A BAKERY MANAGEMENT INFORMATION SYSTEM (BMIS)

CASE STUDY: (HOT LOAF BAKERY MBARARA BRANCH)

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A PROJECT REPORT SUBMITTED TO THE SCHOOL OF COMPUTER STUDIES FOR THE STUDY LEADING TO A PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF BACHELORS OF INFORMATION TECHNOLOGY AT KAMPALA INTERNATIONAL UNIVERSITY

SEMPTEMBER, 2009
DECLARATION

I, KYANKAAGA NICKSON hereby declare that this dissertation is my original work and has never been submitted to any other institute of higher learning for any academic award to the best of my knowledge.

Signature

Date 23rd-09-09

SUPERVISOR:

Signature

Date 23rd-09-09
DEDICATION

This dissertation is dedicated to my father Mr. Nathan Muganga and my Mother Busingye Topista. Thank you for producing me, shaping me and the effort you inserted to educate me.

Secondly my uncles Martin, Isreal, Azor, Francis, Innocent and Deogratious for their support financially, physically and encouragement so that I can attain my education and reach where I have reached. Thank you.

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ABSTRACT

Information Communication Technology (ICT) has played a major role in the day to day running of companies, organizations and institutions and general life. Through the use of information technology these companies are able to perform daily activities efficiently and accurately. The bakery sector too has benefited from this advancement in information Technology. The BMIS project outlines the formulation of a computerized management information System of any bakery particularly hot loaf bakery. The project highlights the following:

Problems faced by the current system in carrying out a management information systems, use of php and it’s related technologies of apache server and JavaScript in validation as an efficient tools for designing and developing a bakery management information systems that helps to solve the problems faced by the current system, Ways of making sure that the data or inputs of the current system can be verified and validated.

It involves the development of a centralized database system using MySQL. It also involves the process of making access to whatever information as fast as possible. This involves real time reports. It also shows how the whole system can be made secure to avoid an unauthorized access to its various resources. Here role based authentication provided by The Apache server is put into use, therefore the project looks at the various ways and technologies that can be used to accomplish the goal of the whole project. That is to provide a computerized management Information system that facilitates or enhances effectiveness and efficiency of all bakery system.
CHAPTER ONE

1.1 Introduction

Hot loaf bakery is registered bakery located along Mbarara-Masaka on 2 km road in Mbarara western Uganda. It was started as a branch of Kabale in 1994 by Mr. Nzeyi where its head office (plant) is located for western Uganda. It consists of many departments which involve productions, store keeping and sales. It has branches in most parts of the country like in Kampala where it was first operated before opening a branch in Kabale. Hot loaf bakery has other branches in Masaka, Fort Portal, Masindi, Lira, Hoima, Rukungiri, and other districts in Uganda.

Hot loaf bakery is a diversified bakery engaging in business that’s in producing, selling and marketing of bakery products which include; breads, cakes, sweat rolls, doughnuts, buns and many other products. Hot loaf bakery has a number of outlets within Mbarara municipality like in pearl building ground flour on high street and on Bulemba road near Western Hotel. Outlets are in charge of selling, marketing and providing direct consumption of their bakery products.

The Hot loaf bakery holds most of the bakery products which follow a certain trend before they are produced, that’s from production; they are handed over to sales section where they are recorded in a book called “finished products”. This is where sales starts by recording all the products got from the production departments. The sales and purchases are recorded in sales book with their corresponding prices. The amount of bakery products that are sold on a particular day are entered in there record books and files. The bakery has Manual Distribution Centers (MDCs), where customers who buy the bakery products in bulk are favored in terms of cost, transport and debts. Good examples include; University canteens and other big hotels like Lake View Regency who buys in bulk weekly.

At the end of the day, daily reports are made on sales, production, and expenses. Stock monitoring is done which checks the products that are on high demand and products that
are low demand, products/ingredients/raw materials that are missing in the production sector. This is done to ensure that products don’t run out of stock without prior knowledge.

1.2 Background

The hot loaf bakery is expanding in terms of production and market since some of its products are consumed by people like in northern Tanzania, some parts of Rwanda. And even Eastern Democratic of Congo. The aim of the hot loaf bakery is to improve its products and as well as improving customers satisfaction. As one of the first bakeries to be set up in western Uganda, it was to produce bakery products like bread which was categorized as follows: kilogram ordinary bread, half kilogram ordinary bread, kilogram cake bread, special bread, van cake, ordinary cake, square cake, ordinary biscuits, brown bread, special doughnuts, plain doughnuts, buns and the bi-products are used to make sweat rolls in order to satisfy the requirements and demands of their customers that’s why their products vary in size and price.

Customers fill up forms specifying the particulars they require, the forms are then forwarded to the sales manager who then specifies the prices and receives payments. Orders mostly depend on the routes and places where products are taken. Example canteens are supplied mostly with buns and sweat rolls; offices with half ordinary bread, shops are supplied mostly with all types of bread ranging from the smallest to the big size. Routes outside urban areas are supplied mostly according to the forces of demand. Example Kikagate route is supplied mostly with buns and some few bread types.

The Bakery Management Information System (BMIS) processes the inputs and outputs. The details of data inputs include the sales of products in form of purchases and this will lead to filling forms like sales forms, product forms, and delivery forms, return forms, agent forms. Details of productions are handled by filling forms like finished products forms, stocking details. The outputs will include sales reports, stock taking reports, finished product reports, delivery reports, return reports and all the searches like search on returns.
1.3 Problem Statement

Records are kept in paper files, store record books where every one can access them therefore liable to:

- Data is easily lost, misplaced, changed and manipulated.
- Some information about bakery products is stored in files which are kept in drawers. This is very risky because every one can access the information alter it for personal gain hence lack of data security.
- There is poor data search and look up methods, some records about the bakery products are kept in files that are put in heaps, then looking for particular records will involve thorough file by file to check a single file.

Files consume and take a lot of space.

1.4 Objective of the study

1.4.1 General objectives

The main objective of this project was to develop an automated system that will enable of any information system of any bakery.

