DESIGN AND IMPLEMENTATION OF FINANCIAL MANAGEMENT SYSTEM USING, ORACLE AND VISUAL BASIC. CASE STUDY: MOHAMMED ENTERPRISES LTD DAR ES SALAAM

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DECLARATION

We **JACQUELINE PATRICK** and **OGUTU ACHIENG RHODA VIVIANNE** do here by declare to the best of our knowledge that this graduation project report is our original work and that it has never been submitted to any university or any other institution.

The literature and citations from other peoples work have been duly referenced and acknowledged in the text and references.

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APPROVAL

This graduation project report titled "Design and Implementation of Financial Management System" has been submitted with the approval of the following supervisor.

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DEDICATION.

I JACQUELINE PATRICK dedicate this project to my Dad, my Mum and my brother. Thank you dad and mum for your continuous support, love, advices, and encouragement. Special thanks to you big brother Honest, for the challenges you brought to make me who I am today. And you my sweet little niece, Lauryn, thank you for the smile, it has always been so encouraging. Jos I can't thank you enough for your encouragements and your continuous support.

Special thanks to my friend Rhoda Viviane for the advice, support, encouragement a broad smile, and understanding nature which made me achieve the best of this project. Florian, thank you so much for always being there for me throughout this project.

I OGUTU ACHIENG RHODA VIVIANNE dedicate this project to all my family members, especially my late Dad, and Mum. Special thanks go to my Aunt, Beatrice Amollo, all my loving sisters (Lillian, Caroline, Sara) and brothers (Elly, Pascal, Tom, Fred, James), and my dear friend Jacqueline Patrick, for all their support and encouragement. How could I ever make it without you!

Thank you Denis for all the support you gave me.

I LOVE YOU ALL.

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To all our friends and family who have supported us in every way possible, thank you so much and may Almighty God bless you all.

ABSTRACT

Information systems help in the dissemination and communication of information in an organization. The organization that this project used as a case study is Mohammed Enterprises Ltd. the organization was using a financial management system with an inefficient database with few functions and unsatisfactory level of security, which meant that the retrieval and access of data was difficult and the organization's information were at risk. The project set out to create a database system that would generate timely and accurate reports for financial decisions, with the highest level of security.

The project was able to come up with a system that made it easier to access and retrieve the organization's data timely with less effort and with high protection of data as compared to the previous system. It is hoped that this project will go a long way in alleviating the organization's previous problems.

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ABBREVIATION AND ACRONYMS.

METL	Mohamed Enterprises Limited.
E-R	Entity Relationship
I.T	Information Technology

CHAPTER ONE.

1.0 INTRODUCTION

1.1 Background

Computers and information technology play an important role in the growth of an organization. Quick access to vast amount of information determines the success of an organization. Databases, networks, and communication technology enable quick reliable decision making.

This project involved the design and implementation of a financial management system of a company. The system was hosted on a server in form of a database. The database was designed to store and report on large amounts of information on cash management, cash inflows and out flows, investment management, capital budgeting, financial planning, accounting management, collecting bills, paying employees, suppliers and taxes. The users of the system were able to access these information through the use of user interfaces provided. The broad hypothesis that the project based on was that the success of the system critically depended on the means by which it was designed and implemented.

1.2 Scope

The project will confine itself to a production company that sells products through wholesale stores. The system was created to store and report on large amounts of information on cash management, cash inflows and out flows, investment management, capital budgeting, and many others. A graphical user interface was also created to show the user what actions to take, thus making it more efficient and user friendly.

1.3 Objectives of the project.

1.3.1 Main Objective.

The main objective of this project was to create a database system that generates timely and accurate financial reports

1.3.2 Specific Objectives.

- To enable the enforcement of security in the organization's data
- To enable storage of data for easier retrieval
- To facilitate easier modification of data
- To enable easier monitoring of projects run by the organization

1.4 Statement of the Problem

Mohammed Enterprises Ltd. uses inefficient system that has created a number of challenges which include delay in issuing financial reports, difficulty in keeping track of its sources and uses of funds in a financial year. Other challenges also include loss of information, misleading information, improper allocation of investment, accounting distortion such as managerial estimates, errors and omissions, financial statements window dressing and difficult access of financial information by stakeholders and other financial information users.

1.5 Justification of the project.

This project will enable speeding up activities of the department and efficiently producing timely financial reports thus eliminating delays in financial decisions. It will also create fluidity in the way the organization runs its activities. The project will restrict unauthorized persons from accessing confidential information. The new system will create transparency in the organization by use of audit trails. This means that all activities taking place on the system are audited.

The project will also create flexibility in generating reports whenever needed. It will enable easier backup of important information. Data consistency will be achieved since the data will be stored in a centralized place.

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CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Basics of Financial Systems

In past years, financial systems were used for general ledger, capital project and grant accounting, and accounts payable and receivable. The financial management, procurement, and budget systems were not integrated into that system. This limitation resulted in extensive duplication and reconciliation of records.

But in the past few years the technology for integrated, web-enabled solution for tracking and managing financial business functions within one centralized systems was implemented. Financial Management System automates many previously paper-based processes and supports efficient operation of schools and offices through improved access to information consistent with the founders of strategic plan. Major innovations in the design items as integrated financial management system and retrieval system have coma in use today. (FASB, 1995)[16]

Although John J. Wild (1983), states that Financial Management System is a system that successfully integrates finance, and budgeting functions, and adds value to overall business operations by providing accurate, timely, comprehensive, and accessible information; and by supporting data driven decision making and accountability. Larson (2000) argues that Financial Management System streamlines business processes and provides flexibility, adaptability, and reliability.

Financial Management System is directed towards the joint determination and solution of a wide range of financial problems that may face an organization.

However, Financial Management is the process of managing the financial resources, including accounting and financial reporting, budgeting, collecting accounts receivable, risk management, and insurance for a business or organization. The financial management system for a business includes both how you are financing it as well as how you manage the money in the business.

2.2 Information technology and Financial Systems

2.2.1 Financial Systems

Financial system is an information system, comprised of one or more applications, that is used for any of the following:

Collecting, processing, maintaining, transmitting, and reporting data about financial events;

- Supporting financial planning or budgeting activities;
- Accumulating and reporting cost information; or
- Supporting the preparation of financial statements.

