MODELING AND IMPLEMENTING A STORES MANAGEMENT INFORMATION SYSTEM USING VB6 AND MS-ACCESS

CASE STUDY: KITANTE HILL SCHOOL

By

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Declaration

I, NELSON DOUGLAS SENYONJO do hereby declare to the best of my knowledge this graduation project is my original work and that it has never been submitted to any University or any other institution.
The Literature and citations from other people's work have been duly referenced and acknowledged in the text, footnotes and bibliography.

Signed: 
Nelson Douglas Senyonjo
Student
Date: 02/09/2005

Signed: 
Mr. Sebugwawo Dennis.
Lecturer
Date: 02/07/05
Dedicated to my Mother and my Brother with love.
Acknowledgements

I express my sincere gratitude to God, with whose favor, compassion, grace and mercies, I have managed to make it to this level of education.

To my dear mother who has worked so tirelessly to see to it that I go to school and to get the best out of it. Bless U mama.

To my supervisor Mr. Sebugwawo Dennis for his support, guidance and advice during the time of carrying out this project.

To my Brother Izak and my friends, Citra, Hum, Don, Ronald and Charles a.k.a CharlieB for their resourcefulness towards the success of this project.

Last but not least, to the staff of Kitante Hill School for availing me with their facilities and furnishing me with the necessary information that formed the back born of this project.
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CHAPTER ONE.
INTRODUCTION.

1.1 Background

1.1.2 Origin and Purpose.
Kitante Hill School was established in 1960 by the Government of Uganda. By then it was known as Inter-Racial Senior Secondary School. It was meant to cater for the education needs of the foreigners in Uganda before independence and for the foreign missions accredited to Uganda after independence.

1.1.3 Mission Statement and Motto.
To provide quality education for both boys and girls to help them become self reliant.
Motto: Seek Knowledge and Serve.

1.1.4 Population.
The school was built to accommodate approximately 500 “O” Level students, boys only, with about 20 staff members most of whom were Europeans.

Currently, the school has both “O” and “A” Levels with a population of approximately 1500 students and 130 staff members both teaching and non-teaching staff.

1.1.5 Location
Kitante Hill School is on a total land area of about 30 acres located on Acacia Avenue – Somero Road, P.O. Box 7102, Kampala. Telephone number 041 – 233951.

1.1.6 Administration.
The school is overseen by the Board of Governors and the day to-day running of the school is currently administered by the Head teacher Mr. Mbaziira Swaibu Mubiru.
1.2 Statement of the Problem.

Kitante Hill School has a total of 15 departments (i.e. Physics, Biology, Chemistry, Computer, Art, English, Islamic Religious Education, History, Geography, Political Education, French Luganda, Mathematics, Agriculture departments) all of which highly utilize the services of the school store.

Apparently, the School predominantly uses a manual system to process information on incoming scholastic materials from suppliers. There is use of bin cards and tabulated query logbooks to capture and store day-to-day details (i.e. receipts quantities, item’s worth, disbursement and balances).

With the current methods in place, data arrangement, tallying, summarizing, detecting of shortages and generation reports at the end of the month leaves a lot to be desired.

The system is undeniably lengthy, error prone and susceptible to data piracy. Inefficiency and inaccuracy of data input and output may easily cause discrepancies and errors in reports so generated.

With awful security levels and high rate of human intervention, Kitante Hill School risks information corruption, loss and leakage to unauthorized personnel.

The smooth running and automation of the operations of the school store is thus of paramount importance.
1.3 Objectives of the Study.
Stores Management Information System was designed with the following objectives in mind;

To provide for standardized data capture and arrangement forms for receipts, disbursements, and balances of scholastic materials in Kitante Hill school stores.

To produce timely professional-looking and summarized reports that can intern be used for decision making by the school’s administration.

To provide a point-and-click user friendly environment that provides pop up search facilities for finding the correct options easily, readily accessible Help information on screen via context-sensitive help areas and a comprehensive manual for user support.

To produce a system with incredibly easy backup and restore options to ensure security. Provide built-in data integrity that checks to ensure that there are no physical or logical errors on data.

To model and implement a system that has level password control to restrict access for other system users.
1.4 Significance of the Study.

