

CHRISTIAN SERVICE UNIVERSITY COLLEGE



TOPIC:

**STOCK AND INVENTORY MANAGEMENT SYSTEM FOR
ELECTRICITY COMPANY OF GHANA, ASOKWA**

BY

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STOCK AND INVENTORY MANAGEMENT SYSTEM

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A project work presented to the Computer Science Department of Christian Service University College in partial fulfillment of the requirements for the degree of Bachelor of Science in computer science.

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STATEMENT OF AUTHENTICITY

I have read the university regulations relating to plagiarism and certify that this report is my own work and do not contain any unacknowledged work from any other source. I also declare that I have been under supervision for this report herein submitted

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DEDICATION

I first and foremost dedicate this work to God Almighty that has always been my sufficiency and strength to complete this project work successfully. Also to Eli with love, Eileen and Ray with pride.

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Although, I find it personally preferable to write in longhand with pen on a line pad, the office, professional secretarial services made the electronic transfer through the nimble finger and diligent mind of Miss Jennifer Kelsy Kassar Quansah and to all those who helped or contributed in diverse ways towards this project, I say thank you all and my God Almighty bless you.

ABSTRACT

Stock and inventory management is one of viewpoints of organization to enhance its business performance so as to obtain a reasonable return on the business venture.

The company uses a manual record system which normally has irregularities when entries are done into the 'TALLY CARDS. This actually consume considerable amount of stationary (paperwork), also making it difficult for workers to identify tally cards in time. The principal purpose of the automation of the stock and inventory management system is to facilitate and provide all forms of stock level reports quickly (less time) for management support system for important decision making.

Once the quantities of an item in stock hit below the minimum level, the screen will light up, telling the organization to reorder. The indicated item which causes the screen to light up, the items will be checked at the end of the day to establish whether more of the items should be ordered. Data

flow diagram is some of the tools that would be used to develop the required system.

The stock and inventory management system database will contain the inventory information for all the items and systems and the system will also capture the stock and inventory data that is to be stored and processed for day to day running of the company. The system has forms that will be used to capture and insert data into the database, delete records, view reports and provide user rights to only authenticate users.

TABLE OF CONTENTS

CONTENTS	Page No.
Statement of Authenticity	i
Dedication	ii
Acknowledgements	iii
Abstract	iv
 CHAPTER ONE	
1.0 Introduction	1-3
1.1 Motivation for the Project	3-4
1.2 Aims and Objectives	5-7
1.3 Major Challenges	7-10
1.4 Approaches to Project	10-11
1.4.1 Literature Review	11-12
1.4.2 Analysis of Existing System	12
1.4.3 Firming Up a Solution	13

1.4.4 Project Evaluation	13
1.5 Structure of the Report	14

CHAPTER TWO

2.1 Background and Review	15-16
2.2 Review of the Reference System	16
2.2.1 Types of Inventory Systems	17-18
2.3 Problem Identification	18-20
2.4 Proposed Solution	20
2.5 Scope of Project	21
2.6 Objectives of the Proposed System	21
2.7 Features of the Proposed System	22
2.8 Limitation of the propose system	22

CHAPTER THREE

3.1 Requirement and Design Specification	23
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3.2	Functional Requirements of Proposed System	23
3.3	Non-functional Requirements	24
3.3.1	Hardware Requirements	25
3.4	Analysis of Requirements	25
3.5	Design Specification	26-27
3.5.1	Database Design	28-29
 CHAPTER FOUR		
4.1	Implementation and Evaluation	30
4.1.1	Implementation	30
4.1.2	Security and Access to Data	31
4.2	Testing	31
4.2.1	User Manual	32
4.3	Evaluating the Project	32-33
4.4	Evaluating the Solution	33-34
4.5	Evaluating the Methodology	34
4.6	Evaluating the architecture	35

CHAPTER FIVE

5.0	Problems, Achievements and Challenges	36
5.1	Problems/Challenges	36-37
5.2	Achievement	37
5.3	Lessons Learnt	38
5.4	Conclusion	39
5.5	Recommendation	39
	Reference	40-44
	Appendixes	45-57

CHAPTER ONE

1.0 INTRODUCTION

Stock and inventory management system or, otherwise known as inventory control is used to show how much stock you have at any one time and how you keep track of it.

