APPLICATION OF COMPUTER IN AUDITING PROCEDURES

A CASE STUDY OF KUNLE LADEJOBI & CO. (CHARTERED ACCOUNTANTS)

BY

ARIT ISONG UKPONG
PGD/MCS/689/97/98

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

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

MARCH, 2000

APPROVAL PAGE

This Project work has been read and approved by the undersigned, as meeting the requirements of the Department of Mathematics/Computer Science, Federal University of Technology, Minna.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 HISTORY OF AUDITING

Audit according to the Oxford Advanced Learner's Dictionary is defined as an official examination of accounts to see that they are in order. In more technical terms, Audit can be defined to be the independent examination of financial statements of an organisation where such an examination is conducted with a view to expressing an opinion on whether those statement gives a true and fair view and comply with the relevant account procedures.

Auditing is one of the most important practices of accounting. It is required by the law that every organisation or institutions should get it financial statements audited by external auditors at the end of every financial year.

Auditing was introduced as a result of evolution of Joint Stock Company from the Sole Proprietor or a partnership type of Company. In the case of Sole Proprietor or business, the fund available was limited to that which the owner could provide, therefore, the capital at the disposal of the Company is always extremely Limited.

But on the other hand, Joint Stock Company can greatly widen the possibilities buyers, the individuals with the highest shares form the Board of Directors for the Company. But all the Shareholders cannot take part in the day-to –day management of the Company. Therefore, they always employ the services of people who manage the company on their behalf. Since the Company is a profit-oriented one, a report of the economic activities of the Company is very important to the Shareholders. After each financial year, such a report is presented before the Shareholders. The report is in the form of Financial Statement, showing the state of the Company's economy, either making profit or running at a loss. In either case, the Shareholders need to be sure that the financial Statement presented before them represents a fair and true view of the Company's financial stand.

Thus, they need some set of accounting personnel call the "AUDITORS" to carry out this duty of ascertain the correctness of the Company's Financial stand.

1.2 AIMS AND OBJECTIVES OF THE PROJECT

The aim of this project is to study the existing system of Auditing in an organisation. The main objective is to achieve an auditing system which performs the auditing through the electronic equipment (computer).

The primary aim of an audit is to:

a) To prevent and detect errors and fraud that might occur or contained in the Financial Statements.

b) To produce a report by the auditor of his opinion of the truth and fairness of the Financial Statements.

c) To enable auditors assist his clients with an accounting system, auditing and make suggestions to improve controls.

To achieve greater operating efficiencies within the clients organisation.

d) To prevent errors and fraud in all financial transactions.

1.3 METHODOLOGY

The methodology generally applied in this work include:-

a) Recalculation involves the recalculation of calculations previously performed by the client. They are either right or wrong.

b) Observation and Examination which involve physical inspection of tangible assets to provide compelling evidence of existence, condition and valuation.

c) Confirmation involves confirmation by direct correspondence with independent parties.

d) Verbal enquiry is a procedure that generally involves the collection of oral evidence from independent parties and client.

e) Examination and Documents – This involves a great deal of documentary evidence and examination of authoritative parties and by the client.

f) Scanning – This is the process the auditors exercise their general alertness to unusual items and events in documentation.

1.4 DEFINITION OF TERMS

AUDIT:

A Systematic examination of the activities and status of an entity based primarily on investigation and analysis of its systems, controls and records.

INTERNAL AUDIT:

This refers to an independent appraisal function established within an organisation to evaluate its activities as a source to the organisation.

EXTERNAL AUDIT

A periodic examination of books of account and records of an entity carried out by an independent third party (i.e. the auditor).

AUDITOR

An independent person who is appointed to investigate the organisation, its records and the financial statements prepared from them.

COMPUTER

A machine that follows instruction in order to process data, solve a specific problem or accomplish a particular task.

INTERNAL CONTROL

The Internal Control System consist of the policies and procedures established to provide reasonable assurance that specific organisation objectives will be achieved.

VOUCHERS

These are documents that contain records of items of expenditure or receipt on it.

TRIAL BALANCE

This is used to test the arithmetical accuracy of the ledger.

COMPLIANCE TEST

This is a test an auditor carries out in order to determine the effectiveness of Internal Control in Operation as a basis for the preparation of the accounts. The computerised auditing system adopts the compliance test in evaluating the effectiveness of the systems.

