KUKENA TRANSPORT SACCO SYSTEM PROJECT PROPOSAl

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REG NO: CT051/S/1778/15

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SCHOOL: Computing and Information Technology

DEPARTMENT: Information Technology

# DECLARATION

I hereby declare that this project is a true set of the activities and processes undertaken in developing this project and experience gained during my attachment period at Kirinyaga university it’s my original work and it has not been copied or submitted to any other institution, college or any higher learning level for academic credit.

NAME: **KAMBOGO WILSON MACHARIA**

Signature ………………………………….… Date …………………………..

**Supervisors Declaration**

Signature ……………………………………. Date …………………………

# ABSTRACT

The transport system is meant to allow the administrator and the manager to log in into the system and view their information as well as the information concerning the vehicles and services that are available .The organizational history the main reason that result to establishment. The management system is designed to store records and computerizing, giving report and printing the outcomes. The main aim is to reduce time used with old system and usage of book keeping records , data security as all data is stored in the system and manipulated to calculate it in the system. The system developer used interview and observation to get information about the system used currently and calculate from that, analyze the importance of coming up with a system that handle, manage ,secure and ensure easy handling of data. Identification of the drawbacks of the existing system leads to the designing of a computerized system that will replace the existing one, with a new system which is more user friendly and more GUI oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system. Such as less human error, reduce paper work and presumed assumptions, easy to handle, easy data updating, easy record keeping also backup data can be easily generated.

# DEDICATION

I dedicate this project to my fellow students, siblings and my parent and the entire Kirinyaga University Fraternity for the encouragement and special facilitation for my completion of this project.

# ACKNOWLEDGMENT

I first and foremost would like to thank God Almighty for giving me the ability and strength to work and granting me the opportunity and capacity to broaden my knowledge base in the Information Technology field by developing this project.

The special thanks goes to my supervisors and teachers Kirinyaga University , especially the IT department. The supervision and support that they gave truly helped the progression and smoothness of the attachment period. The co-operation is much indeed appreciated. I impress my sincere thanks to my Teacher, Samuel Kimwea.

# ABBREVIATIONS AND ACRONYMS

KyU ….. kirinyaga university .

HRM…..human resource manager.

CIT….computing and information technology.

DOS…dean of students.

COD….chair of department.

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# CHAPTER 1

## 1.0 INTRODUCTION

### 1.1 Background information of the Project

Kukena sacco requires complete computerized transport system due to requirement in speed and security as the organization is growing at a fast rate hence the old system is complete absolute as compared to the current requirement. With this the administrator is able to take records and enroll the vehicle accordingly by entering their details. Currently there are a lot of saccos and a lot of vehicles which calls for a system to handle data and an automated process .It has been done manually by a board of management but its now automated. The sacco manager has at times to manual records decide on the on the availability of some items and demand analysis.

Sometimes due to human error and miscalculations, the sacco goes on error record which output loss of money. The managers are forced to account on error hence some went missing their jobs and others prosecuted.

The managers are forced to manually fill forms daily on account of all the vehicles. The problem may arise if a certain manager issue a list and fails to enter in the records or at times pockets the money, its never realized as its not stated on records who issued the list and to who hence causes a lot of confusion when filling the final record.

Therefore we need to have an easier and effective way of ensuring this effort is convenient and not as tiresome as before.

It is in this regard that l have decided to come up with this system as a solution of all those challenges that are really affecting our organizations especially profit making organizations.

### 1.2 Current System

The current management system is the book keeping record with lists print outs. There’s a need for a centralized information and data management of the sacco. The main challenge is:-The security of data especially when using manual writing.

Some of the records also go missing during annual return period thus calculations become difficulty. In case of loss of records, it calls for accountability from the stated manager as per the period of work.

It may at times involve unnecessary charges in case of loss of cash records.

There are also cases of some drivers not paying for the lists from the sacco, while others pay everytime. This is due to manual work that is not recorded as opposed to using a computerized system.

The manual system used today is also tiresome when working with many or multiple customers in each desk but with the computerized system the job is complete within few seconds. Therefore, no delays for any statistical operations.

### 1.3 Proposed System

The Proposed system is automatic, the manager will use the computer is not yet recognized in the sacco, the manager is also able to search using the name, vehicle or number plate manually written. The manual book keeping enabled bill management system is designed to COMPUTERIZE the entire operations to ensure management of the details for future reference, analysis and security purpose. The top management meet each year to analyze the statistical data during the auditing. This shows that something must be done to ease or fasten this procedure and improve the process accordingly.