This implies to every item you issued, covering stock at every stage of transaction process, from purchase and delivery to using and reordering (replenish) the stock.

Every business needs to know the value of the items or stock it has, without this information a business cannot decide on purchase schedules, reordering to replenish items that are issued out, vital business decisions that rely on accurate inventory information for efficiency and speedy return on investment are some of the benefit you can receive from planning early and planning well.

The researcher has observed that stock control in the case study area do not have Automated System, instead the simplest manual system in the stock book otherwise, known as '*TALLY CARD*' which suits small business with few stock items, it enable business to keep log of stock received and stock issued.

The researcher realized that the manual processing is quite tedious, is also difficult to find records due to file management system, it's time consuming, not user friendly environment, less accurate in comparison to computerized processing, all information are placed separately leading to a lot of paper work.

In order to solve this problem, the researcher has listed the problem areas in which the automated system will deal with. In the new computerized system (automation) the researcher tried to give these facilities:

- ❖ Security

- ❖ Ease of use and (user friendly environment) energy saving.
- ❖ Operation of high repetitive task is reduced
- ❖ It helps in faster decision making
- ❖ Better quality control
- ❖ Greater precision

The main advantages are usually in the form of increase in efficiency, the automation lead to reduction in manpower.

Successful automation can improve work efficiency, increase throughput and reduce cost; automation is changing the face of doing business.

It can also be seen as quality control, waste reduction and increase in productivity and reduction of labour cost

1.1 MOTIVATION FOR THE PROJECT

I am very please to bring about this electronic way of managing stock and inventory in the case study area, to put the knowledge I have acquired over the years to bear. In order to test my ability and

knowledge acquired, it is incumbent on me to benefit society as a whole.

That is why I am working on this case study which is realistic and as possible. This is a proof that a student can report on his/her ability the facts of the case at the time a problem exist, and also develop the following skills such as:

-) Thinking analytically and critically
-) Communicating ideas and opinion
-) Making and defending decisions
-) Identifying and recognizing problems
-) Understanding and recognizing assumptions and inferences as opposed to concrete fact
-) Understanding and interpreting data with this background, which I believed I am being forearmed to deal with the existing problem (the case study).

1.2 AIMS AND OBJECTIVE

The researcher is to design and develop software to address the most common challenges associated with stock and inventory management system. These are some of the key benefits across all application areas:

-) That the system is very user friendly
-) Reduces time for easy accessibility to information resulting in increased internal and external customer satisfaction.
-)

All reports are exportable into excel format and submitted to executive support system (ESS) for decision making. The system will become vital to small, medium, and large businesses. It will also be ideal for automatic order processing. The proposed system will alert personnel (users) and company official when stock runs out.

The system will ensure that the purchase, or re – ordering does not get hampered, and that issuing of goods and other material continues. Without a good inventory control, it's possible that the company will lose stock and materials. Company activities may be halted if firms do not monitor its supplier.

The system will also help reveals whether there is thief or other anomalies within the store. The researcher will ensures that the system is deploy, in that, good inventory management will show how much stock are issued, how much is still in the warehouse or the shelf and how much will be the next order. If amounts don't match, then something went wrong.

Instead of manual browsing through the list of materials and stock, a manager of the system can simply track which material is to be pulled out or issued. The company won't have to worry about missing orders or miscalculations because the automated system is almost *error – free* unless

it's tempered with or there's a technical problem or power outage. All are update in real time.

With the development of the automated system businesses will maintain inventory and balance the costs of keeping, shipping and receiving inventory over many period.

1.3 MAJOR CHALLENGES

The company's materials manager is not satisfied that he has sufficient information to make a vital decision about or which direction to go, he sees his option as developing automated system that can run along-side with the existing one.

