

# **MANAGEMENT INFORMATION SYSTEM FOR KIAMBU COFFEE FACTORY**

BY

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A Graduation Project Report Submitted to the School of Computer Studies  
In Partial Fulfilment of the Requirements for the Award of the Degree of  
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### DECLARATION

I hereby declare to the best of my knowledge that this graduation project is my original work and that it has never been submitted to any other institution.

The literature and citation from other people's work have been referenced and acknowledged in the text, footnotes and bibliography.

Signed:  ..... Date: 12/12/2008 .....

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**Student**

### APPROVAL

This project report has been supervised and approved by

**Ms. Katushemeremwe Fridah**

Signed: .....

Date: 23/03/09 .....

## **DEDICATION**

I dedicate this project to my family for without your financial and moral support i would not have made it this far.

You all provided great support in the accomplishment of this project much thanks and God bless.

## **ACKNOWLEDMENT**

I wish to acknowledge all my classmates, supervisor, lecturers and friends for the assistance and guidance in learning all that entails to Management Information System and offering conducive studying environment.

My thanks go to my supervisor Ms.Katuseremwe Fridah for her guidance throughout the project.

The last vote of thanks goes to Kiambu Coffee Factory Management for allowing me to use the factory as my case study.

## **ABSTRACT**

Having a good information system is essential to perform efficiently in a competitive environment; the organisation with better information system has a distinct advantage. It's upon this background that, this study of building a management information system for Kiambu Coffee Factory is based. The objective of this study was to design a system of information management that is suitable in that, there is efficiency, security and the reduction of the work load where in this it is done manually that is the storage and the retrieving of files.

The methodology involved in this study included data collection example Feasibility study, interviews, system design (that is used to give the requirements needed for the system to perform), Programming for the development of the system, and the implementation.

In this research I found out that data storage in most factories has not been modernized and up to date. Due to this fact there is a big problem of collection of data, storage and security. This is where I contributed to help solve the problem by designing and implementing an interactive computer system that has passwords for security, a database for the accurate and efficient storage of data.

In conclusion this field of study has not been exhaustively researched and developed and due to the evolving technology I would urge future researchers to help perfect on the

storage, retrieval and security of information` mostly in organizations and complex companies like factories.

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## **ABBREVIATIONS**

DBMS	Database Management System
MB	Mega Bytes
MHZ	Mega Hertz
GB	Giga Bytes
VB	Visual Basic
PK	Primary Key
UML	Unified Model Language
KCB	Kenya Cereal Board
IT	Information Technology
MIS	Management Information Technology

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introductory Information**

The rapid growth of the world economy has resulted to several adjustments in most organisations which have resulted to the emergence of computerised systems. These systems have been triggered by the high sensitivity of data that companies are dealing with and the importance of reports that are generated from the data. These reports are used by the company/organisation in making very vital decisions that range from market, expansion and the acquiring of new skills. It is therefore very important to think of ways of computerising data systems so as to minimise losses and ensure full profits and increasing efficiency of service delivery.

Computerised data storage systems have in the past been seen as a means of making sure that companies spend less on human resource as computer do most of the work but gain the same profits and some times more Laudon (1996). This has resulted to the Coffee Factory to propose of introducing a computerised data storage system. This system is aimed at maximising their services by making them more reliable and efficient. Because of the large amount of data they deal with, it has been a problem for them to store, retrieve, and use that data in generation of reports. This is because they have been using papers in their data storage. Retrieval, update and generation of reports have been a big problem to the factory. This is because this method is very slow, unreliable, and prone to theft and fire and needs a lot of labour.

## **1.1 Background to the Study**

Kiambu Coffee Factory is a factory allied to Kenya Cereal Board (K.C.B) which collects red coffee beans from farmers, processes, packs, markets and pays the farmers. K.C.B has various factories which are autonomous in their operations but comes together during marketing. This has resulted to the different coffee factories to invent of new ways they can use to maximise their profits and minimise on their expenses. These factories are evaluated according to their productivity. It is from this that I am proposing to design a database system to help Coffee Factories carry on with their activities to emerge the best in the race.

Currently the factory has thirty clerks who are involved in management of the factory data both in the field and in the factory. Out of the thirty clerks, fourteen are involved in the field coffee collection and the rest are positioned in the factory in running the other duties of storing, retrieval and management of the data. This is a very large number of personnel involved in the factory data management and although the system will cost the factory some amount of money it will reduce on the amount of salaries and wages incurred by the factory. There are also employees of the factory who include: managers, mechanics and casual workers. Data management is the biggest task for the factory and most sensitive. One of the aims of designing this data base system is to reduce the clerks to at most 12clerks. Coffee collection is divided into eight routes. Each route has an average of our collection centres. I plan to have one field clerk on each route hence 8 field clerks and 4 factory clerks to be involved in data management in the factory. This will make the management of the factory activities very easy, simple and efficient for the

factory manager. My aim is to design a system that will make the factory personnel accountable of all their activities. My database will also help in managing other areas like the logistics department. This logistics department deals in managing the factory fleet system. This fleet includes vehicles used in tea collection and other duties vehicles such as those used by the management and their drivers. Coffee Factory being a well established factory with their own petrol station and a good garage, our data base will also help in managing fuel consumption by the factory vehicles and all the repairs done to all vehicles. This will be aimed at streamlining the operations of the factory. This database system will however be limited only to factory management and will not deal with marketing of the processed coffee beans as this will be left for the finance department which is not apart of this database system.

## **1.2 Problem Statement**

Kiambu Coffee Factory uses paper in their data storage and reports generation. This in many times has resulted to loss of data, data inconsistency and data redundancy. Many farmers have been complaining of their kilograms being lost while others enjoy more kilograms than they have delivered. The management has been having a lot of problems in making decisions because the data stored and retrieved is inaccurate. Report generation has also suffered a lot because it takes a lot of time in preparations. This makes even the sales to take a long period to prepare by the finance department. If a farmer (customer) has a complaint with his kilograms, it takes a lot of time in rectifying. The security of the data for the whole factory is also at risk because if a malicious person gets holds of the sensitive data it might cost the factory a lot of time to recover it and even to cover for the damage. Also if their data storage room catches fire, all the data will be lost.

### **1.3 General Objective**

The general objective of the project was to develop a computer-based management information system that will automate the operations of Kiambu Coffee Factory

### **1.4 Specific objectives of the Study**

- Introduction of security controls such as the use of passwords and authentication services to provide security to information and also to ensure that passwords are not shared for data authenticity.
- To free some space because filing takes up valuable space much more information will be stored in a computer in a much smaller space also to help in find relevant information far more efficiently.
- To ensure that there is restricted access to factory records to only authorised personnel since farmer's records is private and confidential and to give different views to different users depending with the privileges they have in the database.
- To guarantee absolute validation of accurate records, farmers and supplier information collected upon every entry made to give a comprehensive understanding of the storage management database.