1.4.2 Specific objective

The specific objectives were:

i. To review the literature related to the system developed.
ii. To specify the user requirements
iii. To design the system that will enable the administrators at hot loaf bakery in establishing the actual and retrieve real data.
iv. To develop prototype that will enhance the work done during recording and makes the work precise, accurate to reduce misunderstanding during information delivery.
v. To validate the system developed. This eases the work done of the managing director of hot loaf bakery during information cross checking verification.
1.5 Project Scope

The system covers production sector and sales sector of hot loaf bakery. It centers on data entry, date search, data retrieval, validation and data verification. The system also deal with a daily supply of goods, customer’s information depending on their terms of purchase, product rates, available raw materials in the production sector (stock taking) and Sales accounting in terms returns, delivery, registered customers (agents) that needs to be supplied on a daily basis.

1.5.1 The system also caters for Data processing and Outputting like;

Product stock out: that is products ready for the market and product conditions. The system can apply in other companies which have more less the same product units and store house management, that’s all Bakeries.

1.6 Significance of the System

The system helps one to appreciate the need of a computerized Bakery Management Information System (BMIS). The system has a customer’s database that solves the problem of registering daily customers (agents), daily finished products, stock takings and sales in terms of returns, deliveries, product sales and rates. Once a customer is registered, is given a unique code that will be used every time the purchase is made.

The system also reduces redundancy concerning with bakery management that is in sales and production departments. This is done by the implementation of a comprehensive Bakery Management Information System (BMIS) that will facilitate standardizations in terms of data entry that’s inputs and outputs.

With the presence BMIS the bakery can determine and predict the forces of demand and supply by following the trend of reports, this can be in terms of stock taking, products sold, costs, profits, hence improving bakeries production and sales departments and other departments in general.
Data security is ensured by securing passwords. This reduces and stops the risks of information being accessed, changed, disrupted and modified by every unauthorized person.

The system (BMIS) enables delivery of information support. Delivery information required in work, for example it can be in work instruction, sales and production feedback when needed and required. In other words this system helps one to appreciate the use and need of a computerized technology in production and sales departments of any bakery.

1.7 The organizational structure of hot loaf bakery

The organizational structure of BMIS encompasses different departments headed by General Manager. Under the General Manager there are Accountant, Production manager, Sales Manager and Store Keeper.

![Organizational Structure Diagram](image)
CHAPTER TWO

2.1 Literature review

This chapter provides the literature background of the Management Information Systems for this research work and defines the key words like Management, Information, System, management system, information system and management information systems.

1.1.1 Definition of the key words

1.1.2 Information System:

The term information system refers to the information technology that is used by people to accomplish a specific organization or individual objective. The technology may be used in the gathering, processing, storing, and or dissemination of information and users are trained in the use of that technology, as well as in the procedures to be followed in doing so[1]. Any written, electronic, or graphic method of communicating information is also known as an information system. The basis of an information system is the sharing and processing of information and ideas. The specific technologies that collectively comprise information technology are computer technology and data communications technology [2].

CIBORRA [3] defined the study of information systems as the study that deals with the deployment of information technology in organizations, institutions, and society at large. Companies must create and preserve adequate and proper documentation of company activities in designated management information systems to support operational needs, protect rights, and allow easy management.

1.1.3 Management;

Is defined as, the art and science of directing the business of an organization. [4]. According to RONALD ET AL in Management Records states that “A Computerized record keeping management system is a system in which records are collected, organized, and categorized to facilitate their preservation, retrieval, use, and provide easy management of the organization
or business community”. A bakery being a place for business also deserves a computerized management information system in which records are collected, organized, and categorized to facilitate their preservation, retrieval, use, and provide easy management. Examples of bakery products: bread, rolls, bans and snacks.

1.1.4 Management Information Systems (MIS)

Management Information Systems is a general name for the academic discipline covering the application of people, technologies, and procedures — collectively called information systems — to solve business problems. MIS are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making [6].

1.2 Examples of Bakeries

1.2.1 Bakery barilla group

Pietro Barilla started to sell bakery products and pasta in a little bakery shop in Parma and continuously opened new ones. This firm developed and acquired different pasta and bakery companies over the years. Presently, the Barilla Group owns two strategic business fields, pasta meal and bakery products [7].

1.2.2 Home baking

Essequibo bakers, a name for our family cake business, have been in the baking business for over 20 years! We are situated in Lubaga, a Kampala suburb in Uganda. We come from a long history of bakers. My grand dad had a bread stall that sold bakeries to families in Guyana (Latin America) & grandma, Scot Williams, was a well known cake specialist who made cakes for a living. The trade was also taught to their children including my mum, Mrs. Patricia Kitongo, who has passed it down to us, here in Kampala – Uganda [8].
1.2.3 Bakery Management Corporation

[9] Georgetown Bakery Management Corporation; This Company is a real estate holding company that owns a manufacturing plant located in Baltimore City, out of which Bakery Express Mid-Atlantic and Bakery Express-Fundraising currently operate. Going forward, the Company will also own the new manufacturing building to be built in Baltimore County.

1.3 Advantages of the Information System:

[10] The role of a management information system is to convert data from internal and external sources into information that can be used to aid in making effective decisions for planning, directing and controlling the activities for which they are responsible.

An information system is useful to keep managers informed of how well the department or organization is performing and to let them know where problems exist. The principle of exception reporting is especially important in this stage – in other words, only situations which need some action are reported. (For example, customers with outstanding accounts, a sudden drop or increase in sales compared with the same period last year or a rash of staff resignations) [11].

These systems could increase customer satisfaction if they are used with wisdom. If the information obtained and analyzed with the system is used to create a product that matches or exceeds customer expectations, and the sales staff uses the system to service customers more expertly and diligently, then customers should be satisfied with the company. This will provide a competitive advantage because customer satisfaction leads to increased customer loyalty, reduced customer acquisition costs, reduced price elasticity of demand, and increased profit margins [12].

The advantage offered by Product Information Management is that there is aggregation of product content from multiple systems into a single, centralized repository bakery products are becoming one of the ultimate healthy foods, bread also makes an excellent Carrier for other nutritious ingredients e.g. seeds. [13]
According to THOMAS [14] Strict and clear terms of business within the supply chain as provided by help to establish well-defined rules for transaction and thereby provide an integrated and straightforward data model. The implementation in the quality program also limits the number of players involved and defines standards for the data collected and the quality of data.