"Tally cards," the process involved data capture, the store is a central point which take delivery of materials from suppliers and section and other departments also draw material and stationeries from the centralized point, the sections and departments comprises of fourteen (14) sections.

Current system “as –is” The stock operation “tally cards” is carried out manually. It is a system that is used for managing stock and inventory control, leading to time consuming (Stock and inventory taking and updating of the “tally cards” on daily basis).

The bulkiness of the stock cards take office space and consume stationery also accumulate dust, It faces the task of monitoring stock levels in accordance with it demand on a daily basis and has lead to the company ordering or purchasing materials that are not in demand thus affecting the capital flow.

At times, stocks of particular items (material) run out of stock, mainly due to those in highly demand at a very crucial time, affecting the company’s operations.

Though the existing system has the above weaknesses, it also has some strength in that it enables the store manager or management count the physical stock at hand on monthly basis.

In the “tally cards system there are steps one ought to follow to draw material from the company’s stores.

-) Step one; a Department/Sections draw item from the store with a requisition book duly authorized by the Director verified by the Accountant and checked by the Material Manager before material is issued.
-) Step two; the store – keeper verifies on the “tally cards” or physically, whether the material is available or not.
-) Step three; Materials are issued based on its availability. Way – bills are issued to cover the items drawn to enforce control measures.
-) Step four; when the issuing officer (store- keeper) issues the material he does record it into the tally cards” subsequently the way- bill book (form) are filled and the person who is to collect signs before he does take the material away, likewise the requisition book.
-) Step five; at the end of the day the issuing officer does collect all the duplicate of the requisition form (book) and records the items into the tally cards.

When issuing officer does issue material, he physically subtracts the quantity from the “tally cards”. At times, the issuing officer does receive materials from suppliers he records the items and its quantity which goes to add up to the existing stock on the “tally cards”.

Whenever there is a new item to be stocked, a new tally cards has to be opened for that particular item(s). Also a new tally card is opened for already exhausted one.

1.4 APPROACHE TO THE PROJECT

Electricity Company of Ghana –Asokwa, uses a manual system “tally cards” for its stock and inventory management, i.e. the use of stock cards. This had led to the delay in acquiring stock and inventory reports.

The company also runs out of some particular stock items that are in highly demand at a crucial time. The proposed system will be able to

provide the required quantity of stock and inventory at any point in time.

The proposed system will have the ability to produce stock and inventory reports that managers can apply in decision-making process. It will also be able to accept data from users through the use of interface and interactive forms, the proposed system shall be efficient and fast enough, data input will be validated and the proposed system will give a summary of stock and inventory on weekly or monthly basis even on quarterly.

1.5 LITERATURE REVIEW

It is the systematic identification, location and analysis of documents containing information related to the research problem being investigated, the techniques that the researcher has employed to gather the requirements for the proposed system are as follows:

) Reading was one of the techniques he employed, this particular techniques was employed to be able to read some of the

guiding documents that the company does use to come out with the “Tally cards” example the history, vision and mission of the company.

-) Questionnaire was another technique to obtain the format of the current system, because it provides the chance to collect information from respondents who are conversant with the whole system under study.
-) The third technique employed was the observation, which gives the researcher to acknowledge the flow of activities in the stock processes, i.e. capturing of data and steps one goes through to draw material.

1.5.1 ANALYSIS OF THE EXISTING SYSTEM

This approach has many draw-backs such as; it is a time consuming process, thus increases time for accessibility to information, resulting in reduces internal and external customer satisfaction. In all the existing system “tally cards” was inefficient and confusing system

1.5.2 FIRING UP SOLUTION

The main objective of the project is to track assets of the organization, and determine the stock levels by computing the receipt and distribute material and also to account for the stock at the end of the day.

The aim of the study is to provide an automated computerized system for securing, quick evaluation and manipulation of records of goods received and distributed at the store. The system will be able to collect, store, retrieve, and communicate and used data for the purpose of efficient and effective management.

1.5.3 PROJECT EVALUATION CRITERIA

The project covers the automation of stock and inventory management system for Electricity Company of Ghana limited-Asokwa. It focuses on tracing of organizational assets and also to determine the stock levels, what it has received, distributed and the amount of stock needed.