Most organizations have of late opted for the use of customized computerized Management information systems in place of manual systems. Computerized systems increase operations efficiency by reducing the work load, they have the ability to store vast amounts of data in small spaces and timely retrieve this data.

With computerized systems, manipulation, analysis and presentation of data processes are quicker and accurate as opposed to manual systems. This thesis is a documentation of the formulation, development and implementation of an Automated Stores Management Information System for Kitante Hill School. It is a windows based system, developed with ease-of-use in mind, uses a combination of windows default settings with system prompts that enable easy

1.5 Scope of the Study.

Automation boundary.

The project was restricted to the development and implementation of an automated customized Stores Management Information System that would; integrate KHS’s daily stores operations i.e. capture details for in-coming items, store records of these items from suppliers, keep track of supplier details, cater for disbursements to the different departments and generate consumption and demand traits of the departments.

The system would also enable consistent and timely search of day-to-day records and generation of reports on request. The system is also restricted to handling only those items brought directly and stored in the school stores.

The design of the system under this project is in modules and will be handed over to the management of Kitante Hill School after a successful testing and presentation. The management is expected to take full responsibility for the proper maintenance of the project.
The project is expected to largely benefit the school especially management in accessing information and making important decisions in time.

1.6 Limitations of the Study.

Facilities: Kitante Hill School lacks the required equipment in the stores onto which the designed system will be installed. Demonstrations of the designed applications have whoever been done using computer facilities in the Accounts department of the school.

I have also recommended and encouraged the school administration to purchase and install a computer and printer for the store manager to enable smooth work flow.

Low technology drive: The top administration and majority of the school staff have a low drive for information systems as a means of increasing productivity in the departments.

The researcher observed that decisions on matters concerning purchase and investment in IT infrastructure are mostly left on paper, not implemented and associated with spending a lot of money.

The other factor may be time frame for which to complete the project on part of the researcher.

However, the project designed is relatively small in terms of size in relation to the size and information requirements of the school, due to the available financial resources; therefore, the cost of development of the project has been genuinely minimized.

The main resources sought and applied for this project include information about the systems, inputs such as the hardware resource i.e. a personal computer, and development software resources.
1.7 Project Output

- At the end of the project the information end users will have the ability to easily access the data.
- The task of manually accessing information that is tiresome and time consuming will finally be eliminated.
- The costs of manual production of information will have been eliminated.
- There will be easy flow of information within the organization.

1.8 Project Activities.

- Establish a working relationship with organization management and other users.
- Study the existing system.
- Purchase equipments and materials.
- Carry out interviews with the organization members and staff.
- Observe the operation of the existing system.
- Develop a prototype.
- Draw plans for the architectural design process.
- Develop a software design.
- System testing.
1.9 **Involvement and Participation.**

The school management and staff were involved in the project design and implementation.

The management and staff provided the required information on the system and advice on the new system being set up.

In the end the same people were be able to access and use the system designed to access the data.

This report is organized in five chapters.

Chapter one is the Introduction. It looks at the general Introduction, Background of the Case, Objectives of the study, significance, scope, project output, project activities, involvement and participation.

Chapter two is the Literature Review. It surveys the work of other authors related to this study.

Chapter three is about System Analysis and Design. It discusses system development and design techniques, looks at the feasibility analysis, system requirements.

Chapter four is the System Implementation. It discusses procedures employed, planning and work schedule tasks, system and software designs including snap shots of the running application as well as system specifications.

Chapter five is Recommendations and Conclusion. It discusses issues that the researcher felt should be addressed by the organization (Kitante Hill School) to facilitate and fully utilize the several procedures of the designed information system.
CHAPTER TWO.
LITERATURE REVIEW

2.1 Introduction.

This chapter briefs us about the work one by some students in the past, which is in line with
my log in, data capture, validation and report generation in addition to the basic functioning of
a Management Information System

2.2 The concept of a Management Information System.

MIS is a tool that summarizes and reports on the organization’s basic operations. The
basic data used for operation are processed, compressed and are usually presented in long
reports that are produced on a regular basis.

The underlying function and objective of MIS therefore lies in serving management
concerned with weekly, monthly, and yearly results—not day-to-day activities.