### **1.5 Scope of the Study**

The research was carried out at Coffee Factory. It covered personnel, farmers and departmental heads.

### **1.6 Significance**

It is hoped that the Coffee Factory Management System shall, on completion be able to achieve the following:-



The factory unit manager who is the highest ranked officer in the factory will be able to follow all the activities of the factory on daily basis and be able to communicate this information to head office of K.C.B. With this system in place there is no need for him to be calling meetings with the juniors all the time to be updated on any activities, he only needs to access the system and will be able to see the flow of all the activities.

Production manager, logistics manager and I.T manager will be able to follow activities in their departments appropriately and in good time. For example, the logistics manager will be able to know the flow of all the factory vehicles and their performances including the route they are operating and the drivers assigned to them.

The I.T manager who is responsible for all the data within the factory will be able to monitor all the activities in report preparations. ,

The production manager will be able to know the processed tea and be able to forward all the reports to the necessary departments such as the finance and sales.

With the clerks, this system makes data input, storage, retrieval and generation of reports easier and faster, therefore making sure they beat deadline in their work. Some of these reports are very important to the senior manager and the board of directors in making crucial decisions in the factory. It therefore makes it easier and faster for them to submit required on time to their superiors.

Eventually because of this new system, growers get their payments in time as the finance department is able to prepare payments early and in good time and more accurate

therefore reducing on many complains from them. This creates more confidence with workers therefore making the relationship between all the parties involved good.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter contains literature review of the study. The literature looks at what other researches wrote about designing a database.

#### **2.1 Management Information System**

“Not all information systems are management information systems. A management information system is a system that provides information to managers to use in making decisions coordination and controlling information systems. Management information system use all types of management like strategic operation and marketing for decision making” (Mejia and Balkin 2002).

Garry Hansen (2001) defines an information system as an automated system which organises data to produce information. The development of information system led to rise of the management information system, this system would use the data already available in the computer to provide answers to a broad spectrum of management questions. The management information system is an information system that managers plan and design to provide themselves with the specific information they need to perform their roles effectively state (Jones and Hill 2000).

## **2.2 The Challenge of Information Systems; Key Management Issues**

Although technology is advancing at a blinding pace, there is nothing easy or mechanical about building and using information systems. There are five key challenges confronting managers according to Laudon (1996):

The strategic business challenge, globalization challenge, information system challenge, information and architecture challenge and the responsibility and control challenge but the ones relevant to this project are:-

## **2.3 Database Management Information System**

According to French (1992) a database management system is a complex software system that constructs, expands and maintains the database. It also provides the controlled interface between the user and the data in the base. The DBMS allocates storage to data and maintains indices so that any required data can be retrieved for example customer details also so that separate items of data in the base can be cross-referenced. The DBMS provides facilities for different types of file processing that is, it can process a complete file, process required records and retrieve individual records such as employee details.

### **2.3.1 Relational Database**

Is a kind of DBMS which rates, or connects data in different files through use of key field or common data element? Data elements are stored in different tables made up of rows and columns. In the technical terminology of DB designs the table are called relations (files), the rows are called tuples (records) and the columns are called attributes (fields).

All related tables must have a key field that uniquely identifies each row thus, primary key and foreign key.

The advantage of relational database is that the user does not have to be aware of any “structure” thus they can be used with little training; moreover entries can easily be added, deleted or modified Date (2000).

Williams, Sawyer and Hutchinson (1999) states that data can be grouped into a hierarchy of categories each increase more complex which consists of fields such as name, address or social security number. This social security number is unique hence used in computing, such a field is called a key field. A record which is a collection of fields and file which is a collection of related records such as data collected on everyone employed in the same department of a company. The researchers opted to use Relational DB because the program implementation is hidden from the user (encapsulation) thus they can be used with little training.

## **2.4 Data security**

Data (information) security is required because most organizations can be damaged by hostile software or intruders. There are several forms of damage which are obviously interrelated (Steinbuhler, 2001). According to Meloni (2002), security can be very complex and may be very confusing to many people but some of the ways to keep the information secure are password policies, firewall protection, virus incident protection, and use approved software by Information Communication Technology (ICT) department.

#### **2.4.1 Use approved software by ICT department**

Only approved software should be operated on the organization's network. This is so because hostile programs can not gain access to the network. These hostile programs may be written with some useful functionality, but may perform a hidden task that the user is not aware of (Sawyer, 2002).

#### **2.4.2 Password policies**

According to Sawyer (2002) password policy is to help keep user accounts secure. It defines how often users must change their passwords, how they must be complex (types of characters used such as lower case letters, upper case letters, numbers, and special characters).

#### **2.4.3 Virus protection policies**

Virus protection is used to identify and remove viruses from computer systems and should be actively running on all systems and must be updated often since everyday viruses are created (Sawyer, 2002).

#### **2.4.4 Firewall protection**

According to Deitel (2001), Firewalls used to protect an organization's internal network from those on the outside (internet), it limits and regulates the access from the outside to the internal network and also regulate the traffic going out.