1.5.4 STRUCTURE OF PROJECT REPORT

All reports are exportable into excel format and submitted to executive support system (E.S.S.) for decision making. The stock and inventory management system database will contain the inventory information for all the items and the system will capture the stock inventory data that is to be stored and processed for day to day running of the company.

The system has forms that will be used to capture and insert data into the database, delete records, view reports.

CHAPTER TWO

2.1 BACKGROUND AND REVIEWS

Stock and inventory management is one of viewpoints of organization to enhance its business performance so as to obtain a reasonable return on the business venture.

The Company uses a manual record system which normally have irregularities when entries are done into the 'TALLY CARDS, This actually consumed considerable amount of stationary (paperwork), also making it difficult for workers to identify tally cards in time.

The principal purpose of the automation of the stock and inventory management system is to facilitate and provide all forms of stock level reports quickly (less time) for management support system for important decision making.

Once the quantities of an item in stock hit below the minimum level, which is the minimum level, the screen will light up, telling to re order. The indicated item which causes the screen to light up, the items will be check at the end of the day to establish whether more of the item should be ordered. Data flow diagram is some of the tools that would be used to develop the required system.

The stock and inventory management system database will contains the inventory information for all the items and the system will also capture the stock and inventory data that is to be stored and processed for day to day running of the company.

The system has forms that will be used to capture and insert, data into the database, delete records, view reports and provide user rights to only authenticate users

2.2 REVIEW OF A REFERENCE SYSTEM

This chapter will involve the systematic, identification, locating and analysis of documents containing information related to the research

problem being investigated. It will also give the relationship of the proposed research to the previous concluded research.

2.2.1 TYPES OF INVENTORY CONTROL MANUAL SYSTEM.

Cameron Balloon Virtual Factory (2005) (4) camp up with the listed manual inventory system:

-) Fixed re – order stock level. The fixed re- order stock level is whereby the business decides the minimum level of stocks it can tolerate and then re- order before the stocks reach this level. The exact timing will depend how long the stocks takes to arrive. This minimum level is set so as to be able to give time to the supplier.
-) Fixed time re ordering; the fixed time reordering, the firm re- orders stocks at a fixed time each month or week. Organizations set up different times depending on their convenience to re-order stocks.
-) Economic order quality: in other ward, economic order quality firms usually estimates what is needed and

order at once. This method is used at the beginning of each yearly quarter.

) Just in – time order production; this method involves keeping stocks to absolute minimum and the raw materials are ordered when they are needed. It was developed in Japan. It deals in the production of goods. This can be wonderful for helping to reduced the need for working capital, but requires a very high level of organization skill and a very close relationship with supplies these four methods would suite the company that employs them but still, the manual work is too much plus the related problems that come with it combining the four methods and automating the whole inventory control system will give that particular organization is a big boast in managing its inventory.

2.3 PROBLEM IDENTIFICATION

The researcher has observed that stock control in the case study area do not have Automated system, instead the simplest manual system in the stock book otherwise, known as '*TALLY CARD*'

which suits small business with few stock items, it enable business to keep log of stock received and stock issued.

The researcher realized that the manual processing is quite tedious, is also difficult to find records due to file management system, it's time consuming, not user friendly environment, less accurate in comparison to computerized processing, all information are placed separately leading to a lot of paper work.

It is a physical inventory counting and cycle counting are features of many inventory control system which does not enhance performance of the organization (business) the company also runs out of some particular stock items that are in demand at crucial times. However the results are enumerated below:

-) It is not user friendly environment.
-) It is very tedious
-) Time consuming
-) All information is placed separately
-) Lot of paper work

) Slow data processing

) It is difficult to file records due to

2.4 PROPOSED SOLUTION

The proposed system will be able to provide the required quantity of stock and inventory at hand at any point in time. The proposed system will have the ability to produce stock and inventory reports that managers can apply in decision-making process.