The management wants to computerize its system and user management system to facilitate quality of service and efficiency in their management.  Basic objectives are to extend their services, reducing time in activities. This also ensures centralized data handling and paperless in enrollment with reduced manpower.

All users are required to be registered to ensure efficient management. The manager of kukena sacco must also register the maximum number of users he is working with. The details of each user in the system registered then will be uploaded together with their respective information in the kukena sacco website. This will be easy to ensure all those users who are currently in the information system will be allowed to serve kukena sacco customers.

Main challenges are effectively sync internal and external operations in such a manner that job can be finished within time limit.

The users registered will only be allowed to make changes to their current information only through the administrator. The management will ensure that all the users are qualified before they are subjected to the administrator for registration.

### 1.4 Main Objective

To computerize the current system, there is a need to improve on the entry qualification of the users and the system managers. There is also a need to ensure constant power supply from the main source otherwise the administration should look for ways on how to set up a secondary automatic power supply.

### 1.5 Specific Objectives

1. To provide automatic computation.
2. To make data processing and accessing faster hence manual methods will be unnecessary.
3. To provide a computerized data handling.
4. To reduce delays in admission letter delivery.
5. To ensure data and cash security.

### 1.6 Research Questions

What is the most sensitive area of operation in the organization which requires maximum security?

How will the current traansport system improve the standards of the existing manual system, will it be advantageous ?

What security loopholes will the system eliminate?

To what extent will the system reduce manual calculation and assumption involved during book keeping record generation?

How effective will the system be in ensuring efficiency in classifying the vehicle and placing them to their desired records?

How will the system reduce delays in customer service?

How will the system reduce cases of theft?

**SCOPE.**

This project traverses a lot of areas ranging from organizational concept to computing field, thus required to perform several researches to be able to achieve the project objectives.

The area covers include:

• management: This includes viewing institutional history, details and advancement

• Programming language studies, that is C# and Visual Basic

* JUSTIFICATION

The primary objective of the proposed system is to solve the problems in the best way possible i.e. should be integrated with a database which will store data captured from the interface that will be readily available for any required information concerning registration.

It will provide the following solutions.

* It will mitigate the wastage of resources.
* It will reduce paper work, and provide full information concerning the institution.
* It will enhance proper record keeping with backups

**Limitation**

* Computer has to be bought and installed which could be costly.
* Internet connect is required for operation of transactions
* Require a lot of skills
* Require maximum security enforcement.

# CHAPTER TWO

## 2.0 LITERATURE REVIEW

### 2.1 Introduction

This chapter explained the case study of the project. These are two general structures of  
this study, the technique that has been used and the former system that already created which are related, and which you can use to log in to the current set system.

### 2.2 Objectives

On completion successful participants will:

* have an understanding of the volume of freight distributed by different modes of transport in various regions, globally
* understand the transportation techniques which are required to produce optimal, cost effective routes and be able to apply these techniques in various situations
* have a knowledge of the information technology systems available to assist companies decide on the optimum location(s) of their distribution centres and produce optimum vehicle delivery
* understand the impact of the various transport modes on today’s environment
* understand the advantages and disadvantages of outsourcing distribution services and the companies involved in this market
* be fully aware of the performance measures used within the transport sector
* understand the costs associated with road freight transport
* understand the role of a freight forwarder in global transporta

### 2.3References

1. M A Chowdhary and A Sadek. Fundamentals of Intelligent Transportation systems planning. Artech House Inc., US, 2003.
2. Bob Williams. Intelligent transportation systems standards. Artech House, London, 2008

### 2.4 CONCEPTUAL FRAMEWORK

Login page

UPDATE USER

UPDATE STOCK

ABOUT US

ADMINSTRATOR

USERS

2.5 Related literature review (at least three similar systems**)**

**EMUKI TRANSPORT SACCO**

**NDIRANGU TRANSPORT SACCO**

**MANEGENE TRANSPORTSACCO**

**EMUKI TRANSPORT SACCO**

Emuki transport sacco have a system that is cumbersome since everything is done manually. My system will be electronically hence reducing loss of property and theft hence reducing lot of paper work for environmental conservation. Hence this system will create large opportunity for making large profit since every coin will be acconted and no theft will be accounted and no error will be encounted since with this system the computer detect errors that are encounted incase there are printing and working errors enconted

**NDIRANGU TRANSPORT SACCO**

Ndirangu transport sacco have an insecure system where all the staffs can access database because password is common and the administrators are not able to change. My system will ensure that only the administrator has access to the database hence putting more security on the system.my sytem enhances security when unique password are employed to avoid inconfiences and loss of information .