CHAPTER TWO

2.0 WHY AUDITING?

Auditing is not carried out in a vacuum. The Shareholders and users of financial statements look to the auditor report for assurance that the financial statement is reliable. The problem that has always existed when Managers report to the owners is that the owner might found it difficult to believe the Manager's report because of the following reasons:-

a) The report may fail to disclose relevant information.

b) The reports may contain fraud that may involve the use of deception to obtain an unjust or illegal financial advantage.

c) Their reports may contain errors that are committed intentionally.

d) The reports can be inadvertently misleading by containing omissions, improper disclosures.

2.1 AUDIT TRAIL

Audit Trailing seems to be one of the best means of checking data processing. It is a means designed to permit tracing any input record or process performed on a system back to its original source. It could be used in all the processes of auditing.

To make Audit Trail effective and efficient the storage of these details is automatic and invisible to the user on whom the information is being kept.

2.2 TYPES OF AUDITS

There are basically four main types of audit namely:-

MANAGEMENT AUDIT

That is, a management audit inquires into the effectiveness of management.

PRIVATE AUDITS

A private audit is conducted into an organisation's affairs or business outlets by independent auditors as requested.

STATUTORY AUDITS

These are audits carried because the law requires them. These include Building Societies Act, Company Act and others.

INTERNAL AUDITS

This one is conducted by an employer of a business into any aspect of its affairs.

2.3 AUDIT REPORT

An Auditor should report the result of his audit work.:

a) A signed worker report should be issued after the audit examination is completed

b) The report should be objective, clear, concise, constructive and timely.

c) Reports should present the purpose, scope and results of the audit and where appropriate report should contain an expression of the auditor's opinion.

d) The auditor should discuss conclusions and recommendations at appropriate levels of Management before issuing final written reports.

e) Reports should include recommendation for potential improvements and acknowledge satisfactory performance and corrective action.

2.4 TYPES OF AUDIT TESTING

Audit testing are generally classified into certain categories namely:

COMPLIANCE TEST

This seeks to provide audit evidence that internal control procedures are being applied as required. This is usually carried out by the organisation's employees who perform an Internal Audit function.

FINANCIAL STATEMENT AUDITS

This involves obtaining and evaluating evidence about an organisation statements for the purpose of expressing an opinion on whether they are presented in conformity with the established criteria.

OPERATIONAL AUDIT

This involves obtaining and evaluating evidence about an organisation's operating activities in relation to specified objectives.

SUBSTANTIVE TESTS

These tests seek to provide audit evidence as to the completeness, accuracy and validity of the information contained in the accounting records. This test seeks direct evidence of the correct treatment of a transaction, a balance, assets, a liability or any item in the accounts.

2.5 AUDITOR (IN PERSPECTIVE)

An Auditor is an independent person who is appointed to carryout a thorough investigation into an organisation records and the financial statements. The investigation of such records and financial accounts by such individual trained in the assessments of such records is of benefit to those who control and operate such organisations as well as to owners and shareholders.

2.6 TYPES OF AUDITOR

INDEPENDENT AUDITORS:

These are individual practitioners or members of public accounting firm who render such professional auditing services to their clients.

EXTERNAL AUDITORS

It is a legal obligation for an organisation or institution to engage the services of an External Auditor for the purpose of carrying out an audit assignment of the organisation to the end that an opinion may be expressed.

INTERNAL AUDITOR

These are individuals engaged in an organisation who is an employee and he/she is involved in an independent appraisal activity called internal auditing.

2.7 ROLE OF AN AUDITOR

The basic role of an auditor is to assist the Management to ensure both the survival and the positive development of the organisation. To perform this role effectively and efficiently, the auditor must:-

a) Have an understanding of the short and long term objectives of the organisation.

b) Be conversant with laid-down procedures in all the departments.

c) Make recommendation for corrective action or where possible take corrective actions.

Besides these roles, his attributes include:

a) Must be a person of impeccable character.

b) Must be an individual with high integrity.

c) Must be thoroughly trained and prove his competence before he can sign any audit report.

d) Must be objective and maintain independent mind..

2.8 PROBLEMS OF THE EXISTING SYSTEM

In view of the defects of the manual auditing system which include:

a) Less accuracy in manual system due to poor recording system.

b) Low speed processing in manual auditing system.

c) Poor repetitiveness in manual auditing system as financial statements such as Profit and loss account, balance sheets and Trial Balance are produced for clients Daily, weekly or bi-monthly.

d) Poor handling of large volume of data in terms of stationeries and cards which are Cumbersome and subject to lost or disappearance.