It will also be able to accept data from users through the use of interface and interactive forms, the proposed system shall be efficiently and fast enough, data input will be validated and the proposed system will give a summary of stock and inventory on monthly basis.

The main advantages is usually in the form of increased efficiency, the automation lead to reduced manpower, successful automation can improve work efficiency, increase throughput and reduce cost, automation is changing the face of doing business. It can also be seen as quality control, waste reduction and increase in productivity and reduction of labour cost.

2.5 PROJECT SCOPE

The project covers computerization of stock and inventory management system for Electricity Company of Ghana – Asokwa. It focuses on the stock and inventory of materials, the level of the stock, and the amount of stock needed, details of various entities that draw materials from the central stores.

2.6 OBJECTIVES OF THE PROPOSED SYSTEM

-) The database was designed to enable the store manager of Electricity Company of Ghana- Asokwa, to monitor and control the flow of stock.
-) The database shall have security and access controls in order to prevent unauthorized user from accessing the database, this is done through the use of password.
-) The output of the system should be able to meet the user requirement for decision making, example, and weekly report on stocks.

2.7 FEATURES OF THE PROPOSED SYSTEM

In order to solve this problem, the researcher has listed the problem areas in which the automated system will deal with. In the computerized system (automation) the researcher tried to give these facilities.

-) Security
-) Ease of use (user friendly environment) energy saving.
-) Operation of high repetitive task is reduced
-) Faster decision making
-) Better quality control
-) Greater precision

2.8 LIMITATIONS OF THE PROPOSED SYSTEM

There are other aspects that the researcher did not put into consideration like the people who access the various activities. Where the stock comes from supplier etc, hence further researcher can put all those considerations in order to come up with a holistic and more representative function at computerized stock and inventory management system.

CHAPTER THREE

3.1 REQUIREMENT AND DESIGN SPECIFICATION

This particular chapter does specify the requirements for the computerization of stock and Inventory control system, as a result the requirements serves as a basis for the acceptance of the system.

3.2 FUNCTIONAL REQUIREMENTS OF THE PROPOSED SYSTEM

The proposed system will be designed to perform the following functional requirements:

-) The proposed system will be able to provide the required quantity of the stock and inventory at hand at any point in time.

-) The proposed system will have ability to produce stock and inventory reports that managers can apply in decision-making process.

-) The proposed system will be able to accept data from users through use of interface and interactive forms.

-) The proposed system will be able to give a summary of stock and inventory on monthly or quarterly basis.

-) The proposed system will be able to validate input data.

3.3 NON FUNCTIONAL REQUIREMENTS

-) The non-functional requirements of the system are:
 -) The proposed system should be easy to maintain and adapt to by users. The proposed system should be efficiently and fast enough.

 -) The proposed system would enable backup and recovery to be performed at specific times (manually or automatically).

) The proposed system will provide security to the database by use of passwords.

3.3.1 HARDWARE REQUIREMENTS

) The proposed system will operate on windows operating system platforms

3.4 ANALYSIS OF REQUIREMENT

The database system together with the interfaces would run on a window-based operating system.

Microsoft SQL Server 2005 (mysql data manipulating language will be used as the query language).

The graphical user interfaces will be designed using Microsoft Visual Studio 2008(VB. Net 2008).

3.5 DESIGN SPECIFICATION

A relational database model was employed to be able to accomplish the tasks involved in designing the new database of the system due to the following reasons:

- The relational model is necessary to effectively use relational database software such as Microsoft SQL Server 2008, which will support the database.
- The entities are identified and data elements organized in relational tables, consisting of rows and columns whereby a row represents a record and a column represents an attribute of a record.
- On a purpose, this project will be designed to provide an effective computerized stock and inventory control management process for ECG-Asokwa, for easy monitoring and control of stock flow for the Company.
- Minimization or elimination of data redundancy, thereby minimizing or eliminating wastage of storage space probability of

contradiction between the values of the data items in different files and problems of updating identical data items so that the database files are all equally valid.

