Formulas(0) = "User=" & CoyName & ""

CR1.Destination = crptToWindow

CR1.WindowState = crptMaximized

CR1.PrintReport

**End Sub** 

#### Private Sub mnuPrint\_Click()

If UCase(Data1.RecordSource) = UCase("AcctLevel") Then

CR1.ReportFileName = ThePath1 + "AcctLev.rpt"

Else

CR1.ReportFileName = ThePath1 + "AcctCode.rpt"

End If

CR1.Formulas(0) = "User=" & CoyName & ""

CR1.Destination = crptToPrinter

CR1.PrintReport

End Sub	" AND Date <= #" &
End Sub	CDate(TheEnd) & "#"
Private Sub Text1_LostFocus()	MyQuery = ""
If Not IsNumeric(Text1) Then	If SQL1 <> "" Then MyQuery = SQL1
	If SQL2 $\Leftrightarrow$ "" Then
MsgBox "Invalid Entry a Number is required",	
vbCritical	If MyQuery <> "" Then
Text1 = ""	MyQuery = MyQuery + " AND " + SQL2
Text1.SetFocus	Else
End If	MyQuery = SQL2
End Sub	End If
	End If
Private Sub CmdClose_Click()	If SQL3 <> "" Then
Unload Me	If MyQuery $\Leftrightarrow$ "" Then
End Sub	MyQuery = MyQuery + " AND " + SQL3
End Sub	Else
Drivets Cub Combat LostForm	MyQuery = SQL3
Private Sub Combol_LostFocus()	End If
If Combol $\diamond$ "" Then	
TheLen = InStr(Combo1, "-")	End If
If TheLen $\Leftrightarrow$ 0 Then Combo1 = Trim(Mid\$(Combo1, 1,	TCO (' ON I TO THE
TheLen - 1))	If Option2. Value = True Then
End If	dbs.Execute ("SELECT * INTO TrashBin FROM JnlHist
End Sub	WHERE " + MyQuery)
*=	Else
Private Sub Command1_Click()	If Option 1. Value = True Then
On Error GoTo handler	dbs.Execute ("SELECT * INTO TrashBin FROM glJournal
TheStart = ""	WHERE " + MyQuery)
TheEnd = ""	Else
	dbs.Execute ("SELECT * INTO TrashBin FROM JnlHist
dbs.Execute ("DROP TABLE Trashbin")	WHERE " + MyQuery)
,	dbs.Execute ("INSERT INTO TrashBin SELECT * FROM
	glJournal WHERE " + MyQuery)
If DTP1.Value <> "" Or DTP2.Value <> "" Then	End If
If DTP1. Value = "" And DTP2. Value = "" Then	End If
MsgBox "Incomplete Date entry", vbInformation	
	Set Remi = dbs.OpenRecordset("SELECT * FROM trashBin ")  If Remi = OE = True Then
Exit Sub	If Remi.EOF = True Then  MapPay "Na Passard of the given criteria", wh Critical
Else	MsgBox "No Record of the given criteria", vbCritical
If DTP1.Value <> "" Then TheStart =	Exit Sub
Trim(Str(DTP1.Day)) + "/" + Trim(Str(DTP1.Month)) + "/"	End If
+ Trim(Str(DTP1.Year))	
If DTP2. Value <> "" Then TheEnd =	TheTitle = "Journal Activity For Period Between " + TheStart +
Trim(Str(DTP2.Day)) + "/" + Trim(Str(DTP2.Month)) + "/"	and " + TheEnd
+ Trim(Str(DTP2.Year))	'TheTitle = "General Ledger Activity For Period Between " +
End If	TheStart + " and " + TheEnd
End If	
	CR1.ReportFileName = ThePath1 + "JTrail.rpt"
SQL1 = ""	CR1.Formulas(0) = "TheTitle=" & TheTitle & ""
SQL2 = ""	CR1.Formulas(1) = "User=" & CoyName & ""
SQL3 = ""	CR1.Destination = crptToWindow
If Combo2 <> "" Then SQL1 = "JName = "" &	
Trim(Combo2) & """	If Mode = 2 Then CR1.Destination = crptToPrinter
If Combo1 $\Leftrightarrow$ "" Then SQL2 = "AcctJnlType = "" &	CR1.WindowState = crptMaximized
Trim(Combo1) & """	CR1.PrintReport
If TheStart $\Leftrightarrow$ "" And TheEnd $\Leftrightarrow$ "" Then SQL3 = " Date	Exit Sub
>= #" & CDate(TheStart) & "#" & _	handler:

If Err.Number = 3376 Then Resume Next Err.Clear Else MsgBox Err.Description End If **End Sub** 

#### Private Sub Command2 Click()

Mode = 2Command1 Click Mode = 1**End Sub** 

#### Private Sub Form Load()

'Data1.DatabaseName = ThePath Option2 Click Mode = 1'If Mode = 2 Then Set rst1 = dbs.OpenRecordset("SELECT \* FROM JournalType") Label4.Caption = "Journal Type" While rst1.EOF = FalseCombo1.AddItem rst1!Code + " - " + rst1!Desc rst1.MoveNext Wend