## **CHAPTER THREE**

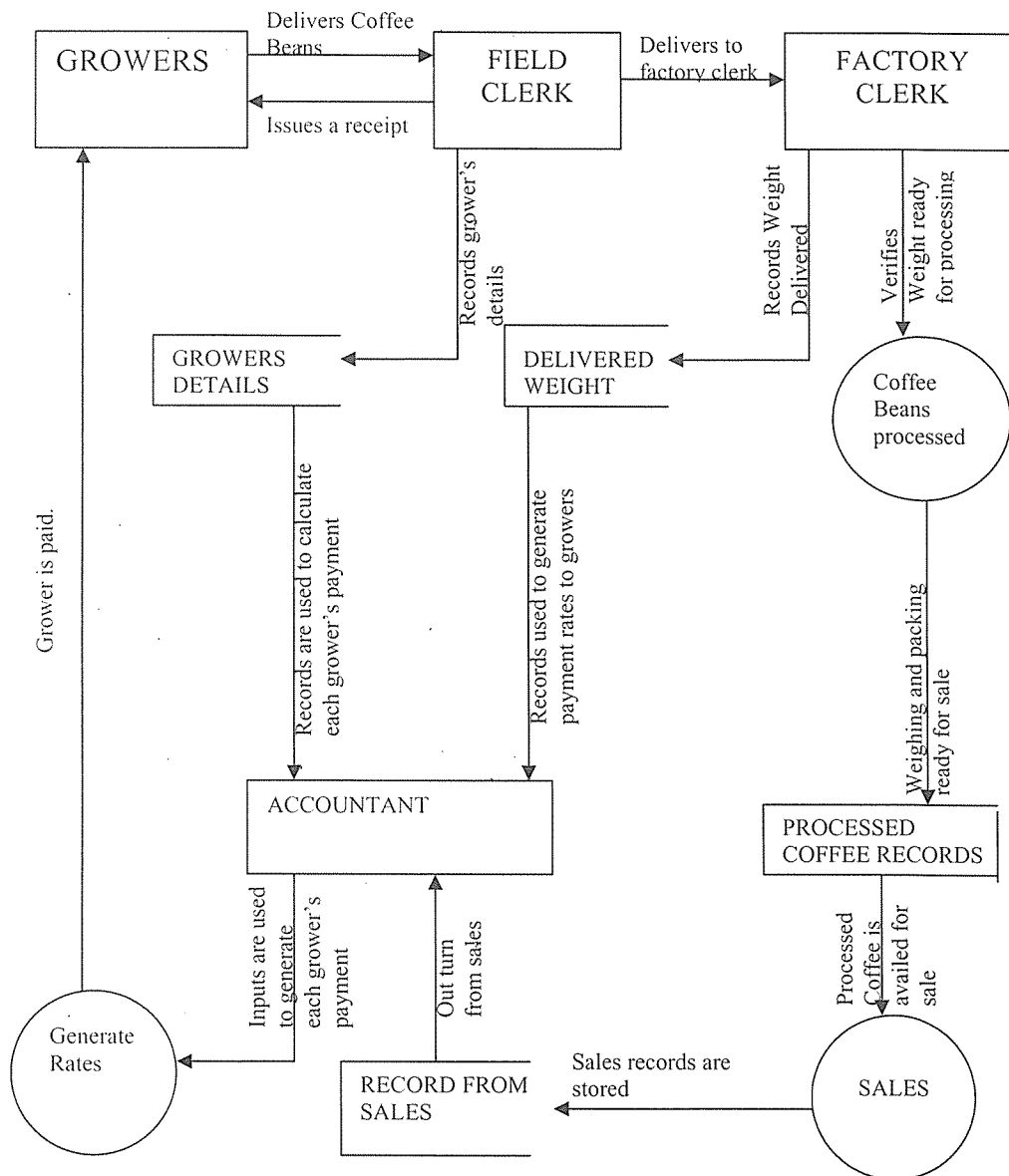
### **METHODOLOGY**

#### **3.0 Introduction**

Methodology is a step by step procedure of how the researcher intends to achieve objectives and in this case reference is to the proposed computerised data management system for Kiambu Coffee Factory. This section comprises of research design that describes the tools, approaches, processes and techniques, and data structure that were employed in the research study.

#### **3.1 Feasibility Study**

This is a study carried out first so as to check if the whole project was viable. It is a preliminary investigation which emphasized “look before you reap” approach before starting and implementing the project. In this project it involved determining the implications of the system technically, legally, in terms of operation and also economically in comparison to the system in existence. The study identified the following processes as indicated by the process diagram after viewing how the activities go about in the factory.



This Diagram shows how coffee beans get to the factory and the process they go through till when they are processed and sold. In this, you find that coffee beans are either collected by the field workers from the farms or delivered to the factory by the farmers themselves and after that processing, packing and selling of coffee occurs.



### **3.2 Methods of Data Collection**

We employed methodological triangulation (use of multiple methods to study a single problem). Different methods reveal different aspects of empirical reality (Patton, 1990). We used questionnaire, observation, document analysis and interviewing methods of data collection.

#### 3.2.1 Questionnaires

This was what was mostly used as a means of data collection because Questionnaires are special-purpose documents that allow the analyst to collect information and opinions from respondents. They can be answered quickly and returned at one's own convenience. Questionnaires enable individuals to maintain anonymity. Responses can be tabulated and analyzed quickly. The questionnaires comprised of fixed format section for easy tallying of the findings and to avoid ambiguity. Also included was a free format section to clarify the fixed format section was also included.

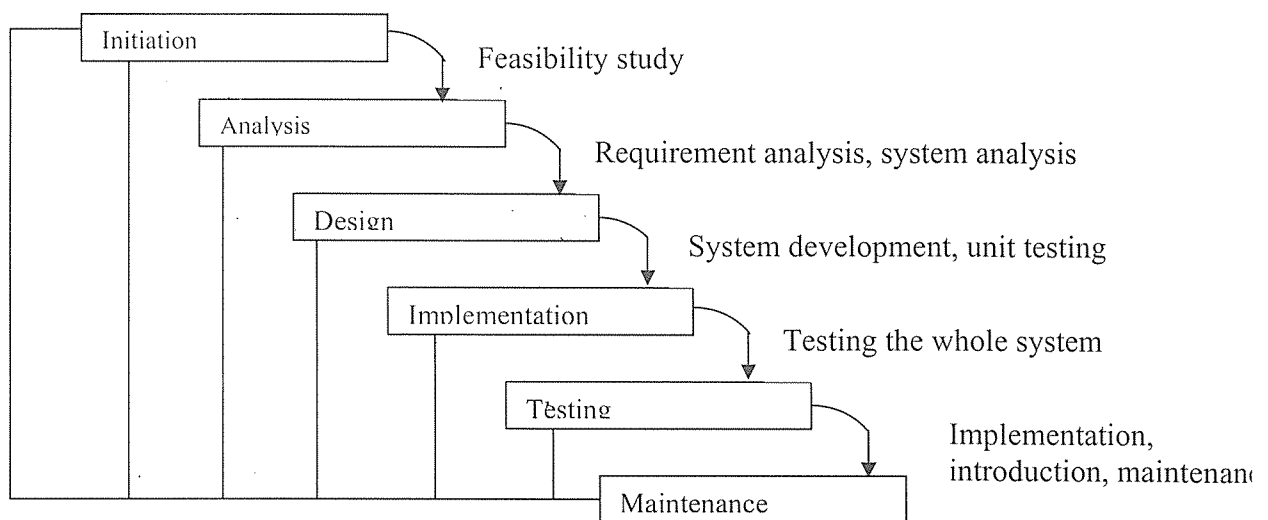
#### 3.2.2 Observation

Observation method was used by visiting the place and seeing how the activities are carried out inside the factory, the record keeping system, updating, retrieval and other hidden costs and constraints. It was also good to get acquainted with the employees of the factory so as to be able to solicit information from them. Data gathered using this method was highly reliable and was carried out to check the validity of data obtained directly from individuals by the questionnaire method.

### 3.4 System Design

This is concerned with system construction, using the identified requirements, for the system to perform the required functions. It looks at the data requirements, software construction and the design of the interface, database and coding.

#### Illustration:



**Fig 1: A Waterfall system design model.** (Irwin/McGraw Hill Publishers, 2000, **System Analysis and Design Methods**, U.S.A)

Designing of the information system largely depends on such factors as

- The environment in which the organization must function.
- The organization culture and policies.
- The type of organization(political, business, government, NGO etc)

The information needs of an organization.