2.9 COMPARISON BETWEEN COMPUTERISED AND MANUAL AUDITING SYSTEM

The nature and volume of data involved i.e for small organisation where the number of data provided are small, the information required are usually not much. But if the size of the organisation increased in terms of data, material and human resources, the need for the use of computer is inevitable.

a) Accuracy: The need for accuracy in the computed results whether manual or electronic of any auditing system cannot be over emphasised. It should be noted that once data are correctly programmed, the computer can be relied upon for considerable accurate results.

b) Repetitiveness: As financial statement i.e. Profit and Loss Account and Balance Sheet are produced for clients or organisation daily, weekly and monthly, doing it manually can be unpleasant and tiresome.

c) The computer can however be relied upon to repeat a processing cycle as many times as required without the fear of tiredness.

d) Speed: Computer process data at a very fast speed. The larger computer actually process millions of instructions per second which of course is an incredible speed compared to a manual approach.

2.10 EFFECT OF COMPUTER PROCESSING

When computers are used to process accounting transactions it affect the organisational structure and it influence the procedures and techniques used to accomplish the broad objectives of Internal Controls. The following characteristics distinguished computer processing from manual processing.

POTENTIALS ERROR AND IRREGULARITIES

Less human involvement in handling transactions processed by computers can reduce the potential for observing errors and irregularities. Most errors or irregularities made in design often remain undetected for long period of time.

UNIFORM PROCESSING OF TRANSACTION

Computer processing uniformly subjects like transactions to the same processing instructions. Hence elimination of the occurrence of random errors, normally associated with manual processing and computerised processing.

TRANSACTION TRAIL

This is a chain of evidence provided through coding, crossing-references and documentation connecting account balances and other summary results with the original transactions and calculations.

Improve

POTENTIAL FOR INCREASE MANAGEMENT

Supervision: Computer systems offer Management a wide variety of tools that may be used to review and supervise the operations of the organisation. The availability of these additional controls may enhance the entire system of internal control on which auditors may place reliance.

2.11 USING COMPUTERS IN AUDIT WORK

Under a manual accounting system, every transaction is recorded in the book of accounts. Under these conditions, the auditor could trace every transaction from initiation to the end having a clear paper audit trail.

In electronic systems audits are carried out using two main approaches:

Audit "around" the computer

Audit "through" the computer

AUDIT "AROUND" THE COMPUTER

This has the obvious advantage of not requiring any knowledge of how to unravel a flowchart or a program listing. This approach owes much of its simplicity and familiarity to the auditor. Its major weakness lies in the failure to assess the processing system. Data input controls way be absent or inadequate while vital system controls against fraud may be missing. Furthermore, processing may be done in an inefficient and costly ways.

These are deficiencies in the system that the auditor should be able to spot. The around the computer approach may be suitable for audits made during the initial phases of a computer changeover and for some low-volume, uncomplicated systems.

AUDITING "THROUGH" THE COMPUTER

Following the complexity and diversification of computerised accounts, there was the need to review the computer controls to ascertain whether the computer system incorporates adequate internal controls: Whether the controls form part of the operational system during implementation, and whether they have not been invalidated by any subsequent amendments. Auditing through the computer, therefore, can be defined as accessing, processing, testing, analysing and reporting electronic data in their electronic state with the objective of ensuring that it conforms to specifications and is valid.

CHAPTER THREE

3.0 SYSTEMS ANALYSIS

3.1 INTRODUCTION

The purpose of an audit is to give the investors and readers of financial statements confidence that these statements are a reasonable representation of the truth of transactions that transpired and that these transactions entered into were of the nature and yielded the benefits as anticipated by the organisational objectives. Therefore, the auditor reports whether in his own opinion, the statements show a true and fair view of the state of affairs of the organisation concerned.

The systems analyst tries to examine what the current system is, what remedy to apply as to correct the situation. Also analysis the current procedure and designing the most efficient and economics systems or procedures that will better accomplish the given tasks within an organisation.

3.3 FEASIBILITY STUDY

Feasibility study which is also known as preliminary investigation is to determine whether or not the proposed project is desirable.

The objective of this study include providing answers to the following questions.

a) What is being done? I.e this is to critically examine the present system of audit and associated problems.

b) What is required and why? I.e this will address the system that is being proposed as alternative to the present system.

c) The cost and benefit of the proposed system and alternative approaches.

However, the investigation aspect at this point should answer these question concerning the project:

a. What is the objective of the Project?
b. What special difficulties are expected?
c. What is the problem generally?

Concerning the computer, the following questions should be answered:-

a. Is it feasible to do the work on the computer?
b. What staff problems will it give rise to?
c. Are other problems involved?
d. Is it worthwhile doing the work on the computer?