A financial system supports the financial functions required to track financial events, provide financial information significant to the financial management of the agency, and/or required for the preparation of financial statements. A financial system encompasses automated and manual processes, procedures, controls, data, hardware, software, and support personnel dedicated to the operation and maintenance of system functions. A financial system may include multiple applications that are integrated through a common database or are electronically interfaced, as necessary, to meet defined data and processing requirements. (Solberg, 1977; Suri, 1983),

2.2.2. Financial management systems

The term "financial management systems" means the financial systems and the financial portions of mixed systems necessary to support financial management. (Kiczales, G., J.d. Riveres, 1991)[10]

2.2.3 Integrated Financial management systems

The term "integrated financial management system" means a unified set of financial systems and the financial portions of mixed systems encompassing the software, hardware, personnel, processes (manual and automated), procedures, controls and data necessary to carry out financial management functions, manage financial operations of the agency and report on the agency's financial status to central agencies, Congress and the public. Unified means that the systems are planned for and managed together, operated in an integrated fashion, and linked together electronically in an efficient and

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effective manner to provide agency-wide financial system support necessary to carry out the agency's mission and support the agency's financial management needs. (Kiczales, G., J.d. Riveres, 1991)[15]

2.2.4 Information systems

The term "information system" means the organized collection, processing, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual. Information systems include non-financial, financial and mixed systems. (Williams *et al*, 1999)[17]).

2.2.5 Database Systems

A database is a collection of persistence data. The purpose of a database is to store information about certain types of objects termed as entities or objects. A database represents some of real world sometime called mini-world or universe of discourse. Changes to a mini-world are reflected in the database. A database is designed, built and populated with data for specific reasons. It has an intended group of users and preconceived applications in which these users are interested. Database management system (DBMS) is a combination of computer hardware and software designed to collect, organize, store, manipulate, and analyze data.

Database system is a collection of interrelated files and a set of programs that allow users to access and modify these files. A database system solves various challenges that occur when using a traditional file system such as data redundancy and inconsistence, data isolation, and security challenges. (Silberchatchz *et al*, 2002)[8]

2.2.5.1 Report generation.

Reports are used to display results. They are used for output that will be distributed or stored in paper form. They are also used to present summarized data.

A report can easily handle multiple pages of output and it can also combine both detailed and summary data. A database system has the capabilities to generate reports whenever they are needed. (Ramakrishnan and Gehrke, 2000)[10]

2.2.6 Structured analysis and design

Structured analysis and design is a process-centered technique that is used to model business requirements for a system and then transform them into good software design models. Structured analysis and design tends to focus on process building blocks. It uses such modeling tools like context diagrams, data flow diagrams, system charts, entity relationship diagrams and so on. (Whitten *et al*, 2001)[13]

2.2.6.1 Data flow Diagrams

These are diagrams that are used to show the context of the system in terms of the processes entailed. They involve various stages or levels' depending on how big a system to design is. They are used to show the flow of the information within the system. (Hoffer *et al*, 2001)[14]

2.2.6.2 System Architecture

This is the overall organization of the system components called subsystems. Architecture provides the context in which more detailed decisions are made in later design. Each subsystem has a well defined interface to the rest of the system. The interface specifies the form of all interactions and the information flow across subsystem boundaries but does not specify how the system is to be implemented internally. (Rajan, 2001) [11]

CHAPTER THREE

3.0 METHODOLOGY

There are so many methods through which to come up with data required to design an information system. There are so many challenges that one goes though to design an information system. These range from investment to strategic business challenges. In order to design an information system, one needs to gather information about the organization in order to capture the right data otherwise the system will be irrelevant to the organization. Thus the researcher had to have a strategic plan on how to go about the task of gathering this information.

The process of system development goes through the system development life cycle (SDLC). Thus the activities within the system analysis and design fall within the SDLC. There are methods that impose a structure on the development process by providing a number of well defined complimentary ways in which to represent information about aspects of the system. This is what we called methodology. (French, 1992)[15]

3.1 Requirements Gathering

3.1.1 Preliminary Investigation

A preliminary analysis was carried out to help the researcher gather information about the goals of the organization and the nature and scope of the challenges in the organization, if any. To determine the nature and scope of the challenges, the researcher had to first study the goals of the organization by taking a closer look at the specifics and then come up with a proposal for a solution or alternative.

Here researchers had three alternatives:-

- Leave the system as it is
- Improve the already existing system
- Create a whole new system

The researchers chose the second option and thus propose the improvement of the already existing system because the existing system had challenges that could be corrected.

3.2 Analysis of the Existing System

This involved carefully analysis and study of the existing system to understand how the proposed system would differ from the old one. In other words, this was meant to describe what the system should do so as to satisfy the needs of users. Structured analysis and design tools like dataflow diagrams were used.

3.2.1 Gathering of Data.

This was to help gather the data that would be used in the system. The researchers used a number of ways to gather it. These included questionnaires, reviewing existing documents, interviews and observation.

3.3 Design of the system.

A preliminary design was done to describe the functional capabilities of the system. A detailed design was also done to describe how the proposed system would deliver the general capabilities described in the preliminary design. The design phase helped the researchers to come up with the logical and physical design of the current system.

A structural framework of the system was also developed during this phase to identify the major components of the system and communications between these components. The logical and physical designs of the system were derived in this phase.

3.4 Implementation

The researchers used windows as programming environment because it was deemed best to bring out the design. The programming language used was visual basic for the design of user interface and MySQL for database design.

3.5 Testing

Testing of the system was done in such a way that first test data was used then real data from the organization was also used. This involved getting a random sample of the users to try out the system

3.6 Limitations of the study

On the scheduled dates for interviews some people did not show up because of field work, which was not foreseen.

Interviewees worked out in the middle of the interview sessions to attend to urgent phone calls, visitors, and work related issues. These meant either rescheduling the interviews or waiting until they were done with the interruptions. At the same time, certain people gave irrelevant answers to certain questions in the questionnaires, and this rendered the questionnaires useless.