- The structure of the organization, specialization and the standard operating procedure.
- The principle interest group affected and the extent of effect by the system

- The magnitude of the problem, decision and organization process that the system is supposed to cover
- The relationship of the organization existing system, the important program, information and human resource requirements.
- The extent of management ability and willingness to support the new system.

### **3.5 Programming**

A logical design of the information system was developed using Visual basic 6.0 to design the interface with the input and output form that is user friendly later, a logical connection was created to the database where the database contains tables including the records with the required fields and entities for the storage of data.

The database for the system was designed using Mysql, a visual basic component, and classes were applied to describe entities and relationship as defined in the Unified Model Language (UML) of system design. UML specifies, visualize and document the objects used in the object-oriented system under development. The tables were designed using the Access application development tool in Visual basic.

Database is designed in such a way that they are flexible and can handle future needs of Kiambu Coffee Factory.

The currently proposed database design process is usually interactive, while designing classes; it requires that one goes back to the users to obtain more information. The database design always comes before the design of the reports and forms.

### **3.6 System Implementation:**

Implementation deals with the process of converting the system specifications into executable programme. System specification involves processes of software design and programming. Software is the description of the software to be implemented, the data that is part of the system, the interface 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 of collecting data and storing them in files inside cabinets at the factory until such a time when the new system is adapted by the management and end users then the system will cut off.

### **3.7 Activities:**

#### 3.7.1 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 form were carried out simultaneously.

#### 3.7.2 Implement tasks.

Planning the task 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 the whole system.

### 3.7.3 System testing

As the software is created and added to the developing system, testing is performed to ensure that the software is working correctly and efficiently. Testing is generally focused on two areas, internal efficiency and external efficiency. The goal of external effectiveness testing is to verify that the software is functioning according to system design, and that it is performing all the required functions. The purpose of internal testing is to make sure that the computer code is efficient, and well documented.

The software here is tested, at each stage of module development. Each module was tested individually to ensure quality and compatibility and to establish whether each module perform the required function, before all the modules are combined, to test the whole system. At this stage of testing any errors that might have occurred were corrected. The input/output forms are tested to verify their format and storage capabilities. Testing is also required for format of data storage. The procedures for updating the master file are also tested to verify the reliability of the system. The user are also given chance to test system before it was implemented.

There was also an element of effective interaction between the end user and the system. This was also tested, in addition to testing of the system's ability to handle the required amount of information needed by the organization, plus the system interface operating capability. Generally test at this stage are more concerned with testing of the system accuracy, reliability of the various components, the capability with range of inputs, the usual operating conditions and the frequency of inputs. Testing is done using both live

and artificial data; the data used is made to include errors. The error element in the test was needed, for testing the validation and control procedures.

## **CHAPTER FOUR**

### **ANALYSIS OF THE CURRENT SYSTEM**

#### **4.0 Introduction**

System analysis is a problem solving technique that decomposes a system into its component pieces for the purpose of studying how well the component works and interact to accomplish their purpose. The gathered facts relative to the objectives using relevant methodology of data collection enabled us to access the existing system. The present system may be criticized against the following procedures and principles for which the weaknesses and strength of the system was apparent

1. Workflow: Are the workflows satisfactory?
2. Economical: Is the system in question economical?
3. Flexibility: Is the system flexible?
4. Simplification: Can complex procedures be simplified?
5. Reliability: How reliable is the procedure?

#### **4.1 Weakness of the existing system at Kiambu Coffee Factory**

- i. Data redundancy -some information are duplicated in several places.
- ii. Tedious retrieval and update of records -poor file arrangements where each farmer has a file for his records, in weight delivered, loan applied for, fertilizers given in debt, and all his payments.
- iii. Poor security measures – In these files are in cabinets shelves that any worker can access including the sweepers and manipulate the data in them but with

computers they must have a user name and password to access the information required.

- iv. Limited storage space- For this case, as the farmers increase and their records increase it becomes hectic to store files because they need more space for storage and that means more manual labour for the case of retrieval especially.

## **4.2 Strengths of the Current System**

Simple system-they are not complex because they don't need extensive planning and technical expertise to implement and maintain them.

Cost- the system is cheap because it doesn't require any hardware, software, operation personnel and equipment maintenance.

## **4.3 Requirements of the new proposed system**

### 4.3.1 Hardware requirements

This describes the hardware resources that were used for the development and installation of the system. These include:

1. Two personal computers.
2. A printer for printing the project and reports where necessary.
3. Stationary such as printing papers and printer ink cartridges.

### 4.3.2 Processing requirements

This makes sure that the system runs properly when it is installed on a desktop computer, which has a relatively high speed in order to achieve the desired results. The specifications are as follows:



- i. Memory 256 MB and above.
- ii. Processor speed of 2.7 MHZ.
- iii. Pentium iv and above.
- iv. Hard disk capacity 40 GB.
- v. Operating system windows XP and above.
- vi. Can run on a peer to peer network.

#### 4.3.3 Backup and recovery

Because of the problems of machine failure and breakdown, theft by hackers etc, the designers need to have at least a copy of the original file kept somewhere for example a floppy, flash, CD-ROM, hardcopy or magnetic tape.

### **4.4 Software Requirements**

The following were instrumental in the development of Kiambu Coffee Factory data management system.

#### 4.4.1 Visual basic

An object oriented programming language (Microsoft visual basic 6.0). An object can be a form, control etc. Controls are objects that are placed on to a form during the interface design. VB is a window development language that uses an interactive approach to development. This software is more users friendly therefore it will enable users of the system to easily operate the system meeting the various requirements. This makes the goals of the organisation to be achieved. Because of its interactive nature, workload was relatively made easy because of its capability of frequent

compilation. It eliminates the need of actual typing in of the commands instead the user will initiate commands by clicking on the controls on the form.

It was mostly preferred for the project because:

1. It is one of the most popular programming language hence steady supply of talented staff.
2. Capable of producing software as sophisticated as any of the other data access techniques available.
3. Good for small projects.

#### 4.4.2 Mysql

It is a computer application that makes it possible for one to construct a powerful system for organising information and emphasizes on security. It is user friendly in that it allows one to record data, maintain and modify data. It provides background for the database manipulation and helping in storage of large amounts of data.

#### 3.6.3 Antivirus

Antivirus was used to detect and remove viruses that may affect the stored information in the system.

### **4.5 Security Requirements**

One of the ways to ensure data integrity and security is by use of username and password to authorise persons to access the information. The use of passwords will also ensure that different users access different files depending with the privileges they have. Users will also be educated on the use of strong passwords which will use their names, their

spouse's names or their pet's names. This will ensure that it is hard for someone from the outside to guess their passwords. Their passwords should also have not less than seven characters which will be having both capital and small letters and also alphanumerical characters.