3.3 TESTING THE PROJECT FEASIBILITY

There are three main aspects of testing the project feasibility. These are:

a. Operational Feasibility

b. Technical Feasibility

c. Economical Feasibility

OPERATIONAL FEASIBILITY

This is concerned with the workability of the proposed system when developed and installed. In determining this, it is based on facts discovered during investigation stage.

TECHNICAL FEASIBILITY

This test clarifies if the proposed project can be carried out with current equipment, existing software, technology and available personnel. Indeed, there are some existing hardware/software and human ware on ground to enable the system take-off effectively.

ECONOMIC FEASIBILITY

The test of financial feasibility is undertaken to asses cost of implementing a proposed project vis-a-vis the benefit to be derived in implementing the project.

There is much desire to automate the organisation as indicated by the management. This is with the view to correct errors of the past and the desire to move forward in the area of information technology.

3.4 WHY COMPUTERISED AUDITING SYSTEM

There is the need for a computerized auditing system to be developed due to the following reasons:

a. High accuracy of computation. Once the right or correct data have been keyed, the computer will process the data according to the instruction and produce accurate results.

b. Computer processed data at a very fast speed.

c. Computerized auditing system can be relied upon for repetitiveness of processing cycle as many times as required without the fear of tiredness.

d. Computerised Auditing System do not take time where data for financial statements are required at irregular or unpredictable intervals.

e. Computerised auditing system is needed in handling a large volume of data processing.

f. High degree of accuracy and efficiency and timeliness.

g. Better Management Information System.

3.5 INTERNAL CONTROL

This refers to the whole control arrangements adopted within an organisation to check on and maintain the accuracy of business, safeguard the assets of the organisation against fraud and other irregularities, promote efficiency and encourage compliance with existing organisation's policies and procedures.

The general control procedure consists of several steps. The first is the establishment of standards. For control to be effective, there is the need for planners to set standards against which performance can be measured.

Secondly, it is important that there is timely and accurate performance information for control.

Comparison of information can be provided by computers to managers on an exception basis only when performance variations are outside certain specified limits. If performance is at variance with standard, there may be various reasons for this. In the case of unfavourable variance, the reason may be that the standard is unrealistic and replanning may be necessary.

For control purposes, it is possible for managers to gather, analyse, classify and summarize actual performance data promptly and accurately. It is possible for the computer to compare the actual performance date with the established standards and periodic reports showing the comparisons can be prepared. The computer can also be programmed to signal when predetermined decisions should be carried out.

Administrative controls include program documentation. It provides the basis for the evaluation and control of new and existing computer systems. It is a good precaution to allow a knowledgeable auditor to participate in the design phase so that proper controls may be built in and to ensure that audit trail does not vanish. A detailed explanation of the purpose of each program with copies of all related documents must be prepared and kept in program file.

Computer – operation controls can be maintained by the creation of data security system, use of appropriate manuals. Data controls are concerned with the accuracy and the authenticity of data flowing through a processing system.

Controls can be established for data by the use of pre-numbered form, the use of control totals and by conducting pre-audit of source documents and by using program instructions to check the authenticity of data as they enter the processing operation.

Processing controls are installed to check on the accuracy of arithmetic calculations and determine whether data are lost or not processed.

Output controls are used to check the accuracy of the processed information. The methods of control include the use of control totals, the review of interested parties, the use of sampling.

The control objective within an on-line computer system can be categorised into access controls, data transfer controls, back-up and recovery from system failure. Thus, control for such systems must be concerned with controlling data at both the remote location and the central location in addition to the accuracy and propriety of transmission between locations.

3.6 SYSTEM CONVERSION/CHANGEOVER

To effect this system, the old system in operation currently out to be changed to the new system. The process of shifting from the old to the new system is known as conversion. The most common conversion methods or change over methods are: Direct, Parallel running, Pilot running.

The method proposed for the new system is the parallel conversion. This is an approach whereby both the new and the old system are running concurrently.

The merits of parallel conversion are as follows:

a. Systematic Switching Over
b. Better understanding of the new system
c. Protection against unforeseen circumstances.