CHAPTER FOUR
4.0 SYSTEM STUDY, ANALYSIS AND INVESTIGATION
4.1 Requirements gathering
The first stage was to carry out a preliminary investigation.

4.1.1 Preliminary Investigation
A preliminary investigation was carried out to help the researcher gather information about the goals of the organization and the nature and scope of the challenges of the organization, if any. To define the objectives of the organization, the researcher had to read internal documents of the organization like annual reports, manuals, and organization's procedures. The researcher also read external document like regulatory rules and forums reports. After this, the researcher carried out interviews within the organization. Among the people interviewed were two directors, six employees and twelve beneficiaries of the organization. These people were chosen as a sample because they represented the rest in terms of understanding of the operations of the organization.

To determine the nature and the scope of the challenge, the researcher had to first study the goals of he organization by taking a closer look at the specific activities. This was done by observing activities being done and talking to people within the organization. Certain questions were then raised on whether too much time was spent on paper work, or by employees working on non-essential tasks. If so, what activities were affected? The researcher had to propose an alternative or solution basing on the outcome of the preliminary investigation. They therefore proposed the improvement of the already existing system because the existing system had challenges that could be corrected.

4.2 Gathering of data
This was to help gather the data that would be used in the system. The researcher used a number of ways to gather it.

4.2.1 Questionnaires:

A questionnaire that contained questions about key areas of interest in the research was designed. It was then distributed to various people in the organization including decision makers. This helped the researchers in gathering important data about the activities of the organization. The questionnaires were given to those employees within the sample who work in the field because the researchers could not find them in the office.

The researchers found challenges with this kind of research tool because some respondents did not bother to fill the questionnaires, others who filled them misplaced them, while some did not just return them. This delayed the process considerably. Information gathered from the questionnaires was recorded in a notebook for analysis.

4.2.2 Existing Information:

The researchers were privileged to have been given some existing documentation of the organization. This helped a lot in understanding the organization, thus being able to know the kind of work the organization does. The documentation included financial annual reports, organization's reports, procedures and manuals.

4.2.3 Interviews:

For some people within the organization there were no other ways of getting data from them apart from using interviews. They claimed to be too busy to read and answer questions on a paper. So the researcher had to schedule and make appointments for the interviews on the time and date that was appropriate for them. From these, the researchers were able to understand the flow of activities in the organization.

First the researchers interviewed the executive director, then the finance director, and then the various project managers and twelve beneficiaries. This method met some challenges as some interviewees were not straight forward, and corporative while others just could not understand the questions being asked.

4.2.4 Observations:

The researchers spent one week trying to observe what was going on in the organization. The researchers used this process to verify the data collected from the above methods and also to capture some more data that could have been ignored. The researchers observed the activities of the organization department by department and findings were recorded in the notebook.

4.3 Analysis of the system

The aim of the analysis was to fully specify the problem and application domain without introducing a bias to any particular implementation technique. The analysis phase was a basis for the derivation of the design concept of the system. Structured analysis was used as a tool to come up with the analysis model. The executive director of METL requested that the system to be put in place should be able to report the income of the organization, the expenses, the projects they run and report the account balances. Analysis of the system was done to determine the system requirements.

4.3.1 User Requirements

- Availability of data were needed
- Timely acquisition of the data is also important
- Ease of use

4.3.1.1 Functional Requirements

- The system should enabled validation of data.
- The system should also enabled insertion of data
- The system should enable querying of data within the system
- The system should enable production of reports for management.

4.3.1.2 Non-functional Requirement.

The following were identified as non-functional requirement of the system. These were meant to help the researchers come up with the design that would be able to deliver the functional capabilities.

- **Hardware requirements**

The required Computer hardware to host the system is as follows:

Processor	Memory	Space
Pentium III or its equivalent speed or higher	256MB	Hard disk space of 20GB or more

Table 4.1 Hardware requirements.

It was agreed upon by system designer that the existing hardware in the organization would be able to provide the desired functionality of the system.

- **Software requirement**

The system needs Windows 2003 Server and Windows XP Professional as the operating system to run it. These were chosen because the users of the system were familiar with them.

- **The Security requirements**

The system security requirements were identified in that only authorized users would have the right to gain access to the database system.

- **Performance requirements**

The system should enable timely acquisition of data.

CHAPTER FIVE

5.0 SYSTEM DESIGN AND IMPLEMENTATION

5.1 System Design

This was the phase concerned with how the system functionality was to be provide by the different components of the system. During the system design, the overall structure and the design of the system was decided. In this phase, the logical and physical designs of the system were derived.