SCHIEFER [15] states that, due to various developments on markets for Bakery products, demands on effectiveness and ability to cooperate are increasing. This process generates the need to enhance the organization of information and communication structures.

1.4 Challenges/Disadvantages of the System:

According to research and markets [16] Bakery products are especially challenged due to several process, product and characteristics:

- Customer deadlines must be met to avoid costly penalty clauses
- Unmanaged, out-of-date designs can’t be trusted, causing costly redesign work
- Extremely high production rates (1,000 to 1,500 products per minute)
- Delicate products, often with fragile coatings and toppings which are loosely adhered
- Uncontrollable process variables leading to inconsistent size and shape variations (e.g. humidity, flour and yeast quality rising and time, etc.)
- It is again disadvantageous that only computer literate who may be able to use the information system and it can only through training that one can use the system.

In conclusion therefore with the advantages stated above, there must be a need for a Bakery Management Information System (BMIS) due to the increasing demand of security of data, reduced redundancy of data which is inform of files which in the long run leads to inefficiency and unstable production Hence a need for computerized system that would solve everything concerning data entry and Information system. Though there are some hindrances that may oppose the system.
CHAPTER THREE

3.1 Methodology

Methodology is a codified set of practices (sometimes accompanied by training materials, formal educational programs, worksheets, and diagramming tools) that may be repeatedly carried out to produce software [16].

3.2 Analyzing the literature of the system

The researcher used interviewing and observation as a means of systems analysis and data collection.

3.2.1 Interview

This is a conversation between two or more people (The interviewer and the interviewee) where questions are asked by the interviewer to obtain information from the interviewee. Interviews can be divided into two rough types, interviews of assessment and interviews for information [18].

The researcher carried out interviews with the general manager of hot loaf bakery who directed him/her to the production manager and sales manager who were able to facilitate and give each and everything concerning with the data that was needed. The advantage of this method of data collection is that there is high response rate since the production manager and sales manager were able and willing to fill and give the required data like bakery background, production trend and sales requirements.

3.2.2 Observation

The act or the faculty of observing or taking notice; the act of seeing, or of fixing the mind upon, anything [19].

The researcher used the time by seeing the types of products produced like buns, types of bread like kilo bread, half kilo bread, brown bread, cakes and other bi-products like sweat rolls and even how the products are entered in books and files.
The researcher also observed how data was recorded, format recordings and other forms generated mostly in sales department and production department. Example is a finished products form which is filled by production sector.

3.3 Specifying User Requirements

3.3.1 User requirements

This is where the entire concept of Information systems development revolves around. These requirements include; user needs, performance expectations, and other specifications. The reason for specifying this is that success or failure of an information system may be measured by the level of satisfaction of its basic users in the organization. Otherwise the customer will continue with the existing system and thereby defeat the purpose of the developed system. It is therefore a waste of resources to build information systems without sufficiently satisfying the target user.

3.3.2 System requirements

These involve computer programming languages to be used by the researcher in developing the information system, for example PHP, Java Script, phpmyAdmin, Mysql and Html.

3.3.3 Data Analysis

The researcher used the data got through the interviews and observation to confirm the situation on the ground. Through the use of the internet the researcher was able to understand the basic inputs and outputs of a bakery management information system and defining different records and there relative fields, the required out puts and inputs like the reports.

The information got by observation, interviewing were analyzed which helped in the designing of the system. That is;

- Separating data so as to know how many tables are required to avoid duplication of data in the same table.
- Defining different records and their relative input fields.
- Defining the required outputs, this is mostly the reports.
3.3.4 Assumptions made by the researcher.

- Every registered customer (agent) has a unique identification number
- Every product of the bakery has a unique identification number
- The bakery administrator will be responsible for full access to the system applications i.e. adding and removing customers and even issuing their respective privileges and rights to other users of the system.
- No customer will have access to the system.

3.3.5 Physical design.

Physical design of the system deals with the actual design of the system depending on the requirements that were established during the logical design. This has been determined by communication requirements between the system, users and design of the interface to support the communication of the user’s tasks and constraints on the bakery management information system flow.

3.3.6 Programming languages.

PHP was used because it is a general-purpose, multi-platform scripting language optimized for the use of with web applications. PHP can also work hand-in-hand with MySQL on an open-source program. It also interacts well with Apache server.

HTML Dream weaver has been used to design the various Graphical User Interface (GUI) forms for the (BMIS). HTML was also embedded into PHP to provide a friendly GUI. Apache web server was also used.

MySQL: (Mysql-5.0.22-community-nt) in particular was used as a database because it can connect well with PHP and they are available at a free cost under open source and commercial licenses and can be used on different operating systems.

PHPMyAdmin: PhpMyAdmin 2.8.2 was also used to provide an interface with MySQL. PHPMyAdmin provides ease manipulation and usage of MySQL.

Internet explorer 6 and internet 7 were also used to test and display results.
CHAPTER FOUR

4.1 Description of the system.

For the person to use the system, he/she must be registered by the bakery administrator, who assigns the user name and the pass words. The BMIS makes the use, roles based on security and users must be assigned to various roles according to their positions. The positions include Bakery Administrator, Sales manager and Production manager. The Administrator can add records, Update records, Delete, View all reports and Search any records. The Sales manager can add Records, Add agents, Updates, View Reports, Search for specific records. The Production manager can manage Stock Taking, View specific reports, Update specific records. Other users cannot use the system.

The system requires that for only business to be carried out or to be an agent one should first be registered with the bakery administrator. On the registration the customer (agent) is given agent identification number (agent id) that will be checked whenever a supply is to be made. Once a customer (agent) has finished registering, he/she can proceed by being supplied with bakery products whenever a request is made.

4.2 Hardware and Software Specification

This deals with the hardware and software specifications for BMIS. Since BMIS is built to run on the apache server, minimum specifications given are those for the dedicated computer on which it should run.