DTP1.Value = Now DTP2. Value = Now **End Sub** 

#### Private Sub Option1 Click()

Combo2.Clear Set rst1 = dbs.OpenRecordset("SELECT DISTINCT JName FROM glJournal") While rst1.EOF = False If Not IsNull(rst1!JName) Then Combo2.AddItem rst1!JName rst1.MoveNext Wend **End Sub** 

#### Private Sub Option2 Click()

Combo2.Clear Set rst1 = dbs.OpenRecordset("SELECT DISTINCT JName FROM JnlHist") While rst1.EOF = FalseIf Not IsNull(rst1!JName) Then Combo2.AddItem rst1!JName rst1.MoveNext Wend **End Sub** 

#### Private Sub Option3 Click()

Combo2.Clear

Set rst1 = dbs.OpenRecordset("SELECT DISTINCT JName FROM glJournal ") While rst1.EOF = False Combo2.AddItem rst1!JName rst1.MoveNext Wend Set rst1 = dbs.OpenRecordset("SELECT DISTINCT JName FROM JnlHist") While rst1.EOF = False If Not IsNull(rst1!JName) Then Combo2.AddItem rst1!JName rst1.MoveNext Wend **End Sub** 

### Dim TheType, Title As String Private Sub CmdClose Click()

Unload Me **End Sub** 

Private Sub Command1 Click() On Error GoTo handler Dim ram As Recordset The Type = 0If Combo1 <> "" Then TheLen = InStr(Combo1, "-") If TheLen <> 0 Then TheType = Trim(Mid\$(Combo1, 1, TheLen - 1)) End If

Select Case t

Case Is = 1GetBalShe Case Is = 2GetIStat Case Is = 3GetTBal Case Is = 4GetIncome **End Select** 

CR1.Formulas(0) = "TheTitle=" & Title & "" CR1.Formulas(1) = "Typ=" & Combo1 & "" CR1.Formulas(2) = "User=" & CoyName & ""

CR1.Destination = crptToWindow If Mode = 2 Then CR1.Destination = crptToPrinter CR1.WindowState = crptMaximized CR1.PrintReport

**Exit Sub** handler: MsgBox Err.Description, vbCritical

#### **End Sub**

```
Private Sub Form Load()
                                                         Loop
Text1 = Year(Now)
Text2 = Month(Now)
Mode = 1
  Set rst1 = dbs.OpenRecordset("SELECT * FROM
                                                         Text1
AcctLevel")
While rst1.EOF = False
  Combo1.AddItem Str(rst1!Code) + " - " + rst1!Desc
                                                         Exit Sub
                                                         handler:
  rst1.MoveNext
Wend
Combo1.ListIndex = (Combo1.ListCount) - 1
End Sub
                                                           Err.Clear
                                                         Else
Public Sub GetTBal()
                                                         End If
On Error GoTo handler
dbs.Execute ("DROP TABLE Trash")
dbs.Execute ("DROP TABLE TrashBin")
                                                         End Sub
Set OverAll = dbs.OpenRecordset("SELECT * FROM
glChart WHERE " &
                   gllevel=" & TheType & """)
dbs.Execute ("SELECT * INTO Trash FROM gLedger" &
       " WHERE glYear=" & Text1)
                                                         WHERE " & _
dbs.Execute "CREATE TABLE TrashBin (CurBal
CURRENCY," &
       "PBal CURRENCY, glCode TEXT, glYear
SINGLE, glName TEXT)"
Set Rat = dbs.OpenRecordset("SELECT * FROM
TrashBin")
Do While Not OverAll.EOF
Set ram = dbs.OpenRecordset("SELECT * FROM gLedger
WHERE glCode="" & OverAll.glCode & """ & _
                " AND glyear=" & Text1)
  SOL1 = 0
  If ram.EOF = False Then
  For i = 1 To Text2 - 1
   If Not IsNull(ram.Fields(i).Value) Then SQL1 = SQL1
+ ram.Fields(i).Value
  Next i
  End If
    Rat.AddNew
    Rat!glCode = OverAll!glCode
    Rat!glName = OverAll!glName
                                                         SQL1 = 0
    Rat!glYear = Text1
                                                         GetIt = 0
    Rat!CurBal = SQL1
    If ram.EOF = False Then
```