5.2 The Logical Design

5.2.1 The Context Diagram

A context diagram was the starting point of the logical design of the system to show the application boundaries and what activities are entailed with the system.
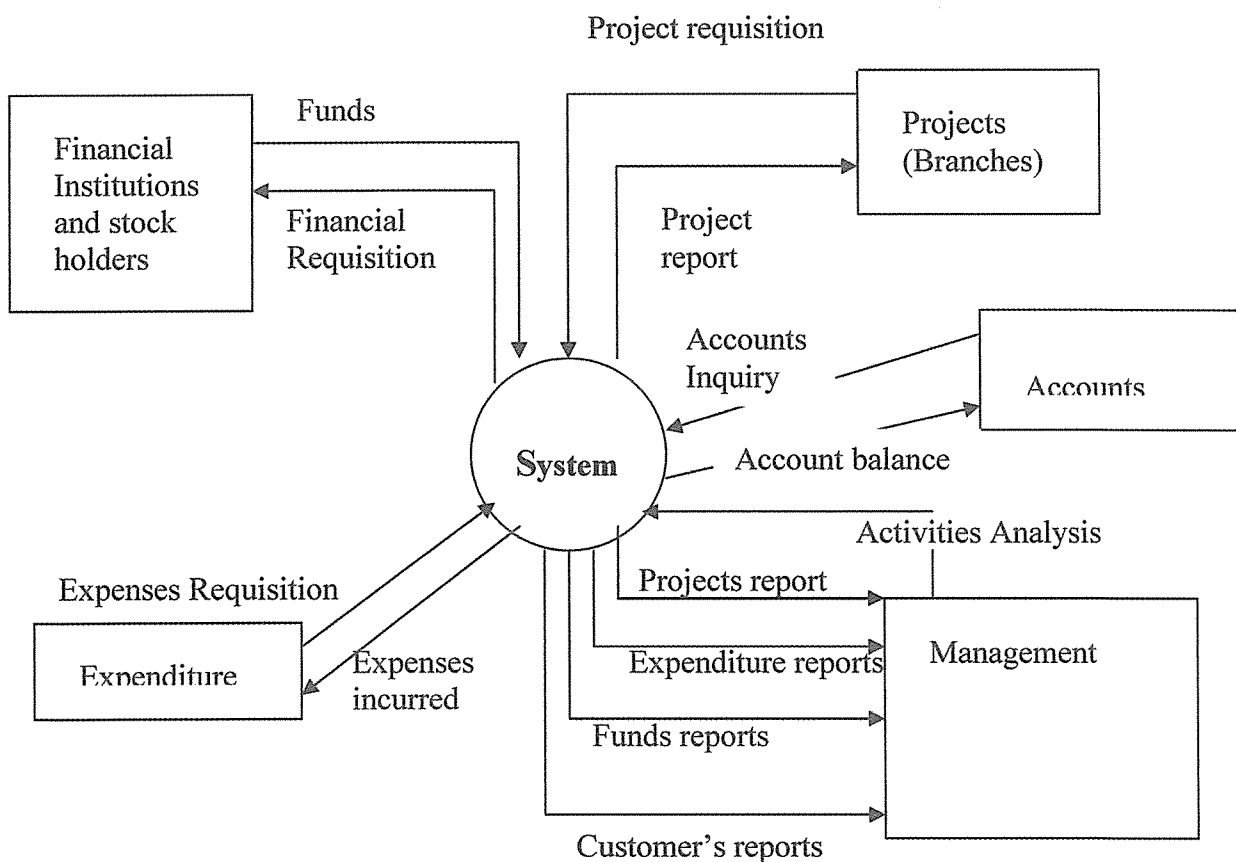
Figure 5.1: The context diagram of the system

5.2.2 The Data Flow Diagram

Data flow diagram is a tool that depicts the flow of data through a system and the work of processing performed by the system. Jeffrey L. Whitten, *et al* (System Analysis and Design 5th edition p 307)

It can also be described as a graphical modeling technique that models that model the sources and destination of data inputs and outputs and the data maintained by the information system. It's a graphic design that shows both how data flows to, from and within an information system and various processes that transforms the data.

Figure 5.2: The Data flow diagram of the system
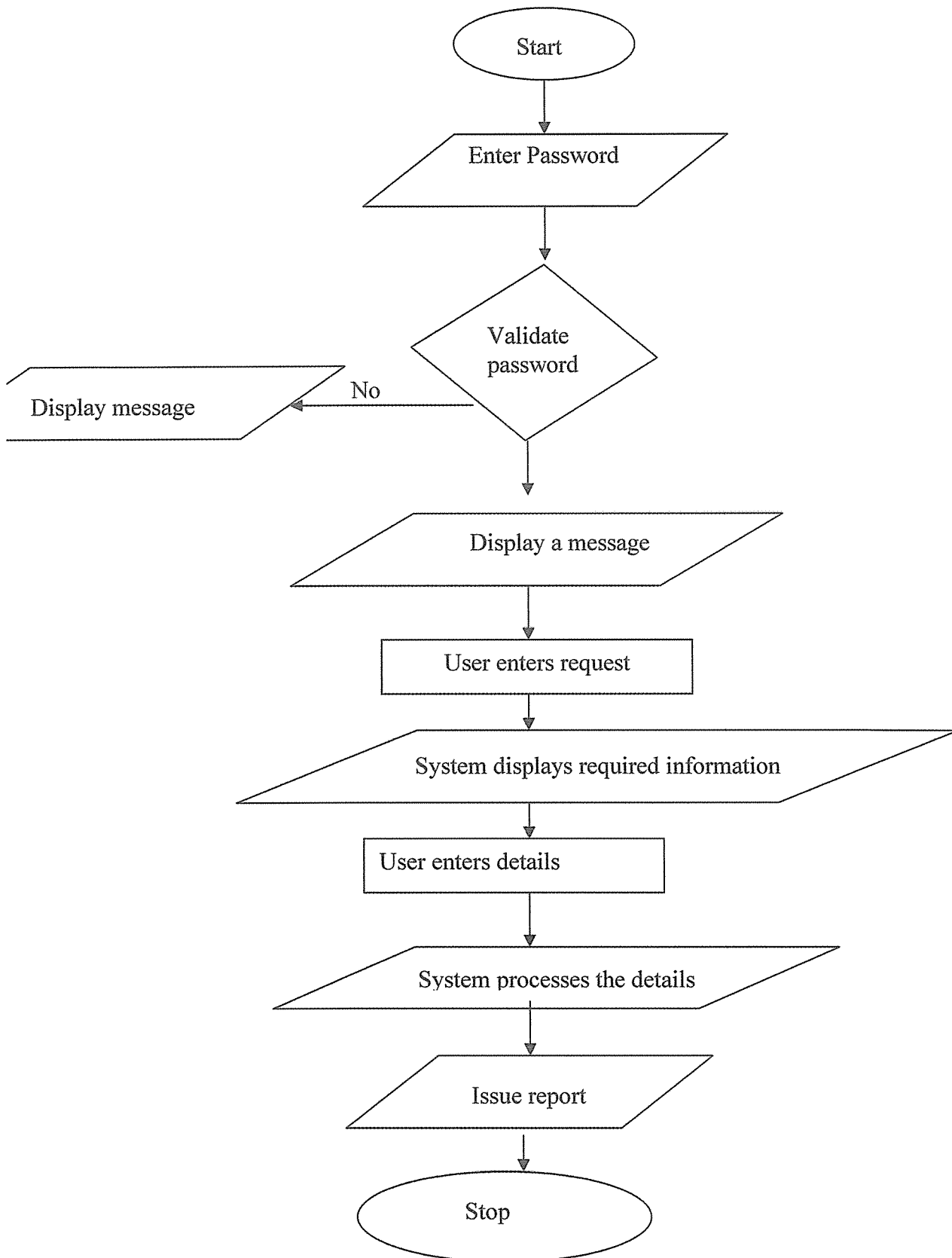
5.3 Entity Relationship Diagram