4.2.1 Hardware specifications.

- A minimum of 128MB or more of RAM.
- A minimum of 500MB free hard disk space. Color monitor with minimum of 800*600 screen resolution.
- 400MHZ or higher of processor speed with whichever brand of products.
4.2.2 Software specifications

Bakery management Information system operates well on windows operating systems which include windows XP and other windows with the following installed:

- PHP 2.11.4
- MYSQL 5.0.45
- Apache 2.0.55 web server or more

4.2.3 Systems architecture

The system is a client server Architecture with the Administrator, Sales Manager and Production Manager who can have access to the database that is hosted on the central server.

4.3 Pseudo codes.

This refers to the use of phases to describe the processing steps of a program or a module. Below are Pseudo codes for logging, inserting or entering date onto BMIS. One can Login either as an administrator, sales manager and production manager.

4.3.1 How to login into the system

Check if the username contains one of the above usernames

If okay
Proceed
If not
Display how to use the system
Back to the login form
If the admin logged in
Check the username and pass word if they are correct
If not display how to use system
If correct
Display administrator’s priorities
If the sales manager logged in
Check the user name and pass word if they are correct
If not display how to use the system page
If correct
Direct to sales manager page
If the production manager logged in
Check username and pass word if they are correct
if not
Display notification how to use the system
If correct
Direct to production manager's page.

4.3.2 Inserting or entering new records into the system

Check if the attributes or fields are entered correctly
If wrong return an error notification "wrong input"
If correct return an empty field

4.4 System Inputs and Outputs.

This chapter consists of the charts, tables and forms used to input data and the result or the output of the system.

4.4.1 Logical database design

This deals with the processing of data by the system. The system creates a database first and then the user enters data requirements, the system then processes the data to produce the desired outputs that are stored in the respective database tables for retrieval or reference.
Key

* It indicates a primary key

_ It indicates foreign key

(1, n) one to many relationship

(n, 1) many to one relationships
4.4.2 The system flow chart

Figure 3: Flow Chart
4.5 The HIPO Chart for BMIS.

**Figure 4: Hipo chart**
4.6 Systems Inputs

The tables within the database of the system are designed using MySQL. The various attributes of the tables are given various parameter values or names that are: fields, data type, size and description. Fields contain all the inputs that are required into the system, data type contain the input type, size contain the number of characters any field can contain/hold, description defines the terms that are abbreviated within the field column.

4.6.1 Sales details in the database

This is how data concerning sales are arranged and organized in the database

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales id(Pk)</td>
<td>varchar</td>
<td>5</td>
<td>Sales identification</td>
</tr>
<tr>
<td>Product id(Fk)</td>
<td>varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Agent id</td>
<td>varchar</td>
<td>5</td>
<td>Agent's identification</td>
</tr>
<tr>
<td>Quantity sold</td>
<td>varchar</td>
<td>15</td>
<td>Total products taken</td>
</tr>
</tbody>
</table>

Table 1: Add sales

4.6.2 Return Details in the database

These are fields in the database concerning returns in the database

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return id(Pk)</td>
<td>varchar</td>
<td>5</td>
<td>Return identification</td>
</tr>
<tr>
<td>Agent id</td>
<td>varchar</td>
<td>5</td>
<td>Agent identification</td>
</tr>
<tr>
<td>Product id(Fk)</td>
<td>varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Rate</td>
<td>varchar</td>
<td>10</td>
<td>Price per product</td>
</tr>
<tr>
<td>Quantity taken</td>
<td>varchar</td>
<td>10</td>
<td>Total products taken</td>
</tr>
<tr>
<td>Quantity returned</td>
<td>varchar</td>
<td>10</td>
<td>Total products returned</td>
</tr>
<tr>
<td>Quantity sold</td>
<td>varchar</td>
<td>10</td>
<td>Total products sold</td>
</tr>
<tr>
<td>Amounts payable</td>
<td>varchar</td>
<td>10</td>
<td>Expected amounts</td>
</tr>
</tbody>
</table>

Table 2: Add returns
4.6.3 Finished products

This is how finished products are arranged in the database. (yy-mm-dd) means that date is arranged in the order of year, month, and date.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date for finished products</td>
</tr>
<tr>
<td>Product id(Fk)</td>
<td>varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Product name(Pk)</td>
<td>varchar</td>
<td>15</td>
<td>Bakery product name</td>
</tr>
<tr>
<td>Product quantity</td>
<td>varchar</td>
<td>15</td>
<td>Product quantity produced</td>
</tr>
<tr>
<td>Clean products</td>
<td>varchar</td>
<td>10</td>
<td>Clean products got</td>
</tr>
<tr>
<td>damages</td>
<td>varchar</td>
<td>10</td>
<td>Number of damages got</td>
</tr>
<tr>
<td>Issued by</td>
<td>varchar</td>
<td>15</td>
<td>Name of person in charge</td>
</tr>
<tr>
<td>Received by</td>
<td>varchar</td>
<td>15</td>
<td>Name of person receiving the products</td>
</tr>
</tbody>
</table>

Table 3: Finished products

4.6.4 Stock stocking details in the database.

These are fields, data types, size (maximum characters that a field can contain) and description (abbreviated items within the column of the field).

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock name(Pk)</td>
<td>varchar</td>
<td>15</td>
<td>Required stock name</td>
</tr>
<tr>
<td>Stock id</td>
<td>varchar</td>
<td>5</td>
<td>Stock identification</td>
</tr>
<tr>
<td>Open stock</td>
<td>varchar</td>
<td>15</td>
<td>Stock you start with</td>
</tr>
<tr>
<td>In stock</td>
<td>varchar</td>
<td>15</td>
<td>Stock remained on the previous day</td>
</tr>
<tr>
<td>Out stock</td>
<td>varchar</td>
<td>15</td>
<td>Stock put in production</td>
</tr>
<tr>
<td>Closing stock</td>
<td>varchar</td>
<td>15</td>
<td>Out stock minus in stock</td>
</tr>
<tr>
<td>Date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date of stocking</td>
</tr>
<tr>
<td>Remarks</td>
<td>varchar</td>
<td>30</td>
<td>Conditions after stocking</td>
</tr>
</tbody>
</table>