Management information system combines various elements that facilitates in data and
information flow. With its ability to process data, the computer is now regarded as the most
important and central element in an information system. With such great efficiency, speed and
accuracy, and increased volumes of data processed and stored, the computer has facilitated
efficient information flow that has facilitated and widened the scope of management decision
making as regards planning and control of operations.
2.3 The Concept of a System.

There are various systems all of which originate from other systems. Scientific system, human system, computer system, manufacturing and accounting, are all systems.

A system consists of a set or a group of interrelated elements, interacting components working together to achieve a stated objective. The basic interacting components that make up a system include,

- **Inputs**, i.e. raw data for processing, this is the start up component on which the system operates. The inputs may comprise of raw materials, physical resources, human resources, knowledge or information.

- **Processing**, transforming the raw data into useful information, makes possible the transformation of input into output. The activities involved include; sorting editing, classifying and formatting.

- **Output**, the final processed information for the end user, the result of operation. It is the objective for which the system is defined.

- **Feed Back**, i.e. the function that makes possible the control over the system operations.
2.4 Works Done

*Tumwebaze Minorita - Club Silk Limited.*

Tumwebaze Minorita, May 2004 Mbarara University of Science And Technology (Faculty of Development Studies Department of Computer Science) developed a Management Information System for Club Silk Limited that would integrate CSL’s payroll with daily personnel records, validate, capture and store personnel records. The system would also enable consistent and timely search of day-to-day records and generation of reports (i.e. beverage report, advances report, shortages report, loans report and pay sheets), as well as pay slips.

I found her work interestingly helpful as far as my project was concerned due to the fact that both information systems accommodated the capture of day-to-day records and generation of reports that enable top management to make necessary decisions.

Tumwebaze Minorita used Microsoft Visual Basic 6.0 (Ms-VB 6.0) programming language for her interface development in concurrence with DAO and SQL code-lines and modules to merge the program interface with an anticipated Microsoft Access database.

MS-VB 6.0 system programming was chosen for its windows-based productivity nature and the subsequent aspects such as; user friendliness and structured design in which large chunks of code may be broken down into smaller and easily manageable modules easing debugging, error trapping and validation during system designing.

My project however has been designed to serve the purpose of a Stores Management Information System while hers was designed to handle Computerized Personnel Information (Pay master) which in many aspects is using the same concepts as mine.
CHAPTER THREE
SYSTEM ANALYSIS AND DESIGN

3.0 Overview
Facts about the present manual system were congregated to guarantee that all strengths and weaknesses are dissolved. Thus, Kitante Stores Management Information System was designed with many of the weaknesses eliminated, whilst retaining the strengths. To realize this, the subsequent methods of system analysis as well as design tools were employed.

3.1 System Development and Design Techniques.
There are various and numerous methods used in system development that guide the life cycle of a software project.

The system development life cycle involves a number of essential technical activities that specifies and combines both project design specifications in the initial stages and working programs in the later stages of development. This can be clearly illustrated by the V-model design process.

![Diagram of the V-model of system development](image)

Fig.3.1 The V-model of system development
3.2 The Waterfall Model.

The system was developed following the waterfall system development model, which allows a certain order in the process. This called for performance of quality assurance tests after every stage of the design and it involved a number of ordered activities performed to obtain an information technology system.

3.2.1 System conceptualization.

The researcher examined all the requirements needed and related them to one another to determine their inclusion in the system.

3.2.2 System analysis.

The system requirements were gathered at this stage, examined and determine how these requirements would be integrated into the system. This called for extensive communication between the management and staff of Kitante Hill School and the system developer to come up with a conclusive solution.

3.2.3 System Design.

At this stage the researcher looked at how the system was to be constructed using the identified requirements, in order to perform the required functions. The researcher looked at the data requirements, software construction and the design of the interface, database and coding.

![Waterfall system design model](image-url)
3.2.4 Coding

This is the programming part of the software development process. The requirements that were gathered during the system analysis stage and the system specifications were presented in computer code.

3.2.5 System Testing

Testing was carried out to ensure that the system software created is working correctly and efficiently. Testing was aimed at examining the internal efficiency and external effectiveness of the software. External effectiveness tests to verify the functionality of the software in relation to the system design and the internal efficiency tests the efficiency of the developed computer code, its standard and the documentation.