## CHAPTER FIVE

### SYSTEM DESIGN

#### **5.0 System Design**

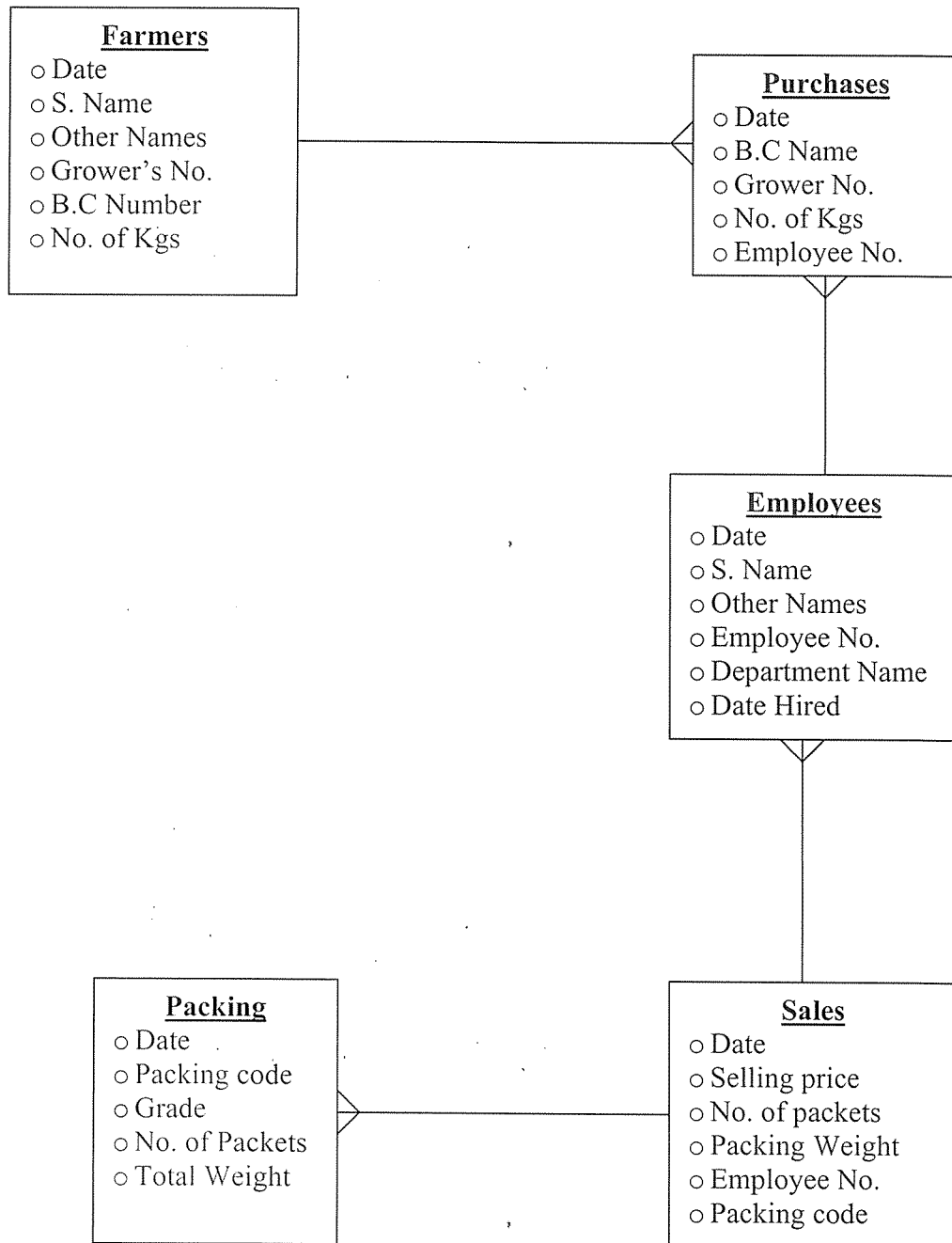
According to (*Jeffrey, White and Bentley 2000*), system design is a problem solving technique that decomposes a system into its component pieces for the purposes of studying how well those components work and interact to accomplish their purpose. It is the development phase of the project that primarily focuses on the business problem, independent of any technology that can and will be used to implement a solution to that problem.

A System designer is driven by the business concern of the system owners and its users. It addresses that data, processes and interface building blocks from the system owner's and user's perspectives. Kiambu Coffee Factory is the owner while growers, managers and clerks are the users.

#### **5.1 Entity Relationship Model**

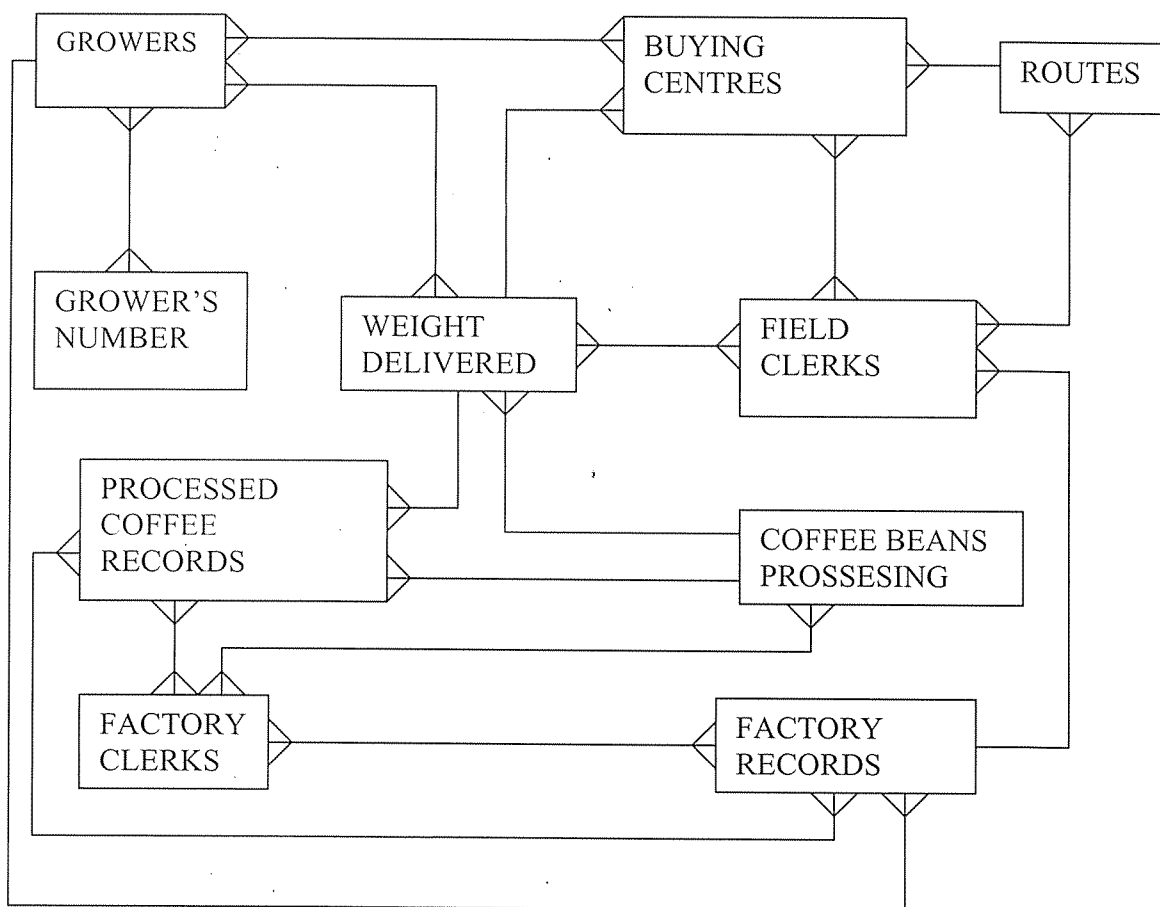
An entity relation model is part of system development methodology that provides an understanding of the logical data requirements of the system independently of the system, organization, and process. It reflects a static view of the relationship between different entities.