Table 4: stocking
4.6.5 Products details in the database

This is how the data is arranged in the database.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product id(Pk)</td>
<td>Varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Product name</td>
<td>varchar</td>
<td>10</td>
<td>Product’s name</td>
</tr>
<tr>
<td>Product rate</td>
<td>varchar</td>
<td>10</td>
<td>Product’s rate</td>
</tr>
<tr>
<td>Product quantity</td>
<td>varchar</td>
<td>15</td>
<td>How much is taken</td>
</tr>
<tr>
<td>Total amounts</td>
<td>varchar</td>
<td>10</td>
<td>Total amounts got</td>
</tr>
</tbody>
</table>

Table 5: Add products

4.6.6 Delivery table details in the database.

This is how the data is arranged within the database when the deliveries are being entered.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery id(Pk)</td>
<td>varchar</td>
<td>5</td>
<td>Delivery identification</td>
</tr>
<tr>
<td>Product id(Fk)</td>
<td>varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Quantity delivered</td>
<td>varchar</td>
<td>15</td>
<td>Total products delivered</td>
</tr>
<tr>
<td>Cost per products</td>
<td>varchar</td>
<td>10</td>
<td>Price per product</td>
</tr>
<tr>
<td>Total amounts</td>
<td>varchar</td>
<td>15</td>
<td>Total products available</td>
</tr>
<tr>
<td>date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date of issuing that delivery</td>
</tr>
</tbody>
</table>

Table 6: Add delivery

4.6.7 Agent Details in the database.

Every agent is given an identity (pk) that identifies him/her from other agents and the full names plus other details.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent id(Pk)</td>
<td>varchar</td>
<td>5</td>
<td>Agent identification</td>
</tr>
<tr>
<td>Agent name</td>
<td>varchar</td>
<td>15</td>
<td>Agent’s name</td>
</tr>
<tr>
<td>Agent Address</td>
<td>varchar</td>
<td>15</td>
<td>Agent’s address</td>
</tr>
<tr>
<td>Agent contact no</td>
<td>varchar</td>
<td>15</td>
<td>Agent Personal number</td>
</tr>
<tr>
<td>Date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date for product take</td>
</tr>
</tbody>
</table>

Table 7: Add agents
4.6.3 Finished products

This is how finished products are arranged in the database. (yy-mm-dd) means that date is arranged in the order of year, month, and date.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date for finished products</td>
</tr>
<tr>
<td>Product id(Fk)</td>
<td>varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Product name(Pk)</td>
<td>varchar</td>
<td>15</td>
<td>Bakery product name</td>
</tr>
<tr>
<td>Product quantity</td>
<td>varchar</td>
<td>15</td>
<td>Product quantity produced</td>
</tr>
<tr>
<td>Clean products</td>
<td>varchar</td>
<td>10</td>
<td>Clean products got</td>
</tr>
<tr>
<td>damages</td>
<td>varchar</td>
<td>10</td>
<td>Number of damages got</td>
</tr>
<tr>
<td>Issued by</td>
<td>varchar</td>
<td>15</td>
<td>Name of person in charge</td>
</tr>
<tr>
<td>Received by</td>
<td>varchar</td>
<td>15</td>
<td>Name of person receiving the products</td>
</tr>
</tbody>
</table>

Table 3: Finished products

4.6.4 Stock stocking details in the database.

These are fields, data types, size (maximum characters that a field can contain) and description (abbreviated items within the column of the field).

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock name(Pk)</td>
<td>varchar</td>
<td>15</td>
<td>Required stock name</td>
</tr>
<tr>
<td>Stock id</td>
<td>varchar</td>
<td>5</td>
<td>Stock identification</td>
</tr>
<tr>
<td>Open stock</td>
<td>varchar</td>
<td>15</td>
<td>Stock you start with</td>
</tr>
<tr>
<td>In stock</td>
<td>varchar</td>
<td>15</td>
<td>Stock remained on the previous day</td>
</tr>
<tr>
<td>Out stock</td>
<td>varchar</td>
<td>15</td>
<td>Stock put in production</td>
</tr>
<tr>
<td>Closing stock</td>
<td>varchar</td>
<td>15</td>
<td>Out stock minus in stock</td>
</tr>
</tbody>
</table>
4.6.5 Products details in the database

This is how the data is arranged in the database.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product id(Pk)</td>
<td>Varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Product name</td>
<td>varchar</td>
<td>10</td>
<td>Product’s name</td>
</tr>
<tr>
<td>Product rate</td>
<td>varchar</td>
<td>10</td>
<td>Product’s rate</td>
</tr>
<tr>
<td>Product quantity</td>
<td>varchar</td>
<td>15</td>
<td>How much is taken</td>
</tr>
<tr>
<td>Total amounts</td>
<td>varchar</td>
<td>10</td>
<td>Total amounts got</td>
</tr>
</tbody>
</table>

Table 5: Add products

4.6.6 Delivery table details in the database.

This is how the data is arranged within the database when the deliveries are being entered.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery id(Pk)</td>
<td>varchar</td>
<td>5</td>
<td>Delivery identification</td>
</tr>
<tr>
<td>Product id(Fk)</td>
<td>varchar</td>
<td>5</td>
<td>Product identification</td>
</tr>
<tr>
<td>Quantity delivered</td>
<td>varchar</td>
<td>15</td>
<td>Total products delivered</td>
</tr>
<tr>
<td>Cost per products</td>
<td>varchar</td>
<td>10</td>
<td>Price per product</td>
</tr>
<tr>
<td>Total amounts</td>
<td>varchar</td>
<td>15</td>
<td>Total products available</td>
</tr>
<tr>
<td>date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date of issuing that delivery</td>
</tr>
</tbody>
</table>

Table 6: Add delivery
4.6.7 Agent Details in the database.

Every agent is given an identity (pk) that identifies him/her from other agents and the full names plus other details.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DATA TYPE</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent id(Pk)</td>
<td>varchar</td>
<td>5</td>
<td>Agent identification</td>
</tr>
<tr>
<td>Agent name</td>
<td>varchar</td>
<td>15</td>
<td>Agent’s name</td>
</tr>
<tr>
<td>Agent Address</td>
<td>varchar</td>
<td>15</td>
<td>Agent’s address</td>
</tr>
<tr>
<td>Agent contact no</td>
<td>varchar</td>
<td>10</td>
<td>Agent Personal number</td>
</tr>
<tr>
<td>Date</td>
<td>Date(yy-mm-dd)</td>
<td>10</td>
<td>Date for product take</td>
</tr>
</tbody>
</table>

Table 7: Add agents

4.7 The Input Forms for BMIS

The input forms of BMIS are designed using HTML. The various attributes of the form are given various parameter values or names. Authenticated in such way that any authorized person is able to access the resources or information meant for him/her. Authentication is ensured by use of Username and given pass words. JavaScript has been used to validate and verify all the inputs.