- A relational database model, the data and the programs are mutually independent, this means that the data can be moved or updated without the need to make alterations to the programs involved.
- It includes all interrelations of data and has a common approach to the retrieval, insertion and modification of data.
- Relational database model, by normalization does put data into tabular form by removing repeating groups and then removes duplicated data from the relational tables.
- The goal of normalization is to create a set of relational tables that are free of redundant data and that can be consistently and correctly modified. It eliminates redundant data, which in turn saves space and reduces manipulation anomalies.

3.5.1 DATA BASE DESIGN

Use Case Diagram

) Use case diagram are used together the requirements of a system including internal and external influences. When the initial task is completed, use case diagrams are modified to prevent the outside view; the purpose of the use case diagram can be as follows:

- Identify specific features of the system

- Identify shared behavior among system features.

- Provide a simple and easily understanding way for client to find their requirements.

- Are used to gather requirements of the system.

- Identify external and internal factors influencing the system.

➤ Represent a view of a system from outside the system.

) Interfaces and forms: (refer to appendix B) these enable the user to log in and have interaction with the system and the database as well, in their capacities to enter data accordingly.

) Modules and Class modules: (refer to appendix B) the class diagram models the resources used to build and operate the system. It's a resources that represent people materials, information and behaviors.

CHAPTER FOUR

4.1 IMPLEMENTATION AND EVALUATION

This chapter is a bench mark or guides to the system users about this software application and explains how the implementation of the system will be done and also how it will executes its functionalities.

The system application will be implemented using operating system platforms environment and MySql will be used to develop the database management system. Visual studio 2008 (VB.Net 2008) will be used to develop the code that links the database as well as graphical user interfaces for the Company.

4.1.1 IMPLEMENTATION

This stage involves installing all components of the proposed system that include hardware, software and training users of the system. The conversion plan for this system is parallel conversion given the advantage of low risks and being able to compare performance between the new system and the old system.

4.1.2 SECURITY AND ACCESSIBILITY TO THE DATABASE

This would be achieved through the use of access control mechanism.

When accessing the database, a dialogue box would be displayed requesting individual to enter user name, password and user group.

4.2 TESTING

Since the software application is a working prototype model, two types of testing will be used (white box and black box testing) i.e. execution based testing and non execution testing.

Execution based testing is the process of inferring certain behavioral properties of the product based in part on the results of executing the product in a known environment with selected inputs.

Non execution testing is mainly for the specifications and this involved validation, validation helped to determine whether the application as a whole satisfied the specifications or objectives.

4.2.1 USER MANUAL

In this section we look at information that is needed to utilize the application by the end user. It focuses on the user learning how to start application, use the application and close the application. The user to start the application does need to log on the system using valid user name and password and there are three options of log in, clear and close.

In addition to that, if other users log on to the application, they can have access to the authorized user screen with many options including update, delete and the report option.

4.3 EVALUATION OF THE PROJECT

The system is user friendly, i.e. there is little difficulty expected in the running of the application. The system significantly reduces time taken to capture stock and inventory information and the time taken to retrieve information to prepare weekly monthly, quarterly and yearly report.

These are achieved with only a click on a button, the required procedures for generating reports will be executed with the assumption that all stock and inventory information exist in the system.

The utmost achievement of the project has been to develop a computer based stock and inventory management system to enable managers of the system generate reports at anytime as quickly as the need be.

For example is easier for managers to know the amount of stock item left a shelf just at a press of a button without him/her physically going there to count. It is also possible for managers to be prompted of reorder levels for mediate action to be taken.

4.4 EVALUATING THE SOLUTION

Information system, it plays a remarkable role in data management of organizations that employ them. In organization that deals in wide range of stock and inventory such as our case study, information system plays vital role in its operations.

-) Improves on the accuracy of stock and inventory data.
-) Reducing the lead time, increasing the velocity of operations

-) Eliminating misalignment from processes.
-) Eliminating variations in inventory and
-) Replenishing stock based on operational demand are some of the solution the researcher sought to offer.

The researcher did establish the strengths and weaknesses of the existing system, and it is from this that the software was designed to implement the input and retrieval of stock and inventory information, and to generate the necessary report.