Rat!PBal = ram.Fields(Val(Text2)).Value

Else

```
Rat!PBal = 0
    End If
   Rat.Update
OverAll.MoveNext
Title = "TRIAL BALANCE AS AT PERIOD " + Text2 + ", " +
CR1.ReportFileName = ThePath1 + "tbal.rpt"
If Err. Number = 3376 Then
  Resume Next
  MsgBox Err.Description
Public Sub GetIStat()
On Error GoTo handler
dbs.Execute ("DROP TABLE Trash")
dbs.Execute ("DROP TABLE TrashBin")
Set OverAll = dbs.OpenRecordset("SELECT * FROM glChart
                  gllevel=" & TheType & " AND " &
                  " (glType Like '3*' OR glType Like '4*')") '3
for income/revenue and 4 for Expenses
dbs.Execute ("SELECT * INTO Trash FROM gLedger" &
       " WHERE glYear=" & Text1)
dbs.Execute "CREATE TABLE TrashBin (CurBal CURRENCY,"
       "YTODBudg CURRENCY, PBal CURRENCY, CBudg
CURRENCY," &
       "AcctType SINGLE, glCode TEXT, glYear
SINGLE, glName TEXT)"
Set Rat = dbs.OpenRecordset("SELECT * FROM TrashBin")
Do While Not OverAll.EOF
Set ram = dbs.OpenRecordset("SELECT * FROM gLedger
WHERE glCode="" & OverAll.glCode & """ &
                " AND glyear=" & Text1)
If ram.EOF = True Then GoTo ThisDay
 For i = 1 To Text2 - 1
   If Not IsNull(ram.Fields(i).Value) Then SQL1 = SQL1 +
ram.Fields(i).Value
```

Next 1	glievel— & The Type & AND &_
GetIt = ram.Fields(Val(Text2)).Value	" (glType Like '1*' OR glType Like '2*' OR
ThisDay:	glType Like '3*' OR glType Like '4*')") '1 for Asset, 2 for
Rat.AddNew	Liability, 3 for Income/revenue and 4 for Expenses
Rat!glCode = OverAll!glCode	
Rat!glYear = Text1	dbs.Execute ("SELECT * INTO Trash FROM gLedger" & _
Rat!CurBal = SQL1	" WHERE glYear=" & Text1)
Rat!PBal = GetIt	
Rat!AcctType = OverAll!glType	dbs.Execute "CREATE TABLE TrashBin (CurBal CURRENCY
Rat!glName = OverAll!glName	&_
Set Dog = dbs.OpenRecordset("SELECT * FROM	"AcctType SINGLE, glCode TEXT, glYear
glBudget WHERE glCode = " & OverAll!glCode & "")	SINGLE,glName TEXT)"
SQL1 = 0	
IDontKnowAgain = 0	Set Rat = dbs.OpenRecordset("SELECT * FROM TrashBin")
Do While Not Dog.EOF	Sum = 0
For i = 1 To Text2 - 1	
If Not IsNull(Dog.Fields(i).Value) Then SQL1 =	Do While Not OverAll.EOF
SQL1 + Dog.Fields(i). Value	Set ram = dbs.OpenRecordset("SELECT * FROM gLedger
Next i	WHERE glCode="" & OverAll.glCode & """ &_
IDontKnowAgain =	"AND glyear=" & Text1)
	AND giyeai — & Texti)
IIf(IsNull(Dog.Fields(Val(Text2)).Value), 0, Dog.Fields(Val(Text2)).Value)	SOI 1 = 0
	SQL1 = 0   GetIt = 0
Dog.MoveNext	Getit = 0
Loop	M. FOR THE C. T. TILL
Rat!YTODBudg = SQL1	If ram.EOF = True Then GoTo ThisDay
Rat!Cbudg = IDontKnowAgain	For $i = 1$ To Text2 - 1
Rat.Update	If Not IsNull(ram.Fields(i).Value) Then SQL1 = SQL1 +
'Another:	ram.Fields(i).Value
OverAll.MoveNext	Next i
Loop	GetIt = ram.Fields(Val(Text2)).Value
Rat.Close	SQL1 = SQL1 + GetIt + IIf(IsNull(ram.Fields(13).Value), 0,
	IsNull(ram.Fields(13).Value))
Title = "INCOME STATEMENT: BUDGET VARIANCE	ThisDay:
FOR PERIOD " + Text2 + ", " + Text1	Rat.AddNew
	Rat!glCode = OverAll!glCode
CR1.ReportFileName = ThePath1 + "IStat.rpt"	Rat!glYear = Text1
The second secon	Rat!CurBal = SQL1
Exit Sub	'Sum = Sum + IIf(overall!gltype Like "1*", SQL1,
handler:	IIf(overall!gltype Like "2*", -1 * SQL1, IIf(overall!gltype Like
If Err.Number = 3376 Then	"2*", -1 * SQL1, 0)))
Resume Next	2 , 1 5(21, 0)))
Err.Clear	'Rat!PBal = GetIt
Else	Rat! AcctType = OverAll!glType
MsgBox Err.Description	Rat!glName = OverAll!glName
End If	Rat.Update
Elia II	Ratiopulate
End Sub	'Another:
End Sub	OverAll.MoveNext
Dublic Sub CatDalSha10	A SAME AND
Public Sub GetBalShe1()	Loop
On Error GoTo handler	Rat.Close
des Essessite (UDDOD TADI E Total III)	Title = "BALANCE SHEET AS AT PERIOD " + Text2 + ", " +
dbs.Execute ("DROP TABLE Trash")	Text1
dbs.Execute ("DROP TABLE TrashBin")	CD1 D CD1 N CD D 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
C+OAll - II-O PI - (IICE) F-CT + FD C3 (	CR1.ReportFileName = ThePath1 + "balShe.rpt"
Set OverAll = dbs.OpenRecordset("SELECT * FROM	T to a t
glChart WHERE " & _	Exit Sub

handler:

If Err. Number = 3376 Then

Resume Next

Err.Clear

Else

MsgBox Err.Description

End If

**End Sub** 

#### Public Sub GetBalShe()

On Error GoTo handler

'NOTE original Balance Sheet Computation is in procedure below i.e GetBalShe1

dbs.Execute ("DROP TABLE Trash")
dbs.Execute ("DROP TABLE TrashBin")

Set OverAll = dbs.OpenRecordset("SELECT \* FROM glChart WHERE " &

" gllevel=" & TheType & " AND " & \_ " (glType Like '1\*' OR glType Like '2\*'

OR glType Like '5\*')") '1 for Asset, 2 for Liability, 5 for Capital & Reserves

dbs.Execute ("SELECT \* INTO Trash FROM gLedger" &

" WHERE glYear=" & Text1)

dbs.Execute "CREATE TABLE TrashBin (CurBal CURRENCY," &

"AcctType SINGLE, glCode TEXT, glYear SINGLE,glName TEXT, Heading SINGLE)"

Set Rat = dbs.OpenRecordset("SELECT \* FROM TrashBin")
Sum = 0

Do While Not OverAll.EOF

SQL1 = 0GetIt = 0

If ram.EOF = True Then GoTo ThisDay
For i = 1 To Text2 - 1

If Not IsNull(ram.Fields(i).Value) Then SQL1 = SQL1 + ram.Fields(i).Value

Next i

GetIt = ram.Fields(Val(Text2)).Value

SQL1 = SQL1 + GetIt + IIf(IsNull(ram.Fields(13).Value), 0, IsNull(ram.Fields(13).Value))
ThisDay:

If SQL1 = 0 Then GoTo Another 'don't put Zero entries

Rat.AddNew

Rat!glCode = OverAll!glCode

Rat!glYear = Text1

Rat!CurBal = SQL1

'Sum = Sum + IIf(overall!gltype Like "1\*", SQL1, IIf(overall!gltype Like "2\*", -1 \* SQL1, IIf(overall!gltype Like "2\*", -1 \* SQL1, 0)))

'Rat!PBal = GetIt Rat!AcctType = OverAll!glType Rat!glName = OverAll!glName

'Defining the Arrangement

If OverAll!glType = 1 Then Rat!Heading = 1 'For Fixed Asset If OverAll!glType = 2 And SQL1 >= 0 Then Rat!Heading = 2 'For Current Asset

If OverAll!glType = 2 And SQL1 < 0 Then Rat!Heading = 3 'For Current Liabilities

If OverAll!glType = 5 Then Rat!Heading = 4 'For Capital & Reserves

Rat.Update

Another:

OverAll.MoveNext

Loop

Rat.Close

Title = "BALANCE SHEET AS AT " & Format(Now, "dd-mmm-yyyy")

CR1.ReportFileName = ThePath1 + "balShe1.rpt"

**Exit Sub** 

handler:

If Err. Number = 3376 Then

Resume Next

Err.Clear

Else

MsgBox Err.Description

End If

**End Sub** 

Public Sub GetIncome()

On Error GoTo handler

dbs.Execute ("DROP TABLE Trash")
dbs.Execute ("DROP TABLE TrashBin")

Set OverAll = dbs.OpenRecordset("SELECT \* FROM glChart WHERE " & \_

"gllevel=" & TheType & " AND " & \_
" (glType Like '3\*' OR glType Like

'4\*')") '3 for Income/Revenue, 4 for Expenditure

dbs.Execute ("SELECT \* INTO Trash FROM gLedger" &

" WHERE glYear=" & Text1)

dbs.Execute "CREATE TABLE TrashBin (CurBal CURRENCY," &\_\_\_

"AcctType SINGLE, glCode TEXT, glYear SINGLE,glName TEXT,Heading SINGLE)"

Set Rat = dbs.OpenRecordset("SELECT \* FROM TrashBin")
Sum = 0

Do While Not OverAll.EOF
Set ram = dbs.OpenRecordset("SELECT \* FROM gLedger
WHERE glCode="" & OverAll.glCode & """ & \_
" AND glyear=" & Text1)

SQL1 = 0GetIt = 0

If ram.EOF = True Then GoTo ThisDay
For i = 1 To Text2 - 1
If Not IsNull(ram.Fields(i).Value) Then SQL1 = SQL1
+ ram.Fields(i).Value
Next i
GetIt = ram.Fields(Val(Text2)).Value
SQL1 = SQL1 + GetIt +
IIf(IsNull(ram.Fields(13).Value), 0,
IsNull(ram.Fields(13).Value))
ThisDay:

If SQL1 = 0 Then GoTo Another 'don't put Zero entries

Rat.AddNew
Rat!glCode = OverAll!glCode
Rat!glYear = Text1
Rat!CurBal = SQL1

'Sum = Sum + IIf(overall!gltype Like "1\*", SQL1, IIf(overall!gltype Like "2\*", -1 \* SQL1, IIf(overall!gltype Like "2\*", -1 \* SQL1, 0)))

'Rat!PBal = GetIt Rat!AcctType = OverAll!glType Rat!glName = OverAll!glName 'Defining the Arrangement
If OverAll!glType = 3 Then Rat!Heading = 1 'For Income
If OverAll!glType = 4 Then Rat!Heading = 2 'For

Rat.Update

Expenditure

Another: OverAll.MoveNext Loop

Rat.Close

Title = "PROFIT & LOST ACCOUNT AS AT " & Format(Now, "dd-mmm-yyyy")

CR1.ReportFileName = ThePath1 + "Inc.rpt"

Exit Sub handler: If Err.Number = 3376 Then Resume Next Err.Clear Else MsgBox Err.Description End If

**End Sub** 

Dim rt1 As Recordset
Private Sub Combo1 LostFocus()

If Combo1  $\Leftrightarrow$  "" Then
TheLen = InStr(Combo1, "-")
If TheLen  $\Leftrightarrow$  0 Then Combo1 =
Trim(Mid\$(Combo1, 1, TheLen - 1))
End If
End Sub

Private Sub Command1 Click()

On Error GoTo handler
Dim TheBal As Double
If UCase(Combo1) = "ALL" Then

rst2!glp08 = rst2!glp08 + TheBal

Case 9

rst2!glp09 = rst2!glp09 + TheBal

Case 10

rst2!glp10 = rst2!glp10 + TheBal

Case 11

rst2!glp11 = rst2!glp11 + TheBal

Case 12

rst2!glp12 = rst2!glp12 + TheBal

**End Select** 

rst2.Update

End If

rst.Edit

rst.Posted = True

rst.Update

Call CtrlAcct(rst!AcctCode, Text2, Text1,

TheBal)

rst.MoveNext

Loop

PB1.Visible = False

If UCase(Combo1) = "ALL" Then

TheQuery = "FROM GLJournal WHERE" &

" AcctYear=" & Text1 & " AND

Aperiod=" & Text2

Else

TheQuery = "FROM GLJournal WHERE

JName="" & Combo1 & """ &

" AND AcctYear=" & Text1 & "

AND Aperiod=" & Text2

End If

dbs.Execute ("INSERT INTO JnlHist SELECT \*

" & TheQuery)

dbs.Execute ("DELETE \* " & TheQuery)

MsgBox "Posting Completed...", vbInformation

Combo1 = ""

Combo 1. Clear

Call Form Load

Exit Sub

handler:

MsgBox Err.Description

**End Sub** 

#### Private Sub Command2 Click()

Unload Me

**End Sub** 

#### Private Sub Form Load()

Set rt1 = dbs.OpenRecordset("SELECT DISTINCT

JName FROM GLJournal")

Combo1.AddItem "ALL"

While rt1.EOF = False

Combo1.AddItem rt1!JName

rt1.MoveNext

Wend

Text1 = Year(Now)

Text2 = Month(Now)

Combol.ListIndex = 0

**End Sub** 

## Public Sub CtrlAcct(AcctNum, Period, ActYear,

Set TestForCtrlAcct = dbs.OpenRecordset("SELECT

glControl FROM glChart WHERE glCode=" &

AcctNum & """)

'Dim CtrlAcct As Text

If TestForCtrlAcct.EOF = False Then

CtrlAcct1 = TestForCtrlAcct!glControl

MsgBox "Control Account is not found for Account

" + AcctNum, vbCritical

Exit Sub

End If

If IsNull(TestForCtrlAcct!glControl) = True Then

MsgBox "Control Account is not found for Account

" + AcctNum, vbCritical

Exit Sub

End If

```
CtrlAcct1 = AcctNum Then Exit Sub
rst2 = dbs.OpenRecordset("SELECT * FROM
edger WHERE glCode="" & CtrlAcct1 & """ &
              " AND glYear=" & Text1)
st2.EOF = True Then
2.AddNew
2!glCode = CtrlAcct1
2!glYear = ActYear
ect Case Period
se 1
2!glp01 = Amt
se 2
2!glp02 = Amt
se 3
2!glp03 = Amt
se 4
2!glp04 = Amt
se 5
2!glp05 = Amt
se 6
2!glp06 = Amt
se 7
2!glp07 = Amt
e 8
'glp08 = Amt
 glp09 = Amt
  10
  lp10 = Amt
   511 = Amt
    2 = Amt
     t
            st!AcctCode
             'AcctYear
```