### 5.1.1 Entity Relationship Model of Kiambu Coffee Factory



### 5.1.2 Conceptual Data Model

The information gathered in the requirement analysis step is used to develop a high level description of the data to be stored in the database, along with the constraints that are known to hold over these data. This step is often carried out using the E-R model.



## **CHAPTER SIX**

### **DISCUSSION, RECOMMENDATION AND CONCLUSION**

#### **6.0 Introduction**

It was earlier highlighted at the beginning of this project that the study came about for the purpose of improving the current system that is being used at Kiambu Coffee Factory, basing on the factory operations. The problem was mainly due to lack of credible sources of information and as a researcher I found out that it's due to poor storage and analysis of data at the low levels of management.

#### **6.1 Evaluation of the new system**

The new system if implemented will be able to achieve the following;

- Management information system will control data redundancy in the organization thus improve performance.
- The system will improve on information flow accessibility through incorporation of simplified modification and retrieval methods.
- The system will promote data integrity within the factory since there will be a central data storage area.
- The factory will increase efficiency and effectiveness in its operations.
- Productivity within the organization within increase.
- Data security will improve therefore rendering data unavailable to unauthorized people.

## **6.2 Challenges Faced During Project Development**

- Lack of enough reference books in the university library specifically the Visual Basic books. This affected the development of the software.
- It was costly since I had to design questionnaires and send them to members of staff when we needed additional information.
- Some of the questionnaires were returned late by the respondents delaying our study and analysis of the system. This culminated to the delay of moving to the next phase of system development.
- Rapid change in computer industry: this is a serious challenge in management information systems in today's organizations. When a system is implemented, after some period of time, it can be useless since new technology could come up challenge the computer-based systems.

## **6.3 Recommendations**

- Other Coffee Factories should adapt this kind of management system to enjoy its benefits.
- Kiambu Coffee Factory management should ensure that all its staff members are offered training on the use of the new system.
- In case of any errors or upgrades, documentation should be updated to enable future upgrade of the system.
- Appoint a system administrator who will be in-charge of maintaining the system.



#### **6.4 Conclusion**

The Kiambu Coffee Factory Management System is meant to be one of the most needed sources of benchmark information that will provide better performance for the factory. The system was not developed without experiencing drawbacks as earlier stated. As such, it is fair to acknowledge that the system has not been subjected to all kinds of tests that are necessary for the system to be implemented to all kinds of platforms. A thorough revision of the constraints to determine the appropriate data values for different fields in order to ensure data integrity is necessary, though the few sample data that the system was tested on was a success.

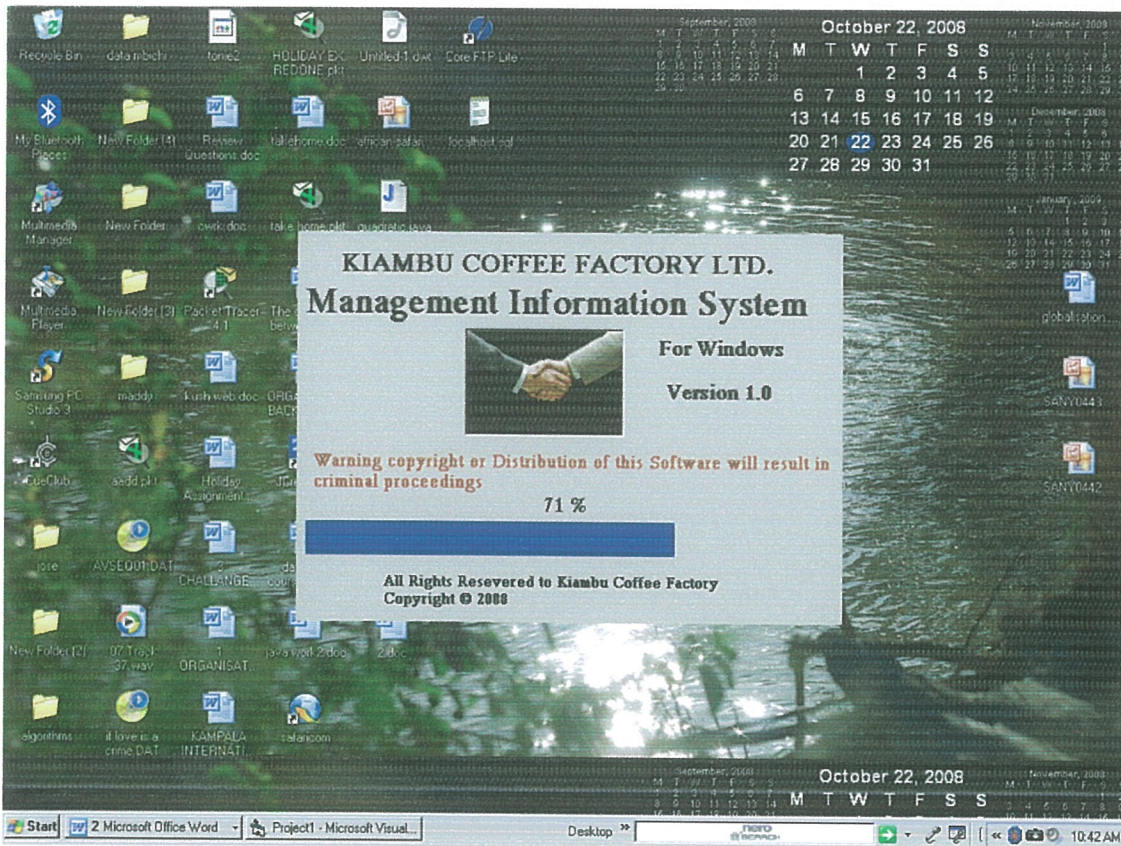
It would be beneficial to consider other different platforms such as SQL 2000, Oracle 8i, and Oracle 9i should be considered bearing in mind that the Kiambu Coffee Factory Management System, as a whole is the main reason why the system had to be developed. A bias for SQL Server 2000 would be recommended because of its affordability, simple statements says, (Theoron Willis, 2002). It follows that this will be a very big database as time goes by. This therefore means that in the end, long term problems will be solved.