4.5 EVALUATION THE METHODOLOGY

The frame work that was used to structure, plan and control the process of developing this software divided the project into sequential phases with some overlaps.

Emphases were placed on planning, time schedules, target dates and implementation of the entire system. The methodology used maintained control over the life of the project through use of extensive written documentation

4.6 EVALUATING THE ARCHITECTURE

An important advantage of an object oriented approach to design is that, it simplifies the problem of making changes to the design. The reason for this is that object state representation does not influence the design.

Changing the internal details of an object is unlikely to affect any system objects, Furthermore, because objects are loosely coupled, it is usually straight forward to introduce new objects without significant effects on the rest of the system.

CHAPTER FIVE

5.0 SUMMARY OF PROBLEMS, ACHIEVEMENTS AND CHALLENGES

This chapter summarizes the problems achievements of the projects, challenges encounter as well as recommendation thereafter. The main objective of this project is to design a stock and inventory management system for Electricity Company of Ghana.

The project also want to create a more secure way of storing inventory data and an efficient way of gathering monthly inventory report.

5.1 PROBLEMS/CHALLENGES

In the early stages of the data base, Java script was sought of to be used to implement the code but due to the fact that the researchers had diminutive knowledge about the scripting language, they had to change to V.B. net 2008 which they have learnt in one of the semesters.

The other problem was that of finances to fund the all their project in terms of printing, stationery, research assistants and other needed materials.

5.2 ACHIEVEMENTS

The system is user friendly hence little difficulty is expected in running this application. It will greatly reduce on the time that it takes to capture inventory information and time it takes to prepare monthly reports will reduce considerably.

This will be achieved with only a click of the button, all the required procedures for generating reports on the data base will be executed with the assumption that all inventory information exist in the system.

The utmost achievement of the project has been to develop stock and inventory management system to cater for inventory and that can quickly enable managers' monthly reports. For example, it's possible for managers' to know the amount of stock item left at the shelf and its monetary value.

5.3 LESSONS LEARNT

The researcher did establish the strengths and weaknesses, and it is from this that software was designed that is implemented to input inventory information, retrieve and generate the necessary reports.

The project will serve as a knowledge based to other researchers and interested parties. It will also be used as a template for developing the real data base system for Electricity Company of Ghana limited.

The designer does hope that the online system will help Electricity Company of Ghana limited to minimize the problems with the manual inventory system “tally cards” being employed. The system can allow future adjustments to integrate future demand.

5.4 CONCLUSION

The data base will enable the update, retrieval, deletion, and generation of inventory reports accordingly. The complete and appropriate implementation of this stock and inventory management system on stock items will yield significant advantages to the organization.

5.5 RECOMMENDATION FOR FUTURE WORK

Electricity Company of Ghana-Asokwa, should establish an automated or computerized stock and inventory management system to manage inventory data and ease on the process of generating monthly reports.

Computerization of services and processes is required to effectively benefit from this application. There are other aspects that the researchers did not put into consideration like the people who access the various activities.

When the stock comes from etc, hence further researchers can put all those considerations in order to come up with an efficient and more representative function at computerized stock and inventory management system.

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APPENDIXES:

Appendix A: Interview guide;

I am in the process of designing an automated (computerized) stock and inventory management system for Electricity Company of Ghana limited, Ashanti East. I therefore request you to fill and answer the question therein.

Your co-operation will be welcomed.

What method is being used to control/monitor the stock of material?

.....
.....
.....

What system is being used to manage the stocks of the organization?

.....
.....
.....

What are the problems and difficulties do you meet in the process of capturing and storing of information using the above system?

.....
.....
.....

How do you determine the stocks that are to be supplied or purchased?

.....
.....
.....

When and how are the stock levels of various items determined?

.....
.....
.....

Name:

Designation:

Thank you very much,

David Agbeko Kwamla Doe (Researcher)

APPENDIX B Interface and forms

LOGIN FORM

Login form enables the user to login and have access to the system and database.