3.7 COST AND BENEFITS ANALYSIS

1.	OPERATING COST	N .K
	Supplies (Stationery, Diskettes) for 1 year	75,000.00
	Equipment Maintenance (1 year)	50,000.00
	Program Maintenance	35,000.00
	Four (4) operators at N3,000 per month for 1 year	144,000.00
	Utilities	20,000.00
2.	Air Conditioners (2 HP)	90,000.00
	Miscellaneous Expenses	25,000.00
		N439,000.00
3.	DEVELOPMENT COST	
	Systems Analysis and Design for 4 weeks at N10,00	40,000.00
	Software Development	15,000.00
	Personnel Computers (4)	320,000.00
	2 Printers (Laserjet 6L)	90,000.00
	Stabilizer/UPS (1.25 KVA)	50,000.00
	Training	60,000.00
	Miscellaneous	20,000.00
		N595,000.00
	Grand Total =	N1,034,000.00

BENEFITS OF THE PROPOSED SYSTEM

The benefits to be derived is enormous and such benefits include:-

a. It will save time and cost

b. Fast and quick means of data processing and information

c. Reduction in storage space for files and file cabinet.

d. Better access, privacy, confidentiality continuity and audibility

e. A more effective and result oriented audit department with enhanced data integrity.

f. Better management information system.

CHAPTER FOUR

4.0 PROGRAM/SOFTWARE DEVELOPMENT/ IMPLEMENTATION

4.1 INTRODUCTION

Programming is the preparation of a detailed sequence of operating instruction for particular problem to be run on a computer. It involves identification of the problem into a program flow chart, testing and running the program.

4.2 FEATURES OF PROGRAMMING CHOSEN

To meet the needs for the computer application, the dbase iv have been chosen. It is effective because it facilitates easy manipulation of files and records. It is also easy to process the files, either for insertion, deletion, searching or any other process.

Other important advantages of using the dbase iv are as follows:

a. Inconsistency can be avoided
b. Security restriction can be applied
c. Integrity can be maintained
d. The data can be shared
e. Speed of operation
f. Drudgery is removed

4.3 THE FILE CONTROL

In auditing an Electronic Data Processing System, it will be formed that much reliance is normally placed within the system, upon standard forms and documentation. However strict adherence is placed on procedures laid down. It is important that the auditor should ensure that an audit control file be built upon as part of the working papers.

However, the following should be included in the audit control file:-

a. Copies of all forms of source documents, details of checking carried out to ensure their accuracy should be part of the working papers.

b. Full description of how the source documents are to be converted into input media, the checking control procedures.

c. The auditor's own comments on the effectiveness of the control.

4.4 INPUT SPECIFICATION

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

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

4.5 OUTPUT SPECIFICATION

These are basically vouchers and other related documents in the organisation. This include: Analysed Bank Schedules, Periodic Reports produced on quarterly or yearly basis and other relevant vouchers.

4.6 REVIEW AND MAINTENANCE

The system will need to be reviewed and maintained periodically due to the following reasons:

a. To deal with unforeseen problems arising from operation.

b. To confirm that planned objectives are being met and to take corrective action if they are not.

c. Adaptability of the software to the environment must also be ensured. Users must also be able to cope with the new system.

While maintenance of the software will normally be the responsibility of the programmer who ensures that the package is always in good working order or condition. Necessary precautions should be taken to uphold the integrity of the program.

4.7 TRAINING

With the new System in place, there must be an employee who stands as the operator or data entry personnel. This person and the Chief Auditor have to be given some induction course on the usage of the system, though they were involved in the design of the system.

The training include familiarizing and getting the user acquainted with the operation and fundamental steps in using the new system. The training is better done in house, since the organisation can effectively handle such training program. It is very important that such a training be coupled with the documentation of the system programs as rightly provided.

4.8 HARDWARE REQUIREMENTS

For the purpose of this project the hardware required is the IBM 8100 Mini-Computer because of its Multi-tasking use such as its ability to perform many tasks simultaneously, makes it more preferable to the organization. Besides, it has greater memory

storage capacity, greater processing speed and more versatile and flexible. Other items include Floppy Disk Drive of 3.5 or 5.25, Standard Keyboard, Monitor, Laser Jet (GL Model) or Dot Matrix and a Stabilizer or ups.

4.9 SOFTWARE REQUIREMENTS

System Software Ms-Dos 6.0 Version

Application Software - Dbase IV

4.10 SECURITY MEASURE

Computer Systems Security encompasses the Security of all the information assets that constitute the system. It should be noted that if hardware fails then the information system has failed. Therefore, adequate measures should be taken regarding both the Software and hardware.

Security involves physical safeguards, procedural control, recovery plan and insurance. It also involves the need to protect the corporate information database, its integrity and accessibility.

The problem of data insecurity may arise from one or a combination of many factors which include:

a. Lack of formal logging – in mechanism

b. General laxity on the part of users

c. Inadequate protection of the system software.

d. Uncorrupted from of information transfer which might lead to write-tapping.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY AND CONCLUSION

Auditing is a process of examining information with the intent of establishing its reliability. The process is usually performed by someone other than the one who prepared such information.