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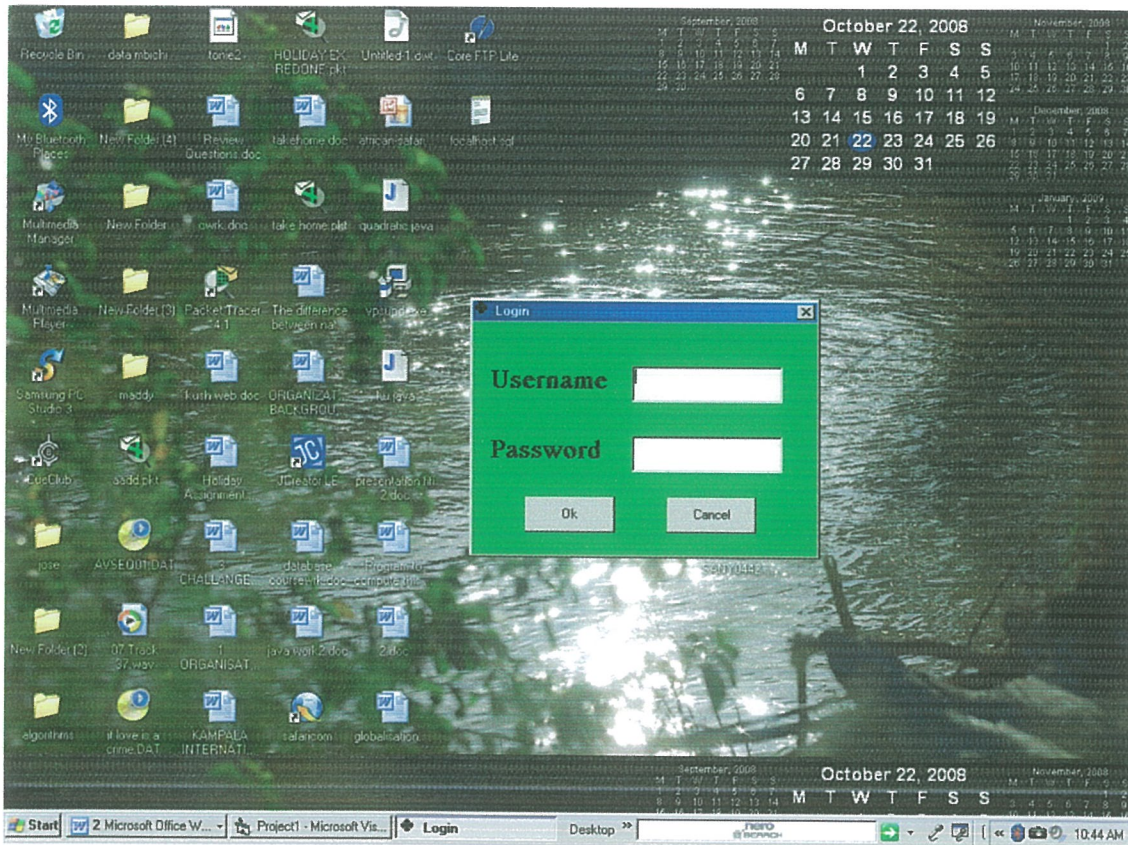
## 6.6 Form Views

### 6.6.1 Splash Screen



This form displays the first screen that runs through the screen before prompting for the user to input a user name and a password. It shows that the program has loaded all its forms and interfaces allowing the user start interacting with it.

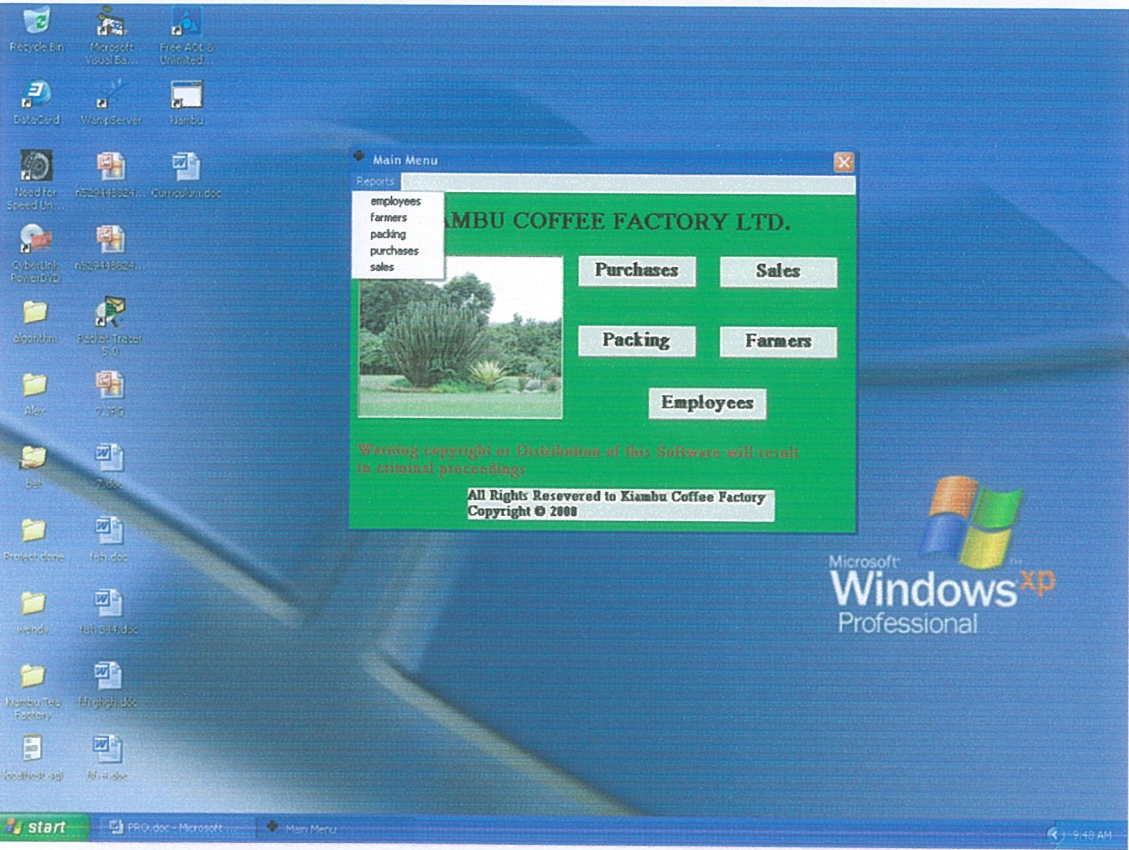
## 6.6.2 Logon Screen



The above screen prompts the user to input his username and password so as to allow him access the rest of the program. If the user inputs a wrong password or username, he is not allowed to access the program or use its services.