**MANEGENE TRANSPORT SACCO**

Manegene transport sacco has a system that does not update the service after it has been lendered to the customer hence wasting a lot of time updating manually. My system will update immediately the customer is offered any services .My system will also have a backup whereby once the data gets lost can be retrieved back.with this backup and restore setting the system is able to manage all the data without loss since the data are secure.

# CHAPTER THREE

## 3.0 METHODOLOGY

### 3.1 INTRODUCTION

This study was done to ensure that the system proposed is economical to the company.

### 3.2 Feasibility Study

Investigation of a proposed system to decide whether the system can run smoothly with the organization, will the institution realize the benefits that are expected and to decide will the institution to go for it. The purpose of feasibility was not to solve the problem but to determine if the problem is worth solving.

The system has been tested for feasibility in the following points:

### 3.3 Operational Feasibility

Proposed project is beneficial only if they can be turned out into information system. That will meet the organization’s operating requirements. Operational feasibility aspects of the project were taken as an important part of the project implementation. Some of the important issues raised to test the operational feasibility of a project include the following: -

* Was there sufficient support for the management from the users?
* Was the system to be used and work properly if it was being developed and implemented?
* Was there be any resistance from the user that will undermine the possible application benefits?

The system was targeted to be in accordance with the above-mentioned issues. Beforehand, the management issues and user requirements were taken into consideration. So there is no question of resistance from the users that could undermine the possible application benefits.

The well-planned design would ensure the optimal utilization of the computer resources and would help in the improvement of performance status.

### 3.4Economic Feasibility

The  system developer evaluated  the  cost  of  the software  development, hardware acquisition, maintenance, training and labor  against  the  ultimate  income  or  benefits  from  the developed   system. The cost of automated registration management system is approximated to be 1.42 million Kenya shillings though the cost was much high the benefits of the system exceed it.

**Table 1: Economical feasibility of kukena transport Sacco**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.NO** | **ITEM** | **Quantity** | **Unit Cost** | **Total COST** |
| 1. | Computers | 5 | 15000 | 75000 |
| 2. | Server | 1 | 80000 | 80000 |
| 3. | Networking | 1 | 200,000 | 200,000 |
| 4. | Software | 1 | 300,000 | 300,000 |
| 5. | Maintenance | 3 | 5,000 | 15,000 |
| 6. | Training | 1 | 30,000 | 30,000 |
| 7. | **Total** | |  | **1005000.00** |

### 3.5 Technical feasibility

Technical feasibility was conducted and it was concluded that the system was technically feasible. It was based on a smart and simple billing user interface thus it provides an easy access to the users. The system has a database and therefore it will create, establish and maintain a workflow among various entities in order to all concerned users in their various capacities or roles. Permission to the users will be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security. Some of the software and hardware requirements o for the development of the project are available as free or open source. The work for the project is done with the current equipment and existing software technology.

### 3.1.1Data Collection Methods

The system developer used interview and observation tools to gather information from both the staff and the management platform.

### 3.1.2Interviews

Data collection included, first, the interviews with the staff of the Sacco using the the manual operation and explored their opinions about the automated system-based service. The interviews questions were designed as semi-structured qualitative interviews carried out by the researcher. Semi-structured interviews were carried out by asking thematic and open ended questions

The interviews with users and management sampled their wishes and preferences for the new system. The conducted interviews aimed at understanding the new system concept automated system from the users point of view. During the interview, the researcher targeted to find the acceptability degree by users and features which are necessary for the new system. The details of the interviews carried out are   
 the date, duration, technology group, current method of transportation are described. The target group of the interview was narrowed down to were made face-to-face and were conducted by the researcher who encouraged the interviewee to discuss their attitudes and views of the new service. After introducing the concept and logic behind new system   
All interviews were recorded and transcribed by carefully listening to the conversations.

### 3.1.3Observation

The system developer visited the kukena transport Sacco and observed how to access the information concerning the services in the Sacco. The observer noted delays and long queues especially during customer service and also in finding the crucial information concerning the organization. The developer also noted that there was a lot of paper work involved.

This method enabled recording of actual facts about the system allowing the system developer to make conclusions about the efficiency of the system.