The purpose of audit is to examine Internal Controls and ascertain the accuracy of business data, safeguard the organisation assets against fraud, embezzlement and theft. Internal Controls must also promote operating efficiency, encourage compliance with the existing government policies and procedures.

There are control problems in electronic systems and the auditor should have the requisite knowledge of how to use computers and carry out his audit "through" the computer as opposed to the system of auditing "around" the computer.

Since many of these accounts are already in electronic state, the auditor must be knowledgeable to know how these data have been stored, the processing details and relevant controls that

should be installed in the system.

Indeed, every large organization due to the complexity of their operations, there is need for control of performance and accountability .

The main purpose of auditing is to ensure that the organisation achieves its set objectives at a minimum cost and in accordance with laid down rules and regulations of management and the standard accounting practice.

5.2 RECOMMENDATIONS

Based on this project work, it is highly recommended that:-

The organisation should arrange for In-house Computer Audit Training for all the staff particularly, the Audit Staff. Since Computer auditing is a fairly new areas of focus the present auditors will need adequate training in this regard.

The implementation of the new system will enhance efficiency. As manual systems are replaced by computer systems, it is important to identify control problems and look for solutions. Auditors must have a greater understanding both of the concepts of control in a data processing environment and the basic technology of computers.

Data processing of information system is now a critical part of the organization's basic structure. Auditors should ensure that:-

i. Effective controls are designed into the System.

There is adequate audit involvement in the design process to help ensure that appropriate controls are implemented.

Proper funding to be proved by the organization since the benefits to be derived from the use of computers far outweighs the cost.

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```
ET TALK OFF
ET ESCAPE OFF
ET BELL OFF
ET SAFETY OFF
ET STATUS OFF
ET SCOREBOARD OFF
SE BANK
TORE 0 TO R
) WHILE .T.
 R = 0
 @1,1 TO 20,70 DOUB
 @2,15 SAY "**** MAIN SYSTEM MENU ****"
 @4,10 SAY "ADD RECORD                [1]"
 @6,10 SAY "EDIT RECORD               [2]"
 @8,10 SAY "VIEW RECORD               [3]"
 @10,10 SAY "DELETE RECORD             [4]"
 @12,10 SAY "PRINT REPORTS             [5]"
 @14,10 SAY "QUIT                      [6]"
 @17,8 TO 19,55
 @18,17 SAY "ENTER YOUR CHOICE     [ ]"
 @18,45 GET R PICT "9" RANGE 1,6
 READ
   DO CASE
      CASE R = 1
           DO ADD
      CASE R = 2
           DO EDIT
      CASE R = 3
           DO VIEW
      CASE R = 4
           DO DELETE
      CASE R = 5
           DO REPORT
      CASE R = 6
           EXIT
   ENDCASE
IDDO

 OCEDURE ADD
 E AUDIT
 EAR
  WHILE .T.
 ORE 0 TO MACC_NO, MAUDIT
 ORE SPACE(15) TO MTYPE
 ORE SPACE(30) TO MREMARK
 ORE SPACE(20) TO MCOMPANY
 ORE CTOD("  /  /  ") TO MDATE
  23 SAY "DATA ENTRY PROGRAM"
  23 SAY "=================="
  4  SAY "ACCOUNT NUMBER : "
  45 GET MACC_NO PICT "9999"
  4  SAY "COMPANY : "
  45 GET MCOMPANY
 ,4  SAY "ACCOUNT DESCRIPTION : "
 ,45 GET MTYPE
 ,4  SAY "DATE AUDITED : "
  45 GET MDATE
  4  SAY "REMARK : "
  45 GET MREMARK
  4  SAY "AUDITED AMOUNT : "
```

```
@16,45 GET MAUDIT PICT "99999999.99"
READ
S = .T.
@22,15 SAY "SAVE RECORD (Y/N) ? " GET S PICT "Y"
READ
IF S
APPEND BLANK
REPL ACC_NO WITH MACC_NO
REPL TYPE WITH MTYPE
REPL DATE WITH MDATE
REPL REMARK WITH MREMARK
REPL AUDIT WITH MAUDIT
REPL COMPANY WITH MCOMPANY
ELSE
@22,0
WAIT "   RECORD NOT SAVED, PRESS ANY KEY ....."
CLEAR
ENDIF
MORE = .T.
@22,0
@22,15 SAY "ADD MORE RECORD (Y/N) ? " GET MORE PICT "Y"
READ
IF MORE
   CLEAR
   LOOP
ELSE
   CLEAR
   EXIT
ENDIF
ENDDO
RETURN