91 + Amt

Case 2 rst2!glp02 = rst2!glp02 + AmtCase 3 rst2!glp03 = rst2!glp03 + AmtCase 4 rst2!glp04 = rst2!glp04 + AmtCase 5 rst2!glp05 = rst2!glp05 + AmtCase 6 rst2!glp06 = rst2!glp06 + AmtCase 7 rst2!glp07 = rst2!glp07 + AmtCase 8 rst2!glp08 = rst2!glp08 + AmtCase 9 rst2!glp09 = rst2!glp09 + AmtCase 10 rst2!glp10 = rst2!glp10 + AmtCase 11 rst2!glp11 = rst2!glp11 + AmtCase 12 rst2!glp12 = rst2!glp12 + AmtEnd Select rst2.Update End If **End Sub** Dim TheMode As Single Dim InitialIndex As Long Private Sub Combo1 Change() If Combo1 = "" Then DBGrid1.Enabled = False Else DBGrid1.Enabled = True End If End Sub Private Sub Combo1\_Click() Combol Change End Sub Private Sub Combo1\_LostFocus()

Sub

Command3.Enabled = False Command1.Enabled = True DTP1.Value = rst!Date

dbs.Execute ("DELETE \* FROM JnlTrash")
dbs.Execute ("INSERT INTO JnlTrash SELECT
\* FROM Gljournal WHERE " & \_

"JName = " & Temp & """)

DBGrid1.Enabled = True

Data1.Refresh

DBGrid1.ReBind

DBGrid1.Refresh

DBGrid1\_AfterUpdate

Else

MsgBox "Record not found...", vbCritical

End If

End Sub

Private Sub DBGrid1\_AfterColEdit(ByVal

ColIndex As Integer)

If ColIndex = 3 Then

Set cunle = dbs.OpenRecordset("SELECT glCode

FROM glchart WHERE " &

" glcode="" & DBGrid1.Text &

""" & \_

" AND gllevel="" & ALevel &

.....

If cunle.EOF = True Then

MsgBox "Account Code is Either General or

Non-existent", vbCritical

DBGrid1.Text = ""

End If

End If

DBGrid1.Col = 0

DBGrid1.Text = TheIndex

**End Sub** 

Private Sub DBGrid1 AfterUpdate()

dbs.Execute ("UPDATE JnlTrash SET

CR=NULL WHERE CR=0")

dbs.Execute ("UPDATE JnlTrash SET

DR=NULL WHERE DR=0")

Set rst1 = dbs.OpenRecordset("SELECT

SUM(Dr) AS TheDR, SUM(CR) AS TheCR

FROM JnlTrash")

If IsNull(rst1!TheCR) = True Then

TheCR = 0

Else

TheCR = rst1!TheCR

End If

If IsNull(rst1!TheDR) = True Then

The DR = 0

Else

TheDR = rst1!TheDR

End If

Text4 = TheDR - TheCR

'TheIndex = TheIndex + 1

Text5 = TheIndex

End Sub

Private Sub DBGrid1\_BeforeColUpdate(ByVal

ColIndex As Integer, OldValue As Variant, Cancel As

Integer)

If ColIndex = 6 And DBGrid1.Text = "" Then

DBGrid1.Text = 0

End Sub

Private Sub DBGrid1\_BeforeUpdate(Cancel As

Integer)

On Error GoTo handler

If Text1 <> "" And Text2 <> "" And Combo1 <> ""

The

Data1.Recordset!AcctYear = Text1

Data1.Recordset!APeriod = Text2

Data1.Recordset!User = UserName

Data1.Recordset!JName = Text3

Data1.Recordset!AcctJnlType = Combo1

Data1.Recordset!Date = Format(DTP1.Value, "dd-mm-

yy")

The Index = The Index + 1

Else

MsgBox "Incomplete Data ...", vbInformation

Data1.Recordset.Cancel

Data1.Refresh

End If

Exit Sub

handler:

MsgBox Err.Description, vbCritical

End Sub

#### Private Sub DBGrid1\_ButtonClick(ByVal

ColIndex As Integer)

Dim nRow As Byte

'If ColIndex = 0 Then

nRow = DBGrid1.Row

If DBGrid1.Col = 0 Then

If ColIndex = 3 Then

'Combo2. Width = DBGrid1. Columns(3). Width

'Combo1.Height = DB1.RowHeight

Combo2.Left = DBGrid1.Columns(3).Left +

DBGrid1.Left

Combo2.Top = DBGrid1.RowTop(nRow) +

DBGrid1.Top

Combo2. Visible = True

Combo2.SetFocus

SendKeys "{F4}"