3.3 Feasibility Analysis Reports.

From the feasibility study, the researcher concluded that Kitante Hill School needed a manageable easy and user friendly Information System in order to improve on its stores information system.

3.3.1 Technical Feasibility Study.

The researcher used his ability and resources within his reach to design and develop the Management Information System that meets the challenges of the school stores, with the use of familiar development tools and not forsaking system user friendliness.

The researcher used his own computer equipment and software to develop the system.

3.3.2 Economic Feasibility Study.

The researcher found out that Kitante Hill School is capable of maintaining and updating the information system with the help of their IT coordinator. The IT coordinator will help to provide technical support to end users at Kitante Hill School, install and connect
computer hardware and peripherals, such as workstations, network interface cards, printer etc and troubleshoot whenever hardware, software and network problems arise.

3.3.3 Operational Feasibility. 
After the survey, it was found that the information system will operate under a cool environment i.e. in the room where the computer system and software will be installed, networked to the accounts department and head teachers’ office to enable information sharing.

The end users (i.e. store manager and assistant) are also going to be trained with the help of the schools’ IT coordinator on how to use the workstation so as to easily interact with the developed system.

The researcher thus concludes that all aspects are feasible and hence, should proceed effectively and efficiently.

3.3.4 Systems Requirements. (Minimal System Requirements).
After the systems investigations and feasibility study, the researcher was able to come up with the systems requirements, which refer to minimal requirements for the Stores management information system to operate on a computer; the functional requirements, which are the specific tasks that a user needs the system to accomplish; the non-functional requirements, which are the constraints that the information system should meet.

Stores Management Information System was developed on a personal computer running on;

- **Hardware requirements.**
  1. Over 5 GB free hard disk space,
  2. PIV processor (2.4GHz)
  3. 128 MB RAM and
  4. 800 x 600 pixels as its screen resolution.
Software Requirement

The software required to develop and document this information system include;

- Window Xp professional - an operating system,
- Microsoft word – used for word processing
- Snagit Studio 6 – used to capture screen shots of the application.
- Microsoft Access – used for database design
- Microsoft visual Studio, with a visual basic 6.0 design tool – interface and form designs.

Stores Management information system therefore runs on any personal computer (PC) with screen resolution 800 x 600 or higher, a Pentium II (or faster) running Windows 98 /NT/ 2000 or XP. It requires at least 64 MB or RAM, 100 MB free hard disk space and a dot matrix printer.

3.4 Methods used for Data Collection.

3.4.1 Interviews
To ascertain the factual nature of the crisis, interviews were conducted with Kitante Hill School staff members i.e. the top administrators, the stores manager, assistant, and several heads of departments. Interviews were accomplished by inscribing different areas of concern to be covered, determining the temperament/ nature of information sought from a particular interviewee, and finally drawing an inventory of appropriate questions for the interviewee.

As a standard technique of data collection, the use of interviews is profitable in a way that; interviews have an elevated response rate, a better completion rate and enable the interviewer to practically observe and record the non-verbal communication behavior of the interviewee.
This is largely attributed to the level of participation of the respondent (interviewee) during the interview.

The interview was basically about how they collect and store their records, what limitations they faced with their current manual system, and what features they would desire to have in the newly proposed system in order to overcome the stated limitations.

3.4.2 Observation of Documents.
The researcher got documents needed to gather information about the current system. These included Local Purchase orders (LPOs), Good Received forms and the Bin card for recording incoming items in the store, also used to capture details on issues and balances.

![Data capture form for the stores (Bin Card)](Fig.3.3)
The above mentioned technical fact finding methods had the following advantages;

- I found interviewing and observation of documents, the appropriate methods to use because they helped me to quickly arrive to the necessary and relevant information without any technical tools in analysis as would have been with the measurements and questionnaires.

- Interviews conducted allowed the interviewer the opportunity to clearly explain to the interviewee the required relevant information, thus avoiding question misunderstanding that could have come up if questionnaires had been used.

The use of interviews and document observation came quite easy for the interviewer since they are part of the Kitante Hill School staff; therefore information was readily available from the relevant sources and respondents.

3.5 System Architecture

The system architecture is established to reflect the basic structure of the system. It is on this architectural design that the system has been built.