**SCHEDULE**

**Work plan of how I will realize the suggested system.**

**Hardware that is compatible with the software that was created that, computers that that can run the software application has been built**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | WEEK 1 | Research on which project to undertake and studying the current system. |  | | WEEK 2 | Research on tools needed to develop the decided project. |  | | WEEK 3 | Learning of new languages for coding the project.  After analyzing them you choose the best language which is user friendly. |  | | WEEK 4 | Coding of the project. |  | | WEEK 5 | Continuation of the coding process of the project. |  | | WEEK 6 | Debugging of the codes for the project. |  | | WEEK 7 | Documentation of the project. |  | | WEEK 8 | Presentation of the project. |  | |

# CHAPTER 4

## 4.0 RESEARCH FINDINGS AND DISCUSSION

### 4.1 INTRCODUCTION

This process of technique is for designing various formats of data entry for both input and output design and storage.

Employees registration

Employee file

Employees details displayed

Sytem file

Vehicles selection

Payment of service

Receipt of services offed

MWIS Database

Passagers delivary

### 4.2 Input design

Here the employee was required to fill the form of the service he/she needs which was displayed on the screen before offering any service to passages

### 4.3 Registration form

|  |
| --- |
| NAME |

|  |
| --- |
|  |

|  |  |  |
| --- | --- | --- |
| SACCO.NO |  |  |

|  |
| --- |
| SERVICE |

|  |
| --- |
|  |

|  |  |  |
| --- | --- | --- |
| ID NUMBER. |  |  |

|  |
| --- |
| TOWN |

|  |
| --- |
|  |

### 4.4 Output design

Output was the information delivered to an employee. The information delivered was useful to them. They were able to know what they had bought, at what time, and tellers name in case the commodity was refunded it was easier for the customer to be served easily than before.

Record Number

service Name

Quantity

cost

Cash

Balance

Date Issued

Teller Name

# *CHAPTER 5*

## 5.0CODING

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xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"

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</Grid>

</StackPanel>

</DockPanel>

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</ImageBrush>

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<Button x:Name="findCarByPlateNumber" Content="FETCH" HorizontalAlignment="Left" Margin="156,153,0,0" VerticalAlignment="Top" Width="116" Height="49" Background="#FF88EC10" FontFamily="Cooper Black" FontSize="24"/>

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</Button>

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</DockPanel>

</Page>

# CHAPTER SIX

## 6.0TESTING AND IMPLEMENTATION

## 6.1 UNIT TESTING

**LOGIN FORM TESTING**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Test** | **Expected**  **Input** | **Expected**  **Output** | **Actual Input** | **Actual Output** |
| 1. | Login Form | Username, Password | Homepage | admin,  1234 | Homepage |

**CLIENTS FORM TESTING**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Test** | **Expected**  **Input** | **Expected**  **Output** | **Actual Input** | **Actual Output** |
| 1. | Clients Form | Clients Details | Msgbox (“Client added”) | Client’s Details | Msgbox (“Client added successfully”) |

**TRANSACTION FORM TESTING**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case ID** | **Test** | **Expected**  **Input** | **Expected**  **Output** | **Actual Input** | **Actual Output** |
| 1. | Transaction Form | Transaction Details | Msgbox (“Receipt added successfully”) | Receipt’s Details | Msgbox (“Receipt added successfully”) |

### 6.2: SYSTEM TESTING

This is where the debugging and correction of errors during the program development occurs. It helps the programmer to find out whether the program is working as expected.

The program testing should include entering invalid data and exceptional items to text whether the system reacts the right way and generate the required reports.

## 6.3: INTEGRATION TESTING

This is testing of the system on the bases of whether it’s able to fit in the organization, it’s is normally due to the following factors.

* To find out system errors which have not yet been detected.
* To find out exactly what the demand of the new system are.
* To find out whether any major changes in the operating procedures could be necessary.

### 6.4 : SYSTEM REQUIREMENTS

The following are the requirement which require to be met in order to have the system work properly. If not met the system may fail.

* Windows XP and Above Operating system
* At least 2 GB RAM
* 160 GB free hard disk memory
* Receipt printer
* Computer

### 6.5 : SYSTEM IMPLEMENTATION

### 6.5.1PARALLEL CHANGEOVER

The system implementation technique used will be **Parallel Changeover Strategy.** This will enable the users of the system adapt to the system easily and become friendly with it. After the new system has been fully adapted into the organization the old manual system will be removed from the organization leading to efficiency and effectiveness in the organization.