An entity relationship model is part of system development methodology that provides an understanding of the logical data requirement of a system independently of the systems' organization and process. Its also reflects a static view of the relationship between different entities

Figure 5.3 Entity Relation Diagram

5.4 Physical Design

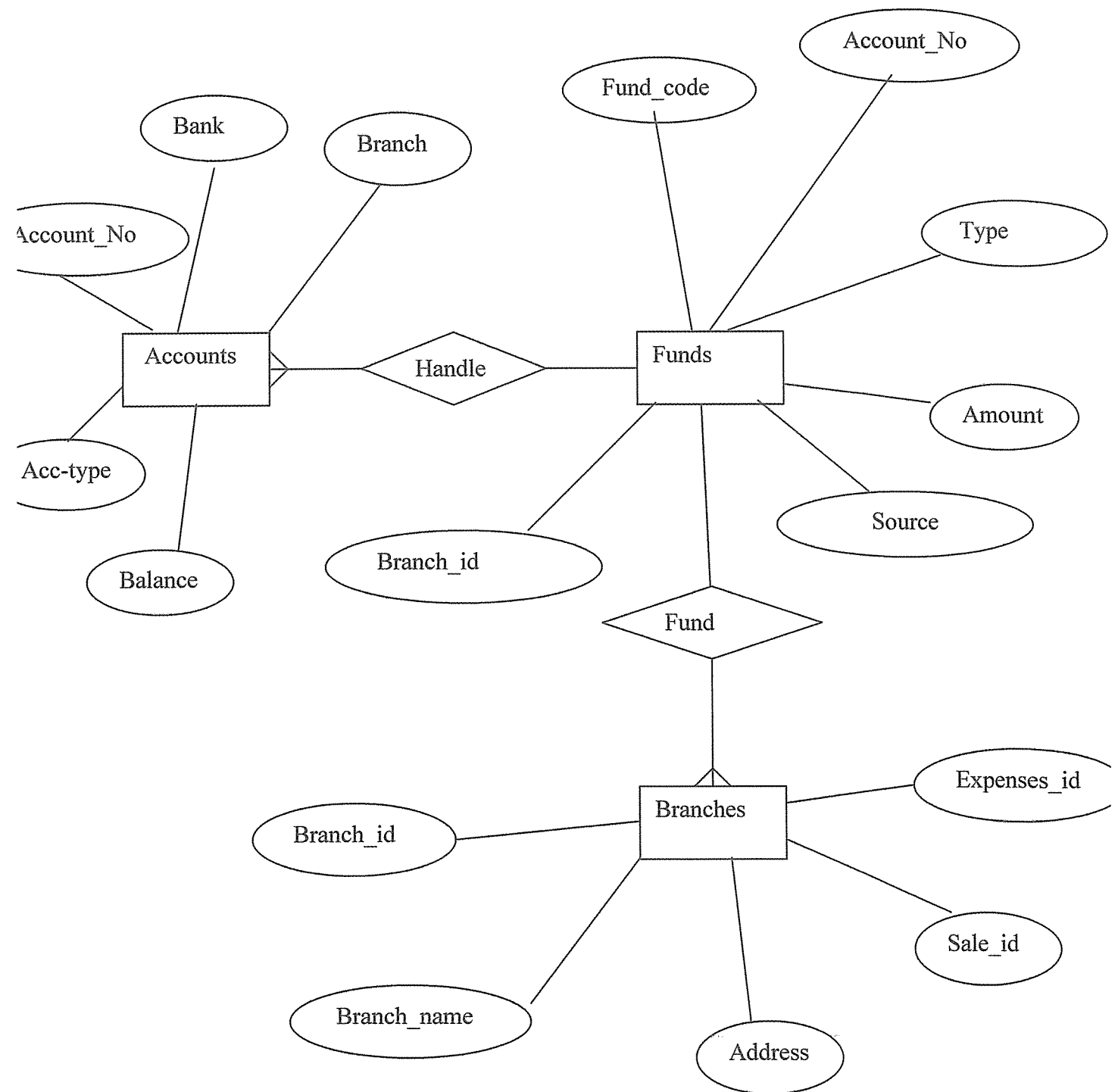Design show not only what a system does, but also how the system is physically and technically implemented. It transforms the logical design material into real computer work and describes how the logical structure is to be physically implemented in the target database management system

Table 5.1 **Branches Table**

Field	Type	Null	Description
Branch_id	varchar(15)	No	Branch identification number.
Branch_name	varchar(19)	No	Describes the name of the Branch
Address	varchar(22)	No	Describes the branch address
Sales_id	Varcar(15)	No	Sales identification number
Expenses_id	Varchar (15)	No	Expenses identification number

Table 5.2 **Accounts Table**

Field	Type	Null	Description
Account_no	varchar(18)	No	Account number
Branch	varchar(20)	No	Bank branch name
Bank	varchar(20)	No	Bank details
Account_type	varchar(20)	No	Account type
Balance	varchar(17)	No	Account Balance

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Table 5.3 **Funds Table**

Field	Type	Null	Description
Fund_code	varchar(15)	No	Funds Identification
Account_no	varchar(17)	No	Account number
Type	varchar(15)	No	Funds type
Amount	varchar(13)	No	Funds amounts
Source	varchar(14)	No	Source of funds
Branch_id	varchar(17)	No	Branch Identification

Table 5.4 **Purchase Table**

Field	Type	Null	Description
Purchaseorder_id	varchar(23)	No	The Purchase order identification number.
Supplier_id	varchar(15)	No	Supplier identification no
Product_id	varchar(24)	No	Product identification no
Order_date	varchar(26)	No	The date at which that item was ordered.
quantity	varchar(19)	No	The quantity orded.
Date_due	varchar(19)	No	The last date which the supplier should supply product.
Terms of payement	varchar(19)	No	The means of payment.