PROCEDURE EDIT
SET TALK OFF
SET ESCAPE OFF
SET BELL OFF
SET SAFETY OFF
SET STATUS OFF
SET SCOREBOARD OFF
USE AUDIT
CLEAR
DO WHILE .T.
STORE 0 TO MACC_NO, MAUDIT
STORE SPACE(15) TO MTYPE
STORE SPACE(30) TO MREMARK
STORE CTOD("  /  /  ") TO MDATE
@1,10 SAY "ACCOUNT NUMBER TO EDIT " GET MACC_NO PICT "9999"
READ
IF MACC_NO = 0
   CLEAR
   RETURN
ENDIF
LOCATE FOR ACC_NO = MACC_NO
IF .NOT. FOUND()
   WAIT "******  RECORD NOT FOUND, PRESS ANY KEY ******"
   CLEAR
   LOOP
ENDIF
MACC_NO = ACC_NO
MTYPE = TYPE
```

```
MDATE = DATE
MREMARK = REMARK
MAUDIT = AUDIT
MCOMPANY = COMPANY
@1,0
@1,23 SAY "DATA EDIT PROGRAM"
@2,23 SAY "=================="
@4,4  SAY "ACCOUNT NUMBER : "
@4,45 GET MACC_NO PICT "9999"
@8,4  SAY "COMPANY : "
@8,45 GET MCOMPANY
@10,4  SAY "ACCOUNT DESCRIPTION : "
@10,45 GET MTYPE
@12,4  SAY "DATE AUDITED : "
@12,45 GET MDATE
@14,4  SAY "REMARK : "
@14,45 GET MREMARK
@16,4  SAY "AUDITED AMOUNT : "
@16,45 GET MAUDIT PICT "99999999.99"
READ
S = .T.
@22,4 SAY "SAVE EDITED RECORD (Y/N) ? " GET S PICT "Y"
READ
IF S
REPL ACC_NO WITH MACC_NO
REPL TYPE WITH MTYPE
REPL DATE WITH MDATE
REPL REMARK WITH MREMARK
REPL AUDIT WITH MAUDIT
REPL COMPANY WITH MCOMPANY
ELSE
@22,0
WAIT "   RECORD NOT SAVED, PRESS ANY KEY ....."
CLEAR
ENDIF
MORE = .T.
@22,0
@22,10 SAY "EDIT MORE RECORD (Y/N) ? " GET MORE PICT "Y"
READ
IF MORE
   CLEAR
   LOOP
ELSE
   CLEAR
   EXIT
ENDIF
ENDDO
RETURN


PROCEDURE DELETE
SET TALK OFF
SET ESCAPE OFF
SET BELL OFF
SET SAFETY OFF
SET STATUS OFF
SET SCOREBOARD OFF
USE AUDIT
CLEAR
DO WHILE .T.
```

```
STORE 0 TO MACC_NO, MAUDIT
STORE SPACE(15) TO MTYPE
STORE SPACE(30) TO MREMARK
STORE CTOD("  /  /  ") TO MDATE
@1,10 SAY "ACCOUNT NUMBER TO DELETE " GET MACC_NO PICT "9999"
READ
LOCATE FOR ACC_NO = MACC_NO
IF .NOT. FOUND()
   WAIT "******  RECORD NOT FOUND, PRESS ANY KEY ******"
   CLEAR
   LOOP
ENDIF
MACC_NO = ACC_NO
MTYPE = TYPE
MDATE = DATE
MREMARK = REMARK
MAUDIT = AUDIT
MCOMPANY = COMPANY
@1,0
@1,23 SAY "DATA DELETE PROGRAM"
@2,23 SAY "==================="
@4,4  SAY "ACCOUNT NUMBER : "
@4,45 GET MACC_NO PICT "9999"
@8,4  SAY "COMPANY : "
@8,45 GET MCOMPANY
@10,4  SAY "ACCOUNT DESCRIPTION : "
@10,45 GET MTYPE
@12,4  SAY "DATE AUDITED : "
@12,45 GET MDATE
@14,4  SAY "REMARK : "
@14,45 GET MREMARK
@16,4  SAY "AUDITED AMOUNT : "
@16,45 GET MAUDIT PICT "99999999.99"
S = .T.
@22,4 SAY "DELETE THIS RECORD (Y/N) ? " GET S PICT "Y"
READ
IF S
 DELETE
 PACK
ELSE
@22,0
WAIT "   RECORD NOT DELETED, PRESS ANY KEY ....."
CLEAR
ENDIF
MORE = .T.
@22,0
@22,10 SAY "DELETE MORE RECORD (Y/N) ? " GET MORE PICT "Y"
READ
IF MORE
   CLEAR
   LOOP
ELSE
   CLEAR
   EXIT
ENDIF
ENDDO
RETURN