### 6.5.2USER TRAINING

The staffs who will work with the proposed system will be required to have the knowledge on computer prior to the live of the running system. This will enable them to adopt the use of the computerized system with ease, and they will be able to handle the computers and their peripherals mostly the storage Medias with care.

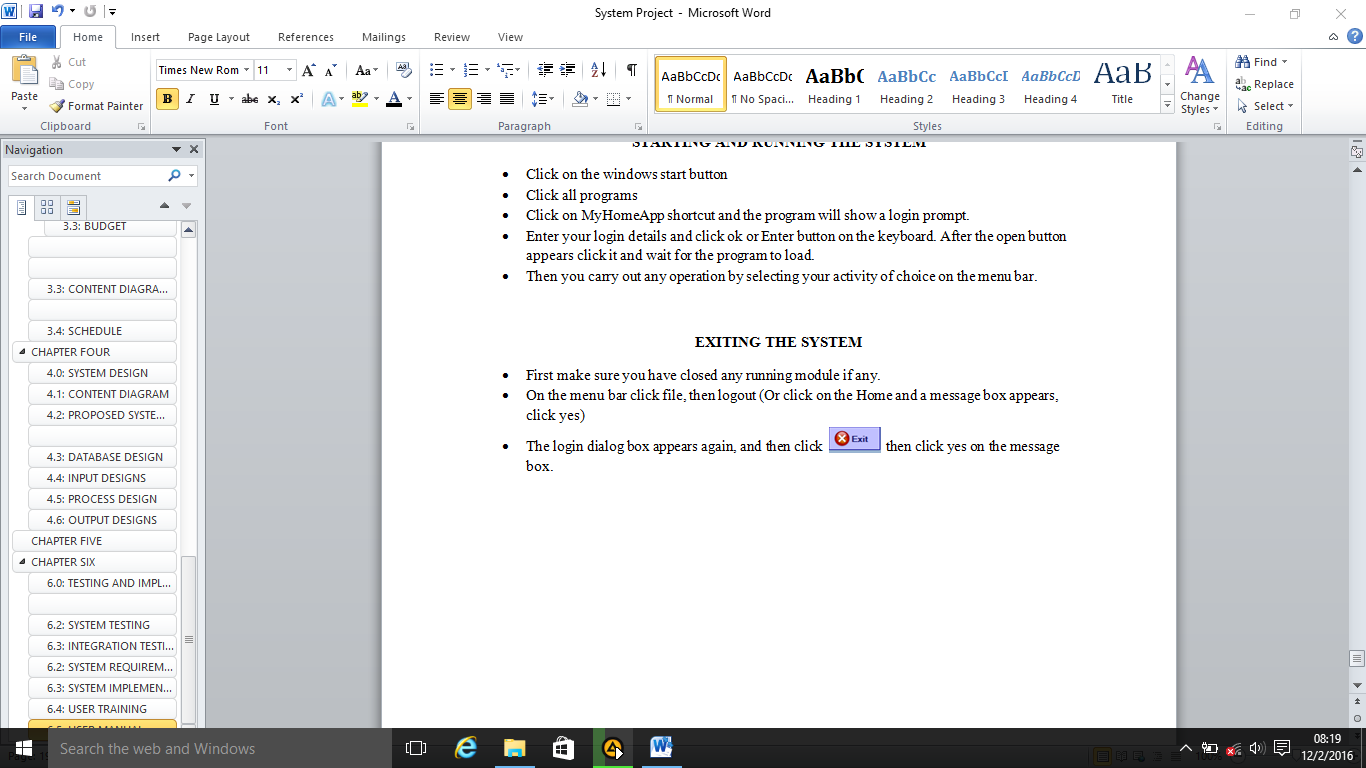
They will also need the knowledge on databases and data entry techniques. The extent of training of the staff will depend on their knowledge of the computers application.