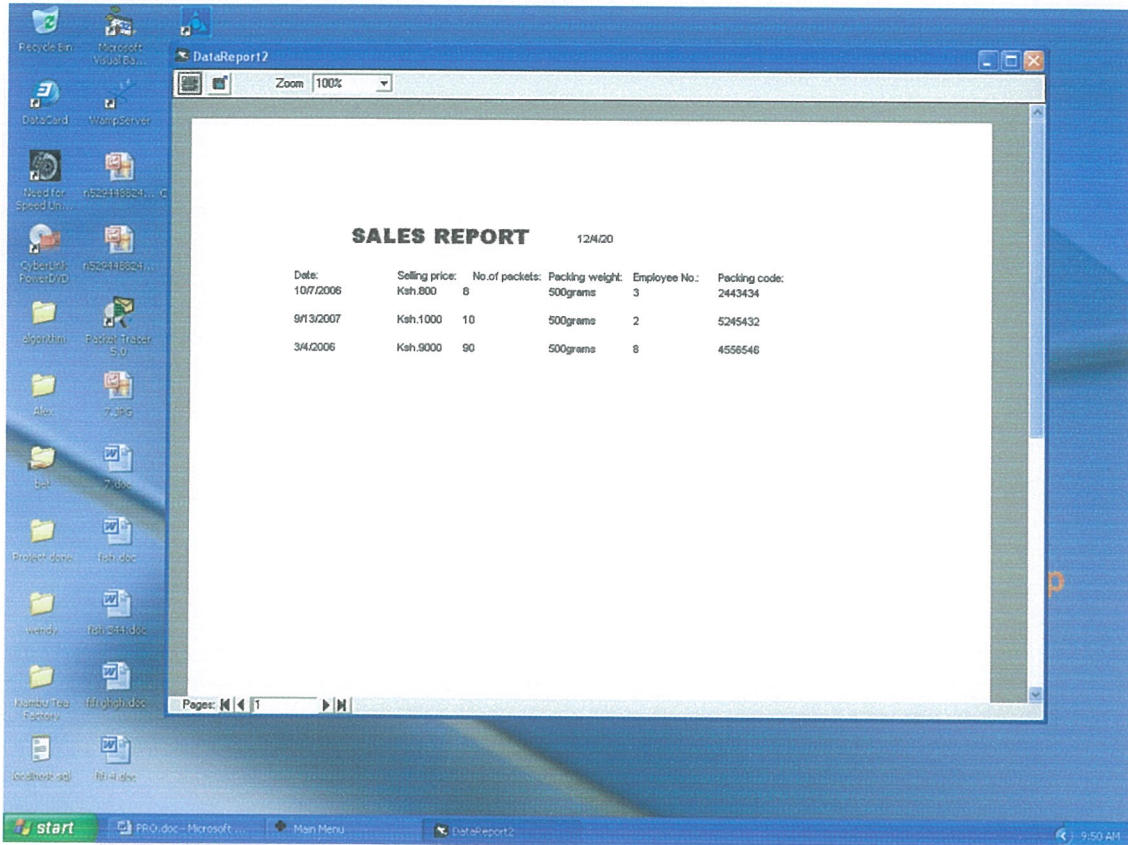


6.6.3 Main Menu Form



This is the form that shows the appearance of the software after the user puts in the username and the password to allow him access the system.

### 6.6.4 Sample Reports



**SALES REPORT** 12/4/20

Date:	Selling price:	No. of packets:	Packing weight:	Employee No.:	Packing code:
10/7/2006	Ksh.800	8	500grams	3	2443434
9/13/2007	Ksh.1000	10	500grams	2	5245432
3/4/2006	Ksh.9000	90	500grams	8	4556546

Page: 1

This is the form that shows the appearance of the software after the user queries for a sales report from the databases through the link at the main menu.

### 6.6.5 Sample Reports

Date:	S Name:	Other Names:	Employee No.:	Department	Date Hired:
7/25/2008	Mururi	Geoffrey Kuriah	1	Manager	7/25/2000
10/7/2008	Kariuki	Wangechi Shiro	2	Asst Manager	9/20/2000
7/26/2008	Naomi	Mwikali Florence	12	Sales	7/16/2006

This is the form that shows the appearance of the software after the user queries for an employee report from the databases through the link at the main menu.

## **Appendix A:**

### **I Sample Questionnaire**

1. How do you rate your current system \_\_\_\_\_

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2. What are the problems you face with your current system? \_\_\_\_\_

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3. What are some of the challenges faced when using the system?

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---

4. Does your organization secure its data?

YES

☐

NO

☐

*(Tick where appropriate)*

5. If yes, how? \_\_\_\_\_

---

6. If No, why? \_\_\_\_\_

---

7. Are you satisfied with your job performance?

YES

☐

NO

☐

*(Tick where appropriate)*



8. If No, why? \_\_\_\_\_

\_\_\_\_\_

9. What will be your advice if you were in-charge of the factory information system? \_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. Have you ever used a computer system?

YES ☐

NO ☐ *(Tick where appropriate)*

11. If yes, what challenges did you face? \_\_\_\_\_

\_\_\_\_\_

12. If No, would like to be in such an environment?

YES ☐

NO ☐ *(Tick where appropriate)*

13. If a new system is to be implemented in your organization, how would you like it

to be? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## **II Interview Guide**

1. Try to gather background information about the hospital.
2. Gather information about its current system.
3. Establish the objectives of the hospital.
4. Establish whether management will appreciate the change you are about to make.
5. Identify the most frequent operations of the company and the challenges faced while doing so.
6. Find out whether the employees will accept the system which is to be implemented.
7. Establish whether the factory has what it takes to come up with a management information system.
8. Establish the level of computer literacy and skill among employees.

## **Appendix B**

### **Introductory Letter**

**KAMPALA INTERNATIONAL UNIVERSITY**

**P.O BOX 20,000**

**KAMPALA – UGANDA**

**15<sup>th</sup> September, 2008.**

**FACTORY UNIT MANAGER**

**KIAMBU COFFEE FACTORY**

**P.O. Box 00200 – 1452**

**Ng'ong,**

**Kajiado.**

Dear Sir/Madam,

### **RE: REQUEST TO USE YOUR FACTORY AS A CASE STUDY.**

I am a student at Kampala International University, pursuing a Bachelor's degree in Computer Science. It is a requirement that I do a research project in order to graduate.

I therefore chose your factory as my case study, so as to investigate the operations and challenges you face in your daily operations.

We look forward for your positive response and approval of our request.

Yours Faithfully,



**Muiruri Geoffrey Kuriah.**