PROCEDURE VIEW
USE AUDIT
```

```
CLEAR
DO WHILE .T.
STORE 0 TO MACC_NO, MAUDIT
STORE SPACE(15) TO MTYPE
STORE SPACE(30) TO MREMARK
STORE CTOD("  /  /  ") TO MDATE
@1,10 SAY "ACCOUNT NUMBER TO VIEW " GET MACC_NO PICT "9999"
READ
LOCATE FOR ACC_NO = MACC_NO
IF .NOT. FOUND()
   WAIT "******  RECORD NOT FOUND, PRESS ANY KEY ******"
   CLEAR
   LOOP
ENDIF
MACC_NO = ACC_NO
MTYPE = TYPE
MDATE = DATE
MREMARK = REMARK
MAUDIT = AUDIT
MCOMPANY = COMPANY
@1,0
@1,23 SAY "DATA VIEW PROGRAM"
@2,23 SAY "=================="
@4,4  SAY "ACCOUNT NUMBER : "
@4,45 GET MACC_NO PICT "9999"
@8,4  SAY "COMPANY : "
@8,45 GET MCOMPANY
@10,4  SAY "ACCOUNT DESCRIPTION : "
@10,45 GET MTYPE
@12,4  SAY "DATE AUDITED : "
@12,45 GET MDATE
@14,4  SAY "REMARK : "
@14,45 GET MREMARK
@16,4  SAY "AUDITED AMOUNT : "
@16,45 GET MAUDIT PICT "99999999.99"
MORE = .T.
@22,0
@22,10 SAY "VIEW MORE RECORD (Y/N) ? " GET MORE PICT "Y"
READ
IF MORE
   CLEAR
   LOOP
ELSE
   CLEAR
   EXIT
ENDIF
ENDDO
RETURN


PROCEDURE REPORT
SET TALK OFF
SET ESCAPE OFF
SET BELL OFF
SET SAFETY OFF
SET STATUS OFF
SET SCOREBOARD OFF
SET DEVICE TO FILE "AUDIT.TXT"
USE AUDIT
CLEAR
```

```
STORE 1 TO S,L
DO WHILE .NOT. EOF()
IF L = 1
@1,40 SAY "SUMMARY OF AUDITED ACCOUNTS"
@2,40 SAY "**************************"
@4,1  SAY REPL("=",105)
@5,5 SAY "ACCOUNT"
@5,15 SAY "ACCOUNT"
@5,68 SAY "AUDITED"

@6,1 SAY "S/N"
@6,5 SAY "NUMBER"
@6,13 SAY "DESCRIPTION"
@6,37 SAY "COMPANY NAME "
@6,55 SAY "DATE"
@6,68 SAY "AMOUNT"
@6,86 SAY "REMARK"
@7,1 SAY REPL("=",105)
L =8
ENDIF
@L,1 SAY STR(S,3)
@L,6 SAY ACC_NO
@L,13 SAY TYPE
@L,31 SAY COMPANY
@L,54 SAY DATE
@L,66 SAY AUDIT
@L,79 SAY REMARK
L = L+1
@L,1  SAY REPL("-",105)
SKIP
L = L+1
S = S+1
IF L =50
   EJECT
   L = 8
ENDIF
IF EOF()
   EXIT
ENDIF
ENDDO
WAIT ""
SET DEVICE TO SCREEN
CLEAR
RETURN
```

SUMMARY OF AUDITED ACCOUNTS
****

S/N	ACCOUNT NUMBER	ACCOUNT DESCRIPTION	COMPANY NAME	DATE	AUDITED AMOUNT	REMARK
1	1111	LEDGER	PORTLAND CEMENT	10/10/99	688832.00	CORRECTLY BALANCED
2	4323	DAILY TRANSACT	HABIB BANK	10/11/99	563455.00	ACCOUNT NOT BALANCED
3	5434	TRANSPORTATION	OB & SONS NIG. LTD.	10/22/99	65345.00	MISSING RECIEPTS
4	8756	EXPENSES	FOTO PALACE	10/23/99	5776532.42	BALANCED
5	6523	EXPENSES	BLAISE FURNITURES	11/02/99	676577.00	BALANCED
6	4566	INCOME	HABIB BANK	11/03/99	676656.00	BALANCED