End If

DBGrid1.Col = 0

DBGrid1.Text = TheIndex

**End Sub** 

### Private Sub DBGrid1\_Change()

DBGrid1 AfterUpdate

End Sub

## Private Sub DBGrid1\_Error(ByVal DataError As Integer, Response As Integer)

If Err. Number = 16389 Then

Resume Next

Err.Clear

Else

MsgBox Err.Description

End If

**End Sub** 

#### Private Sub DBGrid1 GotFocus()

If Text1 = "" Or Text2 = "" Or Text3 = "" Or

Combo1 = "" Then

DBGrid1.Enabled = False

Else

DBGrid1.Enabled = True

End If

End Sub

'rivate Sub Form Activate()

DTP1.Value = Now

**End Sub** 

Private Sub Form Load()

The Mode = 0

DTP1.Value = Now

Data1.DatabaseName = ThePath

dbs.Execute ("Delete \* from JnlTrash")

Set rst1 = dbs.OpenRecordset("SELECT \* FROM

glchart WHERE gllevel=" & ALevel & """)

While rst1.EOF = False

Combo2.AddItem rst1!glCode + " - " + rst1!glName

rst1.MoveNext

Wend

Set rst1 = dbs.OpenRecordset("SELECT \* FROM

JournalType")

While rst1.EOF = False

Combo1.AddItem rst1!Code + " - " + rst1!Desc

rst1.MoveNext

Wend

Text1 = Year(Now)

Text2 = Month(Now)

End Sub

Private Sub Text1 LostFocus()

If Text1 = "" Then

MsgBox "The Account Year must be entered",

vbInformation

Text1.SetFocus

End If

End Sub

Private Sub Text2 LostFocus()

If Text2 = "" Then

MsgBox "The Account Period must be entered",

vbInformation

Text2.SetFocus

End If

End Sub

Private Sub Text4 Change()

If Text4  $\Leftrightarrow$  0 Then

Command1.Enabled = False

mmand3.Enabled = False mmand3.Enabled = True d If d Sub

## blic Function Ck4Existence(Vnum As

ring) As Boolean

4Existence = False

t rst = dbs.OpenRecordset("SELECT JName

OM Gljournal WHERE " & \_

"JName = " & Vnum & """)

st.EOF = False Then

MsgBox "Voucher Number already exist",

Critical

Ck4Existence = True

**Exit Function** 

d If

t rst = dbs.OpenRecordset("SELECT JName OM JnlHist WHERE " & \_ "JName = "" & Vnum & """)

rst.EOF = False Then

MsgBox "Voucher Number already exist and

sted ", vbCritical

Ck4Existence = True

**Exit Function** 

d If

d Function

```
If CtrlAcct1 = AcctNum Then Exit Sub
Set rst2 = dbs.OpenRecordset("SELECT * FROM
gLedger WHERE glCode="" & CtrlAcct1 & """ &
                " AND glYear=" & Text1)
If rst2.EOF = True Then
rst2.AddNew
rst2!glCode = CtrlAcct1
rst2!glYear = ActYear
Select Case Period
Case 1
rst2!glp01 = Amt
Case 2
rst2!glp02 = Amt
Case 3
rst2!glp03 = Amt
Case 4
rst2!glp04 = Amt
Case 5
rst2!glp05 = Amt
Case 6
rst2!glp06 = Amt
Case 7
rst2!glp07 = Amt
Case 8
rst2!glp08 = Amt
Case 9
 st2!glp09 = Amt
  se 10
    lglp10 = Amt
     11
      p11 = Amt
        2 = Amt
               st!AcctCode
                AcctYear
                   91 + Amt
```

```
Case 2
rst2!glp02 = rst2!glp02 + Amt
Case 3
rst2!glp03 = rst2!glp03 + Amt
Case 4
rst2!glp04 = rst2!glp04 + Amt
Case 5
rst2!glp05 = rst2!glp05 + Amt
Case 6
rst2!glp06 = rst2!glp06 + Amt
Case 7
rst2!glp07 = rst2!glp07 + Amt
Case 8
rst2!glp08 = rst2!glp08 + Amt
Case 9
rst2!glp09 = rst2!glp09 + Amt
Case 10
rst2!glp10 = rst2!glp10 + Amt
Case 11
rst2!glp11 = rst2!glp11 + Amt
Case 12
rst2!glp12 = rst2!glp12 + Amt
End Select
rst2.Update
End If
End Sub
Dim TheMode As Single
Dim InitialIndex As Long
Private Sub Combo1 Change()
If Combo1 = "" Then
  DBGrid1.Enabled = False
Else
  DBGrid1.Enabled = True
End If
End Sub
```

Private Sub Combo1 Click()

Private Sub Combol LostFocus()