Fig 3.4. System Architecture: (Decomposition Diagram)
CHAPTER FOUR
SYSTEM IMPLEMENTATION

4.1 Introduction.
Implementation deals with the process of converting the system specifications into executable program. System specification involves processes of software design and programming. Software design is the description of the structure of the software to be implemented, the data that is part of the system, the interfaces between the system components and the algorithm used.

The system implementation was carried out in a parallel form. The new system was installed and allowed to operate alongside the old system until such a time when the new system is adapted by the management of KHS and end users then the current system will be cut off.

4.2 Procedures.
4.2.1 Planning and work task schedule
Many of the implementation activities were taken in parallel to minimize implementation time. Acquisition of data, design of database and forms were carried out simultaneously.

> **Implementation tasks**
  - Planning the tasks and activities
  - Developing procedures for installation and testing
  - Completion of the system software
  - Acquisition of required hardware
  - Generating files and designing database
  - Designing forms
  - Testing of the system software
  - Testing the whole system
4.3 System and Software Design

4.3.1 System Specifications

The new system is designed to capture the required data, process, store and make it available for manipulation by management for planning and control of operations.

The data to be captured include daily reports on activities, supplier details, items received, disbursement, printing of items taken slips, and generation of required reports.

The system is designed with a user friendly environment. The system interface is designed in such away that it has an attractive system desktop that serves as an access to the modules of the system.

The system contains various modules in form of output/input forms which have been designed to capture different data as required.

4.4 Screen Shots of the Package.

4.4.1 Login and Main Program Window.

![Login Form](image)

Fig 4.1. Login Form
The Log in form allows for multi-user log in i.e. Administrator with unlimited privileges such as viewing system users and dropping users, and local user with limited privileges i.e. they only have access to their accounts.

Fig. 4.2. Main Program Window.
4.4.2 Management of Stock and Suppliers.

KHStores as a system requires that stock items, categories and suppliers be entered into the system database before any other operations can be called into play. The Manage Stock and supplier window is displayed in the main program’s workspace when the following procedure is executed: Click Manage Stock on the Menu bar.

This window requires that the user enters Delivery Number (one that appears on the goods received form), Date when the items were received and entered into the system, Item category, quantities entered, unit cost and name of supplier.

4.4.3 Incomplete Form Entry.

The system rejects item entry form when certain details are not or are wrongly entered in their corresponding input fields. User messages in this case pop up alerting the user of missing entries or wrongly input data.
4.4.4 Add units and Add Item Category pop ups.

Fig. 4.4 Add Units

Fig. 4.5 Add Category.

The Add Units, and the Add Category pop-up windows are also incorporated into the system to enable the user to add different item categories and their corresponding units of measurement e.g. Liters (Ltrs), Pieces (Pcs), Kilograms (Kgs) etc.

4.5 Disbursement of Stock.

As pointed out earlier, the entire community of Kitante Hill School utilizes the services of the school store in one way or another. Also the whole idea of developing a Stores Management information system for KHS was to streamline and be able to record incoming as well as track outgoing items.

The disbursement window accessed through the Standard menu bar (Manage Stock – Disburse Stock) or by clicking its icon on the tool bar, has been designed to cater for these needs.
Fig 4.6 Disbursement Window.

The system captures disbursement number, requisition number and department, which fields will be used to establish the consumption trends of a particular department.

The user selects Item category from the combo box and thereby activating the item names that fall in this category.

The system keeps track of the number of items in stock (value entered during data capture of incoming items), makes the necessary deductions and shows the balance in stock as the user caters for the different requisitions that come in.
Through this feature, the system user can therefore tell that the store is running low on certain items and therefore contact is made with the suppliers through the schools administration.

4.6 Report Generation.

The reports Window is accessed by selecting Reporting – (Reports) on the system standard menu bar or by clicking the Report icon on the standard tool bar. This window loads the reports that the system can generate for the user. I.e. Balances, Stock, and Issues.

4.7 System Security.

The security window is accessed by Clicking System Users – Create User Accounts on the standard menu bar.
4.7.1 Creating User Accounts.

To be able to create User Accounts, the system user logs into the system as an administrator thus users cannot create other user accounts. By clicking “Create Users” tab in the security window, the administrator can specify the new account’s username and a temporary password that can later be changed by the new user.

![Create Users](image)

Fig. 4.8. Create Users.