4.7.1 The login form for BMIS

The form shows the login page for Bakery Management Information System (BMIS)

Only authorized users can login into the system i.e. Administrator, sales manager and Production manager
Form 1: Login Page

4.7.2 The administrator page

The administrator page consist the combination of both sales and production pages because he/she can do each and everything concerning the system. That is he/she can add, update, search, view the reports within the system and gives the rights to other users of the system.

Form 2: Administrator page
4.7.3 Sales manager page

The sales manager's page consists of all the privileges that a sales manager is supposed to perform like adding sales in form returns, agents, deliveries and viewing the reports as shown below.

Form 3: Sales Manager Page

4.7.4 Production manager page

The production manager's page consists of all the privileges that a production manager is supposed to perform like stock taking, update stock, delete stock and record finished products as shown below.

Form 4: Production Manager

The system inputs can also categorized as shown below.
4.7.5 Sales

The sales form can be accessed by a sales manager and the bakery administrator that assists in adding sales in a day or any time when the sales are made.

Form 5: Sales Form

4.7.6 Returns

This one can be also be accessed by sales manager and the bakery administrator which assists in the adding returns to the system.

Form 6: Add returns
4.7.7 Finished products

The finished products form is accessed by the bakery administrator and production manager, it is used to record the finished products from the production sector which is then handed to sales sector for marketing.

![Finished products form](image)

Form 7: Finished products

4.7.8 Stock taking

Stock taking is done by production manager though the bakery administrator can also access the page. It is used to stock materials that are used in baking (store management).

![Daily Stock Taking form](image)

Form 8: Stocking
4.7.9 Delivery

This form is accessed by sales manager and the bakery administrator. It should cater for all the deliveries to their respective and registered agents.

Form 9: Delivery

4.7.10 Agents

This form is used to add registered agents into the database. It is accessed by sales manager and the production manager.

Form 10: Add agents
4.7.11 Products
This is used to input the products that are produced at the bakery into the system as long as they are registered with the bakery.

Form 11: Add products

4.8 System Outputs
The data entered in the system are analyzed, formatted, organized and categorized into the database which leads to the output of the required results.

4.8.1 Data Search
These facilitate quick data searches. The user has to specify date or identity depending on the data he or she wants to view as shown below.

4.8.1.1 Search on finished products
Finished products are searched by specifying the range of date one needs to see the products that were produced as shown below.

30
Form 12: Search finished products

4.8.1.2 Search on delivery
Deliveries are searched by selecting the name of the products and then pressing search.

Form 13: Search Deliveries

4.8.1.3 Search on Returns
Returns are searched by selecting the date that one is interested to view the returns as shown below.
4.8.1.4 Stock search
Ingredients to be used in the production can be seen by choosing a range of dates one is interested to view as shown below.

4.8.2 Reports

4.8.2.1 Report on products
The agent purchase list is generated daily, weekly and it lists the products that are registered and supplied with a day or a week basis as long as a purchase is made. It can be done by selecting a range between dates as shown below.
The Products Report

<table>
<thead>
<tr>
<th>product id</th>
<th>product name</th>
<th>product rate</th>
<th>product quantity</th>
<th>total amounts</th>
<th>date</th>
</tr>
</thead>
<tbody>
<tr>
<td>p1000</td>
<td>Klo Cake Bread</td>
<td>16700</td>
<td>65677</td>
<td>7878878787</td>
<td>2008-03-07</td>
</tr>
<tr>
<td>444</td>
<td>Klo Cake Bread</td>
<td>100</td>
<td>45000</td>
<td>4500000</td>
<td>2008-03-10</td>
</tr>
<tr>
<td>90878</td>
<td>Van Cake</td>
<td>454545</td>
<td>67</td>
<td>304554515</td>
<td>2008-03-10</td>
</tr>
<tr>
<td>565</td>
<td>Half kilo bread</td>
<td>56</td>
<td>67</td>
<td>37912</td>
<td>2008-03-11</td>
</tr>
<tr>
<td>14</td>
<td>Special Bread</td>
<td>500</td>
<td>600</td>
<td>300000</td>
<td>2008-03-11</td>
</tr>
<tr>
<td>p1000</td>
<td>Klo Cake Bread</td>
<td>16700</td>
<td>65677</td>
<td>7878878787</td>
<td>2008-03-07</td>
</tr>
<tr>
<td>444</td>
<td>Klo Cake Bread</td>
<td>100</td>
<td>45000</td>
<td>4500000</td>
<td>2008-03-10</td>
</tr>
<tr>
<td>90878</td>
<td>Van Cake</td>
<td>454545</td>
<td>67</td>
<td>304554515</td>
<td>2008-03-10</td>
</tr>
<tr>
<td>565</td>
<td>Half kilo bread</td>
<td>56</td>
<td>67</td>
<td>37912</td>
<td>2008-03-11</td>
</tr>
<tr>
<td>14</td>
<td>Special Bread</td>
<td>500</td>
<td>600</td>
<td>300000</td>
<td>2008-03-11</td>
</tr>
</tbody>
</table>

Form 16: Reports on products

4.8.2.2 Report on Sales made

This report shows the various Sales at the Bakery on a given day or week.