The methods of training will be:

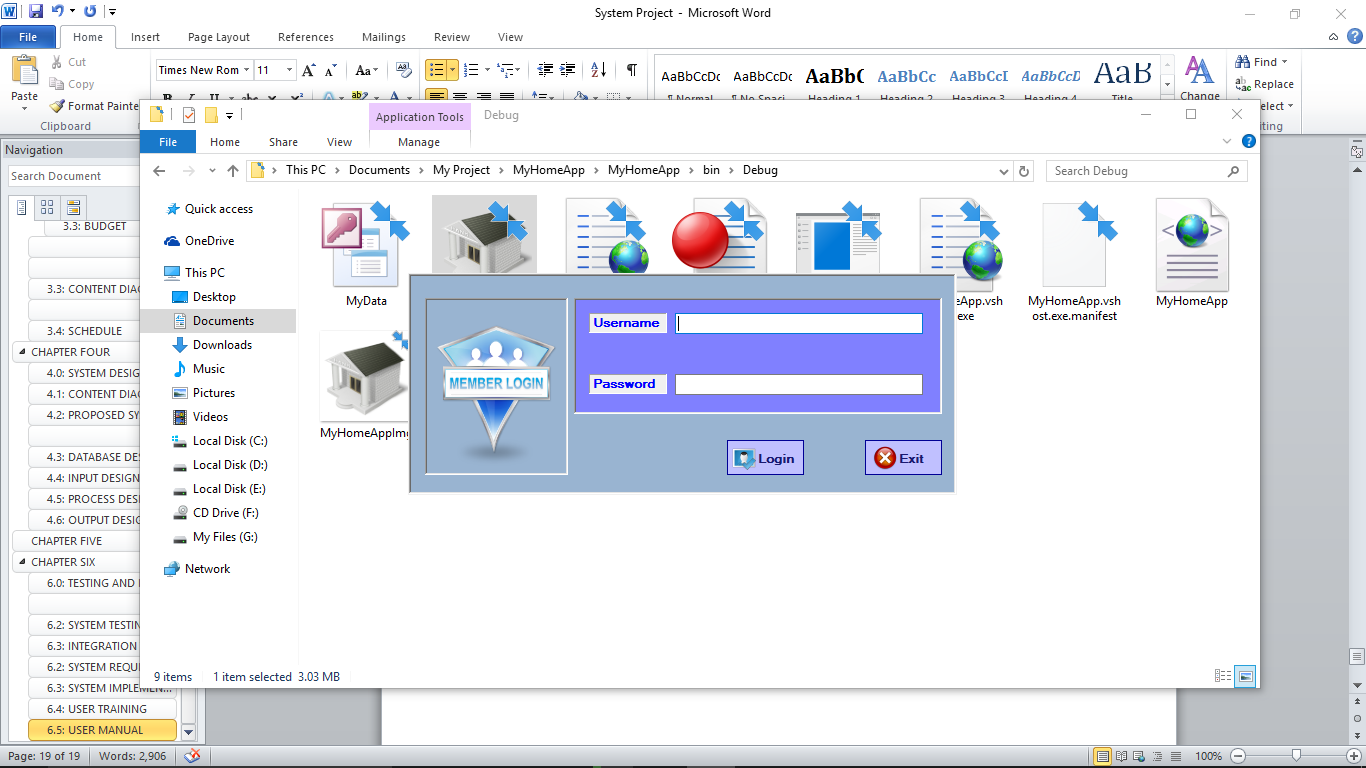
* Using operational manuals for references in the system running
* Computer practical lessons
* Observation as the designer demonstrations how different operations are carried out.

### 6.6: USER MANUAL

**STARTING AND RUNNING THE SYSTEM**

* Click on the windows start button 
* Click all programs (All Apps on windows 10)
* Click on My Home App shortcut and the program will show a login prompt.
* Enter your login details and click ok or Enter button on the keyboard. After the open button appears click it and wait for the program to load.
* Then you carry out any operation by selecting your activity of choice on the menu bar.

**EXITING THE SYSTEM**

* First make sure you have closed any running module if any.
* On the menu bar click file, then logout (Or click on the Home and a message box appears, click yes)
* The login dialog box appears again, and then click  then click yes on the message box.

# CHAPTER SEVEN

# 7.0: CONCLUSIONS

There are very many benefits which will be realized by organization if the implement the proposed system. They include:

* The system is easy and friendly to use.
* The operational cost will be reduced due to the reduction of paperwork in the organization and time taken to extract the required information.
* The system produces information easily when needed hence enhancing easy decision making.
* The system is flexible and offers room for expansion through incorporating other modules to handle the rising needs of the institution.
* The portability of the system enables it to be used in any computer.

I therefore conclude that the system will perform best if installed in the organization for the day to day operations.

### 7.1: RECOMMENDATIONS

This proposed system if installed in the organization it would be the best as it will solve all the observed problems in the current system. High rage of data security and accuracy will be noted and cost of doing many things will be reduced.

I therefore recommend that the New computerized system to be implemented in the organization for the benefits of the organization and its clients.

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