4.7.2 Changing User Passwords.

![Change Password](image)

Fig. 4.9 Changing User Passwords
System Users; both administrator and system users can change their passwords without any restrictions. However to create a new password, the user needs to avail the system with his/her new passwords. This technically rules out possibilities of one user changing the other user’s password without notice. Passwords can be changed on the “change password” tab in the security window.

4.7.3 View and Delete Users.

System Users can only be deleted by administrators. On the “View Users” tab in the security window, is a list showing a list of all users existing in the system. From this, the administrator can select which user to delete from the system.

Fig. 4.10 View Users.
4.8 Database (Data input)

KHstores is a database driven system application. When it is installed, a folder named “KHstores” is created in the “Programs file” folder on the client’s computer. In the KHStores folder there is a Microsoft Access database named “khstores.mdb”. The database khstores.mdb captures records of the running month. At the end of the month, records in the “khstores.mdb” database are automatically carried out and appended to the other records in the “archives.mdb” database. This is employed to rule out Microsoft Access’ s records limitations. It also eases the process of backing up the system database, since the operational database is always manageable in size.

4.8.1 Entity Relationships.

Entity relationships exist between some of the database tables in the khstores.mdb database. Relationships in the database were achieved by linking common fields that exist in various tables. This reduces data duplication in a bid to save storage space. The tables; suppliers, units, Disburse –item, disburse, departments, and category are linked to the items tale.

4.8.2 The Passwords and user names.

The Password table in the khstore.mdb is named “users”. The table stores usernames, their corresponding passwords as well as the user status. The field “Username” is a primary and unique key index in this table.

Table 4.1 Passwords and user names table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Field Type</th>
<th>Field Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>Text</td>
<td>25</td>
<td>User name</td>
</tr>
<tr>
<td>Password</td>
<td>Text</td>
<td>25</td>
<td>User password</td>
</tr>
<tr>
<td>Status</td>
<td>Text</td>
<td>15</td>
<td>Administrator or User</td>
</tr>
</tbody>
</table>

4.8.3 Items disbursement.
Table 4.1 Disbursement table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Field Type</th>
<th>Field size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant Name</td>
<td>Text</td>
<td>25</td>
<td>Name of applicant</td>
</tr>
<tr>
<td>Department</td>
<td>Text</td>
<td>25</td>
<td>Department from which applicant belongs</td>
</tr>
<tr>
<td>Designation</td>
<td>Text</td>
<td>25</td>
<td>Title, i.e. Head of Department, teaching staff, support staff etc.</td>
</tr>
<tr>
<td>Disbursement_date</td>
<td>Date</td>
<td>Date</td>
<td>Date</td>
</tr>
<tr>
<td>Purpose</td>
<td>Memo</td>
<td>100</td>
<td>Stating purpose for which item id being requested.</td>
</tr>
<tr>
<td>Recommender</td>
<td>Text</td>
<td>25</td>
<td>Head of department</td>
</tr>
<tr>
<td>Disburse_no.</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Requisition_no.</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

4.8.4 Items Entry.

Table 4.2 Items Entry Table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Field Type</th>
<th>Field Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>item_name</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>item_description</td>
<td>Text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>category</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>item_date</td>
<td>Date</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>supplier</td>
<td>Text</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>quantity</td>
<td>Number</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>unit_cost</td>
<td>Currency</td>
<td>Currency</td>
<td></td>
</tr>
<tr>
<td>units</td>
<td>Text</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>remarks</td>
<td>Memo</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>item_No.</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

4.8.5 Managing suppliers.
### Table 4.3 Suppliers Table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Field Type</th>
<th>Field Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier_name</td>
<td>Text</td>
<td>25</td>
<td>Name of supplier</td>
</tr>
<tr>
<td>Contact</td>
<td>Text</td>
<td>25</td>
<td>Contact person</td>
</tr>
<tr>
<td>Addr</td>
<td>Text</td>
<td>50</td>
<td>Physical and postal address</td>
</tr>
<tr>
<td>Tel</td>
<td>Text</td>
<td>20</td>
<td>Telephone number</td>
</tr>
<tr>
<td>Fax</td>
<td>Text</td>
<td>20</td>
<td>Fax number</td>
</tr>
<tr>
<td>Mob</td>
<td>Text</td>
<td>15</td>
<td>Mobile number</td>
</tr>
<tr>
<td>Email</td>
<td>Text</td>
<td>25</td>
<td>Email address</td>
</tr>
<tr>
<td>Remark</td>
<td>Memo</td>
<td>100</td>
<td>Notes</td>
</tr>
<tr>
<td>Sup_No.</td>
<td>Text</td>
<td>25</td>
<td>Supplier number</td>
</tr>
</tbody>
</table>