The Sales Reports

<table>
<thead>
<tr>
<th>sales id</th>
<th>product Name</th>
<th>quantity sold</th>
<th>date</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>51565</td>
<td>1000000</td>
<td>2008-02-19</td>
</tr>
<tr>
<td>900</td>
<td>p900</td>
<td>400</td>
<td>2008-03-07</td>
</tr>
<tr>
<td>b100</td>
<td>p45</td>
<td>1689-0</td>
<td>2008-02-05</td>
</tr>
<tr>
<td>s014</td>
<td>p14</td>
<td>68900</td>
<td>2008-02-29</td>
</tr>
<tr>
<td>s10</td>
<td>p10</td>
<td>2098</td>
<td>2008-03-04</td>
</tr>
<tr>
<td>s100</td>
<td>p1234</td>
<td>87000</td>
<td>2008-03-07</td>
</tr>
<tr>
<td>s14</td>
<td>p1234</td>
<td>1500</td>
<td>2008-02-27</td>
</tr>
<tr>
<td>sdd</td>
<td>ssso</td>
<td>wdsfd</td>
<td>2008-02-20</td>
</tr>
<tr>
<td>sjhj</td>
<td>yfsgh</td>
<td>ffef</td>
<td>2008-02-27</td>
</tr>
<tr>
<td>tgo77</td>
<td>6t666</td>
<td>5t65t6t5t</td>
<td>2008-02-27</td>
</tr>
<tr>
<td>788</td>
<td>Klo Cake Bread</td>
<td>78978</td>
<td>2008-03-10</td>
</tr>
</tbody>
</table>

Form 17: Sales Report

4.8.2.3 Report on Stock available

This shows the stock that is available in the store for baking their products this is done by the Production Manager to ensure that there is a constant supply to the sales department.
CHAPTER FIVE

5.1 Evaluations

The BMIS designed for Hot Loaf Bakery is able to make work and improve on the efficiency and effectiveness of the Bakery activities especially the sales, agent, returns, deliveries, stock taking retrieval.

The system is good in terms of:

- Data validation and verification: This has been achieved by use of JavaScript that ensures that the user enters only what the system requires i.e. avoids entry of garbage into the system and as is widely believed in the computer world “Garbage in “leads to “Garbage out” “GIGO”

- Easy Search and Look up: The system makes the search of specific records easy and simple. It also enables or facilities quick, formatted and easy daily and weekly report generation

- The system is platform independent: since it was designed using php MyAdmin and its related technologies and platform independent then that implies the System can run on any platform if it is configured properly, that’s on the server and even stand alone computers.

- The system was designed using Apache Server which if installed on a central server can provide client server services. I.e. can accommodate sharing of resources through a network. This absolutely enhances data sharing among the various users.

- The system is able calculate some quantities when on click button is placed hence improving on the efficiency of the system.

- Its simple graphical user interface makes it easy to navigate in.

5.2 Limitations of the system

- To login into the system one must have a specified password. I.e. the administrator, the sales manager, the production manager.

- Despite the friendly user interfaces there is need for the user to have some basic computer skills to be able to navigate easily and first around the system
• System logs are only configurable on the Apache Server. The Administrator has to choose the appropriate location to save these Log files or it must be first on a wamp server on stand one computers.

5.3 Problems Encountered

Some of the information that the researcher would have liked to know was kind of confidential especially the financial related transactions. This kind of information narrowed the scope for the researcher.

The php MyAdmin technology was very new too and hard to me and it required going into a “wild” search. This was due to the fact that the library lacked current books that dealt with the php technology and being a new programming technology.

The other big problem accounted was the central server that has been on and off hence it has not been possible in time schedule.

5.4 Future research Areas

The researcher realized there is still room for further improvement on the system. Any improvements should be made on the basis of the already developed system to cater for any shortcomings that may have been overlooked by the researcher.

The system can be modified to suit the following areas:

• Whole Productions department
• Quality Assurance department
• Distribution department
• Transport department

5.6 Recommendations

The researcher recommends the following:

• The current system at the bakery that is manual should be phased out completely though they have an Internal BMIS system that works in all Departments.
The Bakery should employ a systems administrator who will be responsible for the maintenance of the BMIS system.

All the Customer related details should be entered on a daily basis for this will enable easy data manipulation since the date is generated automatically.

The system should also be expanded to include the other many departments especially the whole production sector at the Bakery and if possible be uploaded to the World Wide Web so that online can be made any time and instantly.

5.7 Conclusion

The BMIS has achieved all the mentioned Objectives of the system; the system is able to generate reports and searches when needed. The system is able to post, update and delete data from the database. The system also can search for a particular record from the database. Thus, the system has been a success to both the system developer/designer and there is hope that the system will make the work of the Bakery very easy, since it's a computerized system.
APPENDICES

5.1 References


5.2 Interview Guide/Questionnaire

Respondents’ particulars:
Surname
Other Name
Sex: Male [ ] Female [ ]
Job title/position

General Information

1. When was the Bakery Started?

2. Who are the founders of this Hot loaf Bakery?

3. What is main product produced?

4. How do you categorize your products?

5. What is the organizational structure of the bakery ie from the General Manager up to Store keeper?

6. What are various prices/rates of the different products that are produced at the bakery?

7. What are the procedures followed for one to become an agent/constant customer?
8. How do you store your records at end of the day?

9. How do you view reports? I.e. sales, returns, stock takings, finished products?

Setbacks
What are the problems associated with the current system used at the bakery

What are the areas you would like to see improved or changed in this system
5.3 System codes

How to login into the system

```php
<?php echo "\n
<script type='text/javascript'>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns='http://www.w3.org/1999/xhtml'>
<head>
<title>Login</title>
</head>
<body>

<script type='text/javascript'>

function display_quote2Q {
    if(confirm("Do you Want To Exit system?")) {
        window.close()
    }
}

</script>

</body>
</html>

<script language='JavaScript'
src='gen_validatorv2.js'
type='text/javascript'></script>

```

innerHeight=document.MM_pgH
location.reload();
}

MM_reloadPage(true);
function MM_findObjQ(n, d) {
    if(navigator.appName == "Netscape")
    {for(i=0;i&lt;d.layers.length;i++)
    x=d.layers[i];
    else
    x=d.form[i];
    if((x=x.MM_findObj(n,d.layers[i].document));
    if(x&
    =d.getElementById(n)); return x;
}

function MM_validateFormQ {
    //v4.0
    var i,p,q,num,test,num,min,max,errors="",
```
number between '+min+' and
else if (test.charAt(O~
errors += '~'~'+nm+' is required.
if (errors)
alert('The following
error(s) occurred: 
'+errors);
document.MM returnValue
= (errors == "");
} }

/-->
<td valign="top" bgcolor="#lavender"><p align="center"><font size="+4">BMIS</font></p><p>&nbsp;</p></td>
</tr>
<tr>
<td height="37"></td>
<td><div align="right"> <em> </em> </div></td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td>&nbsp;</td>
</tr>
<tr>
<td height="19"></td>
<td>&nbsp;</td>
<td>&nbsp;</td>
<td> </td>
<td> </td>
<td> </td>
<td> </td>
</tr>
</table>
</body>
</html>

How to add sales