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Table 5.5 **Sales Table**

Field	Type	Null	Description
Sales_id	varchar(18)	No	Receipt's identification number
Product_id	varchar(19)	No	Product identification no
Quantity	varchar(29)	No	The amount of product sold to the customers.
Price	varchar(18)	No	The price of a particular product.
Total_balance	varchar(15)	No	The balance of a particular product.
Saff_id	varchar(16)	No	Staff identification no.
Date	date	No	Date of the sale
Category_id	varchar(16)	No	The category of the item

Table 5.6 **Staff Table**

Field	Type	Null	Description
Staff_id	varchar(24)	No	Staff identification no
F_name	varchar(15)	No	The first Name of the staff
O_names	varchar(17)	No	Other names of the staff
Address	varchar(15)	No	The address of the staff
Town	varchar(19)	No	The town where a particular staff is situated
Phone	varchar(28)	No	The phone no of a staff
E_mail	varchar(18)	No	The E-mail Adress of a particular staff

Field	Type	Null	Description
Branch	varchar(15)	No	The branch which a staff belongs.
Salary	varchar(18)	No	The salary which a staff earns
Gender	varchar(13)	No	Male or Female
Job_title	varchar(16)	No	The job title in a particular department

Table 5.7 **Suppliers table**

| Field	Type	Null	Description
Supplier_id	varchar(20)	No	Supplier identification no
Company_name	varchar(18)	No	The name of the company from which the supplier comes from.
Address	varchar(19)	No	The address of the supplier
Town	varchar(15)	No	The location of the supplier
Email	varchar(15)	No	The E-mail address of the supplier.
Phone_no	varchar(27)	No	The telephone no of the supplier.

5.5 Implementation.

The purpose of the implementation phase was to convert the hardware, software and files to the modified system and to train users.

5.5.1 Testing

Testing of the system was done in such a way that the first test data was used then real data was also used from the organization.

The system was tested in three different phases; component testing, integration testing, and user testing.

Figure 5.4 The testing procedure

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┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│ Component    │─────▶│ Integration  │─────▶│ User testing │
│ testing      │      │ testing      │      │              │
└──────────────┘      └──────────────┘      └──────────────┘
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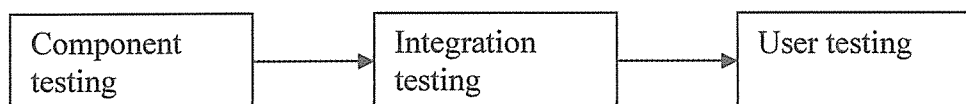
5.5.2 Component Testing

First the various units on the user interface forms were tested as code was written for them. Then the whole interface was tested as a whole and errors corrected. It was then connected its data source and then tested. When errors were found, they were debugged and then tested until there were no more errors.

5.5.3 Integration Testing

The various user interfaces were connected to the database and then tested as a whole. In this testing phase, the researcher was testing for accuracy and consistency of the system.

5.5.4 User Testing

This testing phase involved using the user's data and it was done in two phases, that is, system testing and acceptance testing. User testing was meant to test for the accuracy of the system's output. This is because the researcher wanted to make sure that the system would respond correctly to all input data.

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- **System Testing**

System testing was concerned with finding errors that result from unanticipated interactions between the system components.

It was also concerned with validating the system to make sure that it meets its functional and non-functional requirements. This testing was done with test data. The researcher used test data to test the system's accuracy. It was found that the system responded with accurate results.

- **Acceptance Testing**

The system was tested with data supplied by the organization rather than test data. This was to help reveal errors and omissions I the system requirements definition because the real data exercises the system in different ways from the test data.

It was also meant to help reveal requirements problems where the system activities do not meet the user's needs or to find out whether the system's performance is acceptable. The findings were incorporated into the requirements definition and appropriate changes made.

CHAPTER SIX
6.0 DISCUSSIONS, RECOMMENDATIONS AND CONCLUSIONS
6.1 Discussions

Integrating the various activities of a company requires a serious planning and cost benefit analysis. The project was carried out successfully according to plan but various issues arose. The researcher found out that some activities are under looked and thus ignored at the expenses of others. For instance, it would depend on the researcher's interests. If the researcher enjoys the design part, he/she might neglect the other phases as a result, flaws in the system are inevitable as the size grows. It might be of interest however, to report that so far, no weaknesses on the part of the system have been reported. It is hoped that the system would go a long way in alleviating the problems associated with data storage and processing in METL.

6.2 Recommendations

Future result should look into developing an organization wide information system. This would include all areas of the organization like human resource because when developing an information system and some processes are left out, it becomes very difficult to draw boundaries for the system.

If a system is to be used successfully, it would have to require user training especially if it involves some users who have no idea about using computers. This creates extra work for the researcher.

If in future someone is to design an information system bigger than this, the best way to go about it would be to get more than one researcher, divide the system into subsystems and then each person works on one system. Then the whole system would be integrated together. This would be better when using structured analysis and design otherwise the diagrams would so extensive and confusing.

6.3 Conclusion

The whole project was a challenge to the researchers but all in all, it was more of a learning experience. This was a good thing considering the researcher under took a task which was bigger than estimated.