#### 4.8.5 Managing item units

### Table 4.4 Units Table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>c(s)</td>
<td>Text</td>
<td>Pieces</td>
</tr>
<tr>
<td>g(s)</td>
<td>Text</td>
<td>Kilograms</td>
</tr>
<tr>
<td>tr(s)</td>
<td>Text</td>
<td>Liters</td>
</tr>
<tr>
<td>bag(s)</td>
<td>Text</td>
<td>Bags</td>
</tr>
</tbody>
</table>

#### 4.9. Implementation (source Code)

Below is a sample of Visual Basic Data Access Objects (DAO) code lines that were used in the implementation of the system design. The following code is executed when the user clicks the “Login” button on the login form.

```vbnet
Private Sub Command1_Click()
    Dim db As Database
    Dim rs As Recordset
    Dim Find As String
```
Set db = OpenDatabase(App.Path & \"\khstores.mdb\")
Set rs = db.OpenRecordset("users", dbOpenTable)

Find = Text1.Text
With rs
  .Index = "username"
  .Seek "="; Find
If .NoMatch Then
  MsgBox ("Unknown user!"); vbExclamation
  Exit Sub
Else
  If rs.Fields(0) = Text1.Text And rs.Fields(1) = Text2.Text Then
    If rs.Fields(2) = "user" Then
      WorkArea.mnuCreate_User.Enabled = False
      WorkArea.mnuChange_password.Enabled = False
      WorkArea.Show
    Else
      WorkArea.Show
    End If
  End If
  Unload Me
Else
  MsgBox ("Wrong password!"); vbCritical
  Exit Sub
End If
End If
_Close
End With
End db.Close
End Sub

Private Sub Command2_Click()
Login.Show
Text1.Text = ""
Text2.Text = ""
End Sub

Private Sub Text2_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
  Command1_Click
End If
End Sub
Private Sub Command1_Click()
On Error GoTo hunky
Dim nellydb As Database
Dim nellyrd As Recordset

If Text1.Text = Empty Then
MsgBox "Missing Information!", vbCritical, help
Exit Sub
End If

Set nellydb = OpenDatabase(App.Path & "\khstores.mdb")
Set nellyrd = nellydb.OpenRecordset("Category", dbOpenTable)

With nellyrd
  .AddNew
  nellyrd!CatDescription = Text1.Text
  .Update
  .Close

Text1.Text ="
MsgBox "Category Added to Categories!", vbInformation, help

End With

hunky:
Select Case Err.Number
Case 3022
MsgBox "User Err: Category name already in use!", vbCritical, help
Exit Sub
End Select
End Sub
CHAPTER FIVE
RECOMMENDATIONS AND CONCLUSION.

5.1 Recommendations.
To facilitate the process of printing requisition slips and keep all these slips as a running sheet; installation of a dot matrix printer and purchase of two foil self carbonating A4 – paper – perforated into three sections of the height of each requisition slip is recommended.

Kitante Hill School administrators should consider providing more facilitation and support as well as materials required by the system analyst, if they are to ever obtain a total workable system.

5.2 Conclusion.
Designing and documenting KHstores Management Information System was such an uphill climb. I have God alone to thank for enabling me get to the top. Phew!!

The need for a computerized Stores Management Information System at Kitante Hill School is however long overdue; it is therefore my wish that the school administration gives this system its due attention and to adopt.

5.3. Future work.
Documenting a comprehensive animated help facility for the application, and to avail it to the user just by the click of a mouse button.
Also the system shall be improved by way of enabling the user to edit requisition slips in terms of deletion or addition of items onto the list without necessarily entering them twice.
Bibliography


3. Gary Beene’s, VB Information Center, 
   
   Http://www.garybeene.com/vb/tut.htm