```php
$sales_id = trim($_POST['sales_id']);
$product_id = trim($_POST['product_id']);
$agent_id = trim($_POST['agent_id']);
$quantity_sold = trim($_POST['quantity_sold']);
$date = trim($_POST['date']);
$db_handle = mysql_connect('localhost', 'aruhozo', 'bmis811');
if($db_handle)
{
    echo 'Could not connect to the database';
}
else
{
    $query = "insert into add_sales values('$sales_id', '$product_id', '$agent_id', '$quantity_sold', '$date');"
    $result = mysql_query($query, $db_handle);
```
if(!$result){ echo "Could not date the record";
} else { echo "record added successfully";
}
?>

How to add products into the database
<?php
$salesid = trim($_POST['salesid']);
$productname = trim($_POST['productname']);
$agentid = trim($_POST['agentid']);
$quantitysold = trim($_POST['quantitysold']);
$date = date("Y-m-d");
if($date!=$d) {
    echo "wrong date";
    exit;
}
$db_handle=mysql_connect('localhost', 'anthozo', 'bmis8l1');
if(!$db_handle) {
    echo "Could not connect to the database";
} else {
    echo "sales added";
    header("Location:addsalses.htm");
}
?>

How to add stock into the database
<!DOCTYPE HTML PUBLIC
<html>
<head>
<title>Production Section</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>
<body bgcolor='lavender'>
<form method='post' id='stocktaking'>
<table width='45%' height='227' border='0' align='center' cellspacing='0' cellpadding='0' bgcolor='lavender'>
    <tr bgcolor='lavender'>
        <td colspan='2'>
            <div align='center'></div> </td>
    </tr>
    <tr>
        <td width='46%'><strong>Stock name</strong></td>
        <td> <select name='stock_name' id='stock_name'>
            <option>flour</option>
            <option>yeast 2 in 1</option>
            <option>yeast brown</option>
            <option>tam</option>
            <option>sugar</option>
            <option>baking powder</option>
            <option>cooking oil</option>
            <option>calcium</option>
            <option>mixed spices</option>
            <option>vanilla liquid</option>
            <option>eggs</option>
        </select></td>
    </tr>
    <tr>
        <td><strong>Stock id</strong></td>
        <td> <input name='stock_id' type='text' id='stock_id' maxlength='5'></td>
    </tr>
    <tr>
        <td><strong>Open Stock</strong></td>
        <td> <input name='open_stock' type='text' id='open_stock' maxlength='15'></td>
    </tr>
    <tr>
        <td><strong>In Stock</strong></td>
        <td> <input name='in_stock' type='text' id='in_stock' maxlength='15'></td>
    </tr>
    </table>
    <input name='stocktaking' type='submit' id='stocktaking' value='Submit'></form>
</body>
</html>
How to add finished products into the database

```html
<script language="JavaScript"
src="gen_validatorv2.js" type="text/javascript"> </script>

<body>

<form id="form1" action="finished_productsaction.php" method="post">

<table>
<thead>
<tr>
<th>Product id</th>
<th>Remarks</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

```
<table>
<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
<th>Clean Products</th>
<th>Damages</th>
<th>Issued by</th>
<th>Received by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown Bread</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Dgnts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweat Rolls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plain Dgnts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweat Rolls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plain Dgnts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<form>
  <table>
    <tr><td>Product</td><td><input name="product_id" type='text' id="product_id" maxlengt="5" /></td>
    <td>Damaged</td><td>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&n...
function checkbanO{
if
(document.layers | document.all | document.getElementById)
return checknumberO
else
return true
}
<\/script>
<\/script>

/*Current date in form credit:
JavaScript Kit (www.javascriptkit.com)
Over 200+ free scripts here!
*/var mydate=new DateO
var theyear=mydate.getFullYearO
if (theyear < 1000)
theyear+=1900
var theday=mydate.getDateO
var themonth=mydate.getMonthO+1
if (themoth<10)
themoth="0"+themoth
var theday=mydate.getDateO
if (theday<10)
theday="0"+theday
var displayfirst=theday
var displaysecond=themoth
var displaythird=theyear
document.finished_products.date.value=displaythird+"-"+displaysecond+"-"
+displayfirst
<\/script>
<p><em><font color="#000000" size="+2">Quality Tastes</font></em></p>
<font color="#000000" size="+2">And
</font>
```php
// Establish database connection
$database = "bmis";
$server = "database.ics.must.ac.ug";
$username = "aruhozo";
$password = "bni8ll";
$db_found = mysql_select_db($database, $db_handle);

// Query to search finished products
$query = "select * from finished_products where date BETWEEN '{$date1}' AND '{$date2}'";
$results = mysql_query($query, $db_handle);
if (!mysql_num_rows($results)) {
    echo '<p>No finished product found in the database</p>';
    echo '<a href="javascript:history.back(1)">Back</a>';
} else {
    echo '<table border="1" align="center">
    <tr><th>Date</th><th>Product Id</th><th>Product Name</th><th>Product Quantity</th><th>Clean Products</th><th>Damages</th><th>Issued By</th><th>Received By</th></tr>
    while ($aak = mysql_fetch_assoc($results)) {
        echo '<tr><td>'; echo $aak['date']; echo '</td><td>'; echo $aak['product_id']; echo '</td><td>'; echo $aak['product_name']; echo '</td><td>'; echo $aak['product_quantity']; echo '</td><td>'; echo $aak['clean_products']; echo '</td><td>'; echo $aak['damages']; echo '</td><td>'; echo $aak['issued_by']; echo '</td><td>'; echo $aak['received_by']; echo '</td></tr>';
    }
    echo '</table>';
}
```

How to search finished products from the database:

<p>Click to go back</p>

How to search finished products from the database:

<p>Click to go back</p>