Combol Change

End Sub

```
If Combo1 = "" Then
                                                  End Sub
MsgBox "The Journal Type must be entered",
vbInformation
                                                  Private Sub Combo2 LostFocus()
                                                  If Combo2 <> "" Then
Combo1.SetFocus
                                                    TheLen = InStr(Combo2, "-")
Exit Sub
                                                    If TheLen \Leftrightarrow 0 Then Combo2 =
End If
                                                  Trim(Mid$(Combo2, 1, TheLen - 1))
If Combo1 <> "" Then
                                                  End If
  TheLen = InStr(Combo1, "-")
                                                  Set cunle = dbs.OpenRecordset("SELECT glCode
  If TheLen \Leftrightarrow 0 Then Combo1 =
                                                  FROM glchart WHERE " &
Trim(Mid$(Combo1, 1, TheLen - 1))
                                                                   " glcode="" & Combo2 & """ &
                                                                   " AND gllevel=" & ALevel & """)
End If
                                                  If cunle.EOF = True Then
TheTab = "glJournal"
                                                    MsgBox "Account Code is Either General or Non-
TheQuery = "Select max(acctSerial) AS SN
                                                  existent", vbCritical
FROM "
                                                    Combo2 = ""
TheQuery2 = " WHERE " &
         "AcctYear=" & Text1 & " AND
                                                  End If
Aperiod=" & Text2 &
                                                  DBGrid1.Columns(3) = Trim(Combo2)
          " AND AcctJnlType=" &
                                                  Combo2. Visible = False
Trim(Combo1) & """
                                                  End Sub
Set rst = dbs.OpenRecordset(TheQuery + TheTab
+ TheQuery2)
                                                  Private Sub Command1 Click()
                                                  dbs.Execute ("DELETE * FROM GlJournal WHERE
                                                  JName = " & Trim(Text3) & " &
If Not IsNull(rst!SN) Then
                                                                 " AND AcctYear=" & Trim(Text1) & "
   t1 = rst!SN
                                                  AND Aperiod=" & Trim(Text2))
Else
   t1 = 0
                                                  dbs.Execute ("DELETE * FROM JnlTrash")
End If
                                                  DBGrid1.ReBind
 The Tab = "JnlHist"
                                                  End Sub
 Set rst = dbs.OpenRecordset(TheQuery + TheTab
                                                  Private Sub Command2 Click()
                                                  Unload Me
   TheQuery2)
  'Not IsNull(rst!SN) Then
                                                  End Sub
   t2 = rst!SN
                                                   Private Sub Command3 Click()
                                                   If Command3.Caption = "&New" Then
    2 = 0
                                                   Mode = 1
    1 If
                                                   Temp = ""
                                                   Temp = InputBox("Specify Voucher Number",
      >= t2 Then
                                                   "Voucher Number")
      eIndex = t1 + 1
                                                   If Temp = "" Then Exit Sub
       Index = t2 + 1
                                                   If Ck4Existence(Trim(Temp)) = True Then Exit Sub
```

InitialIndex = TheIndex

DBGrid1.Enabled = True dbs.Execute ("Delete \* from JnlTrash") Data1.Refresh Combo1 = "" Text3 = "" Command3.Caption = "&Save" Command 1. Enabled = False Command3.Enabled = False Combo1.Enabled = True 'Text3.Enabled = True Text3 = UCase(Trim(Temp))DBGrid1.Enabled = True Combo1.SetFocus Else

Command3.Caption = "&New" Command1.Enabled = True Combo 1. Enabled = FalseText3. Enabled = False DBGrid1.Enabled = False Data1.Refresh If The Mode = 1 Then dbs.Execute ("DELETE \* FROM Gljournal WHERE " & "JName = "" & Temp & """)

The Mode = 0End If

If Mode = 1 Then 'Re-number Entries

Set Rest = dbs.OpenRecordset("SELECT \*

FROM JnlTrash") N = InitialIndex

Do While Rest.EOF = False

Rest.Edit

Rest!AcctSerial = N

N = N + 1

Rest.Update

Rest.MoveNext

Loop 'End

Rest.Close

DBGrid1.Refresh

End If

DBGrid1.Refresh

dbs.Execute ("INSERT INTO GlJournal SELECT \* FROM JnlTrash") Command1.Enabled = True 'dbs.Execute ("UPDATE JournalType SET SerialNo=" & TheIndex - 1 & " WHERE Code=" & Combo1 & End If End Sub Private Sub CmdEdit Click() The Mode = 0Mode = 2Temp = InputBox("Specify Voucher No.", "Editing

existing Journal")

Set rst = dbs.OpenRecordset("SELECT \* FROM Gljournal WHERE " &

"JName = "" & Temp & """) Set Rest = dbs.OpenRecordset("SELECT MIN(AcctSerial) AS TheCount FROM Gljournal WHERE " &

"JName = "" & Temp & """)

InitialIndex = IIf(IsNull(Rest!TheCount), 1, Rest!TheCount)

N = InitialIndexDo While rst.EOF = Falserst.Edit rst!AcctSerial = N

N = N + 1rst.Update

rst.MoveNext

Loop 'End 'Rst.Close

'DBGrid1.Refresh

If rst.BOF = False Then rst.MoveFirst

If rst.EOF = False Then Text1 = rst!AcctYearText2 = rst!APeriod

Combol = rst!AcctJnlType

Combo1 LostFocus Text3 = rst!JName

TheMode = 1

Command3.Caption = "&Save"