The system was designed, developed and installed and the old system modified. With the existing system, the users will be able to store, retrieve and update their data with minimum of ease compared to the old one.
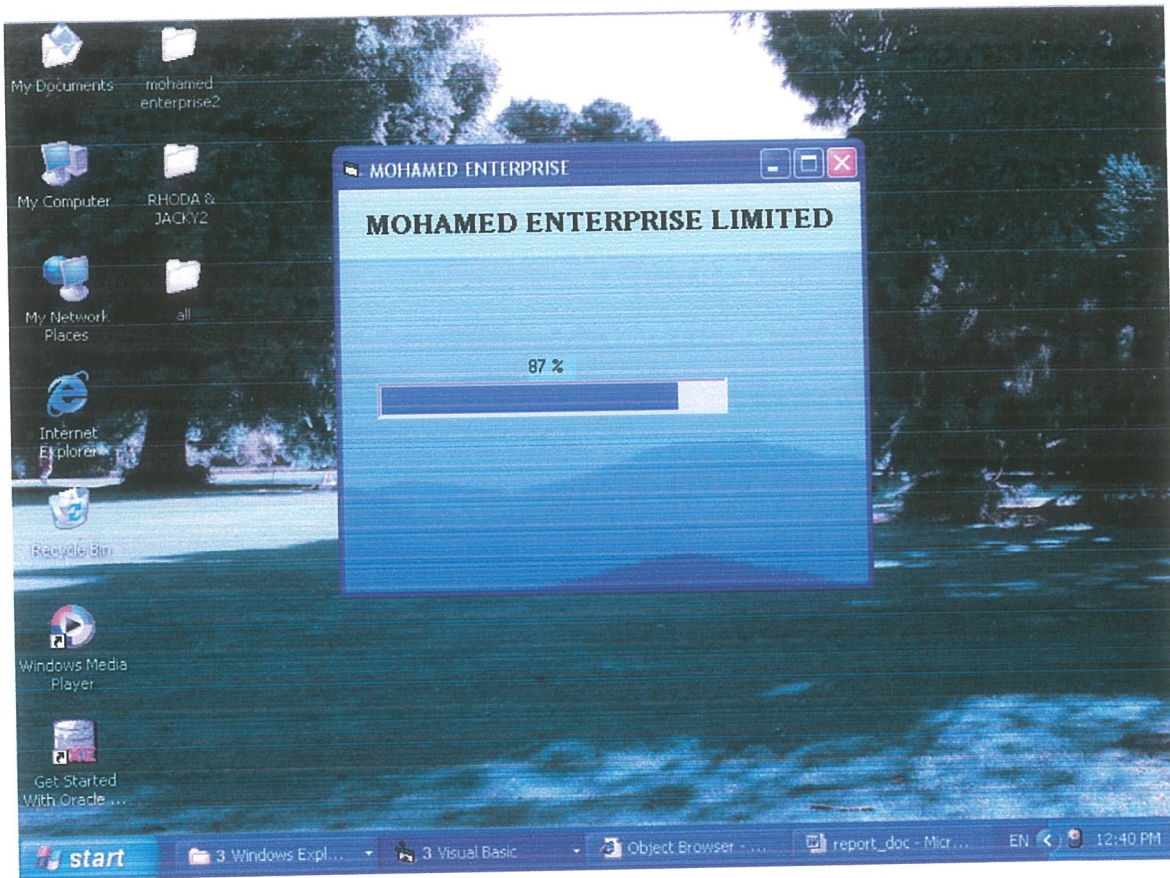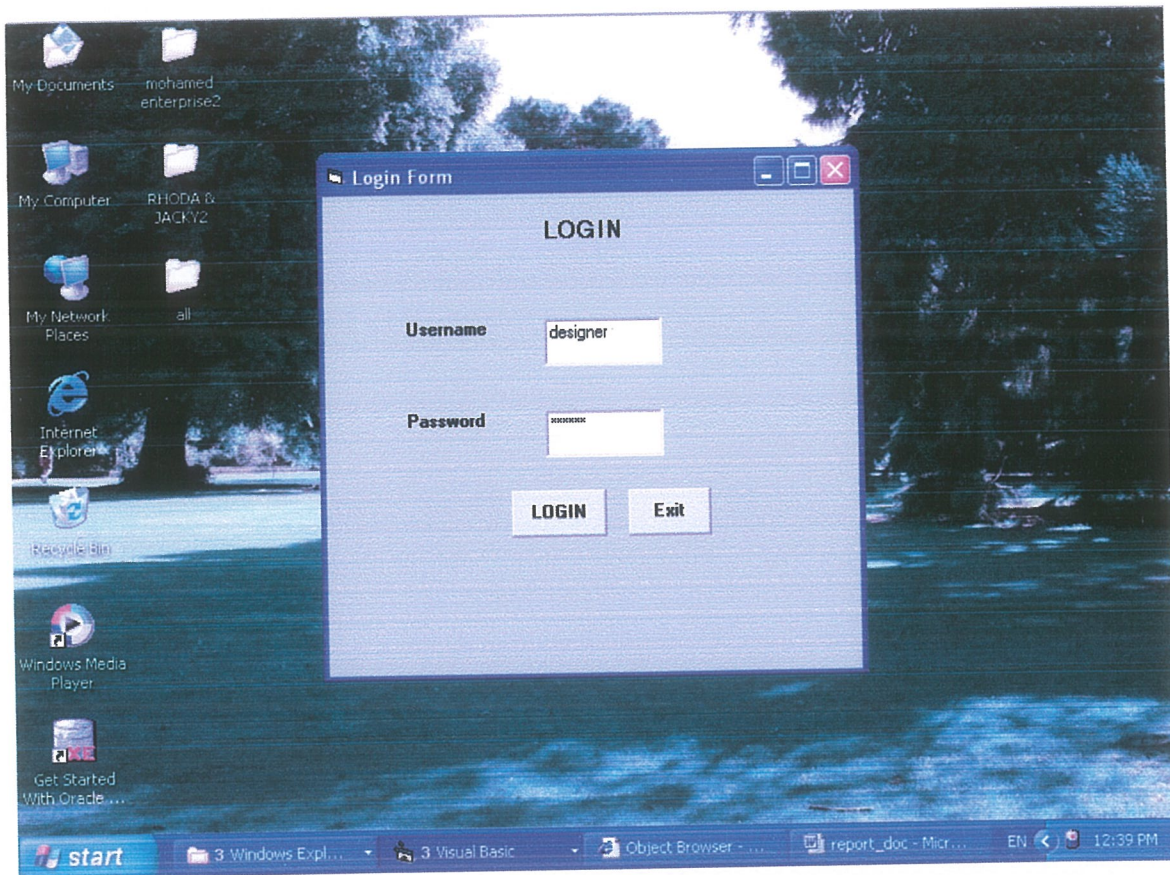
REFERENCE

Woodwell, donald R., <u>Automating Your Financial Portfolio</u>, (Dow-Jones-Irwin 1983).

Chambers, C. and D. Ungar. <u>Making Pure Object-Oriented Languages Practical. in OOPSLA '91 Proceedings; SIGPLAN Notices.</u> 1991. Phoenix, AZ.

Primmit, K (1997). <u>Introductory Research Methods,</u> Nairobi East African Publication, University Press

White, J. A. 1982. <u>The automated factory and integrated systems in the 80's.</u> Proceedings of the 4th IIE Managers Seminar. Norcross, Gal: Institute of Industrial Engineers.

Sommerville Ian, (2001). Software engineering, Pearson education limited, 6th edition.

Kroenke D.M, (2000). Database fundamentals, Design and Implementation, Prentice-Hall Inc, 7th edition.

FASB (1985) Financial Accounting, "Accounting for contributions received and expected", Norwalk Connecticut: FASB press, Appendix D, Statement 116

Silberchartz A, Korth F H, and Sudashan S, (2002). Database systems concepts, McGraw-hill, International edition.

Date C.J, (2000). An introduction to database systems, Pearson Education Inc, 7th Edition.

Rajan S.D, (2001). An Introduction to structural analysis and design, Arizona state University, ISBN: 0-471-319976-X

Whitten L.J, Bentley D.L, and Dittman C.K, (2001). System analysis and design methods, McGraw-hill Inc, 6th Edition.

Hoffer A.J, George F. J, and Valacich J, (2003), Modern System analysis and design, London Press, 4th Edition.

French C.S, (1992). Computer science, DP publications limited, 4th Edition

Gracia-Molina H, Ulman D.J, and Windom J, (2000). Database system implementation, Pearson Education Inc, 3rd Edition.

Williams K.B Sawyer C.S, Hutchison E.S, (1999). Using information technology, A practical introduction to computers and communications, McGraw-Hill Inc, 3rd.

APPENDICES

Appendix A.

The Screenshots of the user Interfaces

Appendix B

Sample Source Codes

```
Private Sub cmdprev_Click()
Adodc1.Recordset.MovePrevious
If Adodc1.Recordset.BOF = False Then
lblRec.Caption = Val(lblRec.Caption) - 1
Else
MsgBox ("Already at Begining of File"), , "MOHAMED ENT."
Adodc1.Recordset.MoveFirst
End If
End Sub


Private Sub cmdsearch_Click()
Dim strsearch As String
strsearch = InputBox("Please ENTER Your BRANCH NAME")
Adodc1.Recordset.MoveFirst
While Not Adodc1.Recordset.EOF
If LCase(strsearch) = LCase(Adodc1.Recordset.Fields(0)) Then
MsgBox ("SEARCH Successfull!")
Exit Sub
Else
Adodc1.Recordset.MoveNext
End If
Wend
MsgBox ("Record Does Not EXIST"), , "ERROR"
End Sub


Private Sub cmdupdate_Click()
Dim intupdate As Integer
```

```
intupdate = MsgBox("Are You Sure?", vbYesNo, "Confirm Update")
If intupdate = vbYes Then
Adodc1.Recordset.Update
Else
MsgBox ("Record Not UPDATED"), , "MOHAMED ENT."
End If
End Sub




Private Sub Form_Load()
cmdupdate.Enabled = True
cmddelete.Enabled = True
cmdsearch.Enabled = True
cmdexit.Enabled = True
lblRec.Caption = 1
End Sub




Private Sub cmdexit_Click()
End
End Sub




Private Sub cmdlogin_Click()
Adodc1.Recordset.MoveFirst
While Not Adodc1.Recordset.EOF
If txtusername1.Text = Adodc1.Recordset.Fields(0) And (txtpassword1.Text =
Adodc1.Recordset.Fields(1)) Then
frm_management.Show
Unload Me
Exit Sub
```

```
Else
Adodc1.Recordset.MoveNext
End If
Wend
MsgBox ("Please ENTER the CORRECT USERNAME AND PASSWORD"), ,
"ACCESS DENIED!"
End Sub




Private Sub cmdcancel_Click()
Text1.Text = ""
Text2.Text = ""
Text3.Text = ""
Text4.Text = ""
Text5.Text = ""
Text6.Text = ""
Text7.Text = ""
Text8.Text = ""
Text9.Text = ""
Text10.Text = ""
Text11.Text = ""
Text12.Text = ""
Text13.Text = ""
Text5.SetFocus
End Sub




Private Sub cmdclose_Click()
Unload Me
End Sub
```

```vb
Private Sub cmdsave_Click()
Adodc1.Recordset.Update
End Sub



Private Sub Timer1_Timer()
progress.Value = progress + 1
lblper.Caption = lblper + 1
If lblper.Caption = "100" Then
frm_login.Show
Timer1.Enabled = False
Unload Me
End If
End Sub
```

Requirements gathering sample questionnaire

This exercise is for academic purposes only. It is meant to help analyze the kind of system METL uses. All views given by individuals will be confidential.

EVALUATION OF THE OBSTACLES THAT HINDER EFFECTIVE USE OF THE FINANCIAL MANAGEMENT SYSTEMS FOR ORGANISATIONAL DEVELOPMENT.

Instructions: Please answer the questions as appropriate

1. Do you use a computer in places other than your office?
Yes [ ] No [ ],

If YES, Where? (Please tick)

    At work .... ☐

    At school .... ☐

    In a public place e.g. library........ ☐

    In an Internet café .... ☐

2. Do you use the Internet?
YES [ ] NO [ ]

(a) If YES, What do you use it for? (Please tick)
    Information   ☐

    Email   ☐

    Education purpose   ☐

    Ecommerce   ☐

(If other, Please specify)
....
....

(b) If NO, what are the reasons? (Please tick)
    Costs (expensive)   ☐

Not available ☐
Other (Please specify) _____

_____

3. Has your Organization developed an Intranet?
Yes [ ] No [ ]

a) If YES, are outsiders given access and who are they?

_____

_____

b) If NO, why? _____

_____

4. Do you use integrated financial management system in your organization?
YES [ ] NO [ ]

5. If YES, What do you use it for? Does it give you what you want?

_____

_____

6. What are the speed, efficiency and accuracy of the system?

_____

_____

7. Does the systems help you in management decisions making?
      YES [ ] NO [ ]

8. What is the cost of the system?

_____

_____

9. Is the cost affordable to you?
        YES [ ] NO [ ]

10. What do you suggest should be done to make the facility available and more affordable? (Please explain).

_____

_____

_____

11. What risks and rewards does the system have?

_____

Thank you!!