Figure 1: Login form enables the user to login and have access to the system and database.

MAIN FORM

System user form enables users in their capacity to be able to enter data.

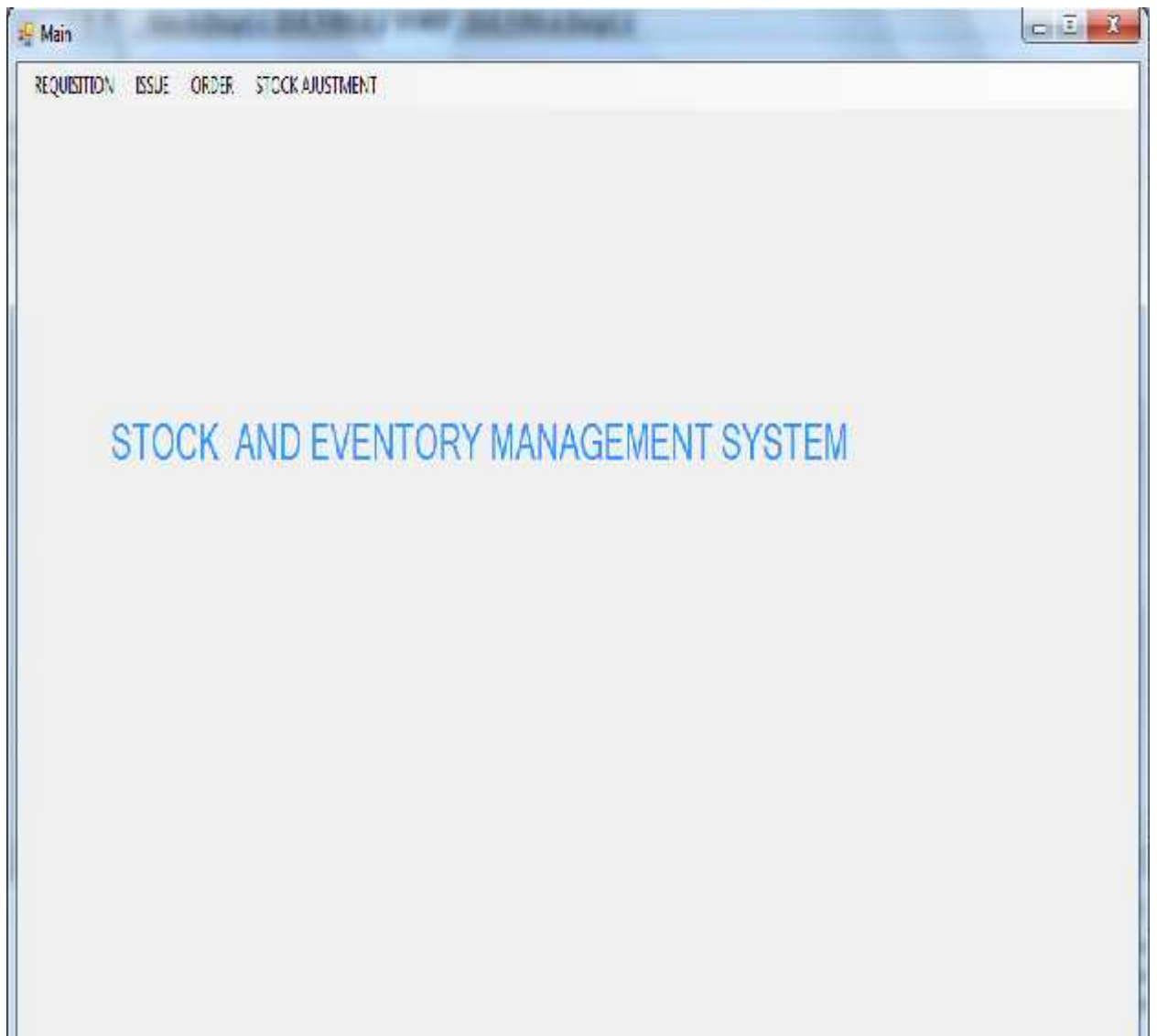
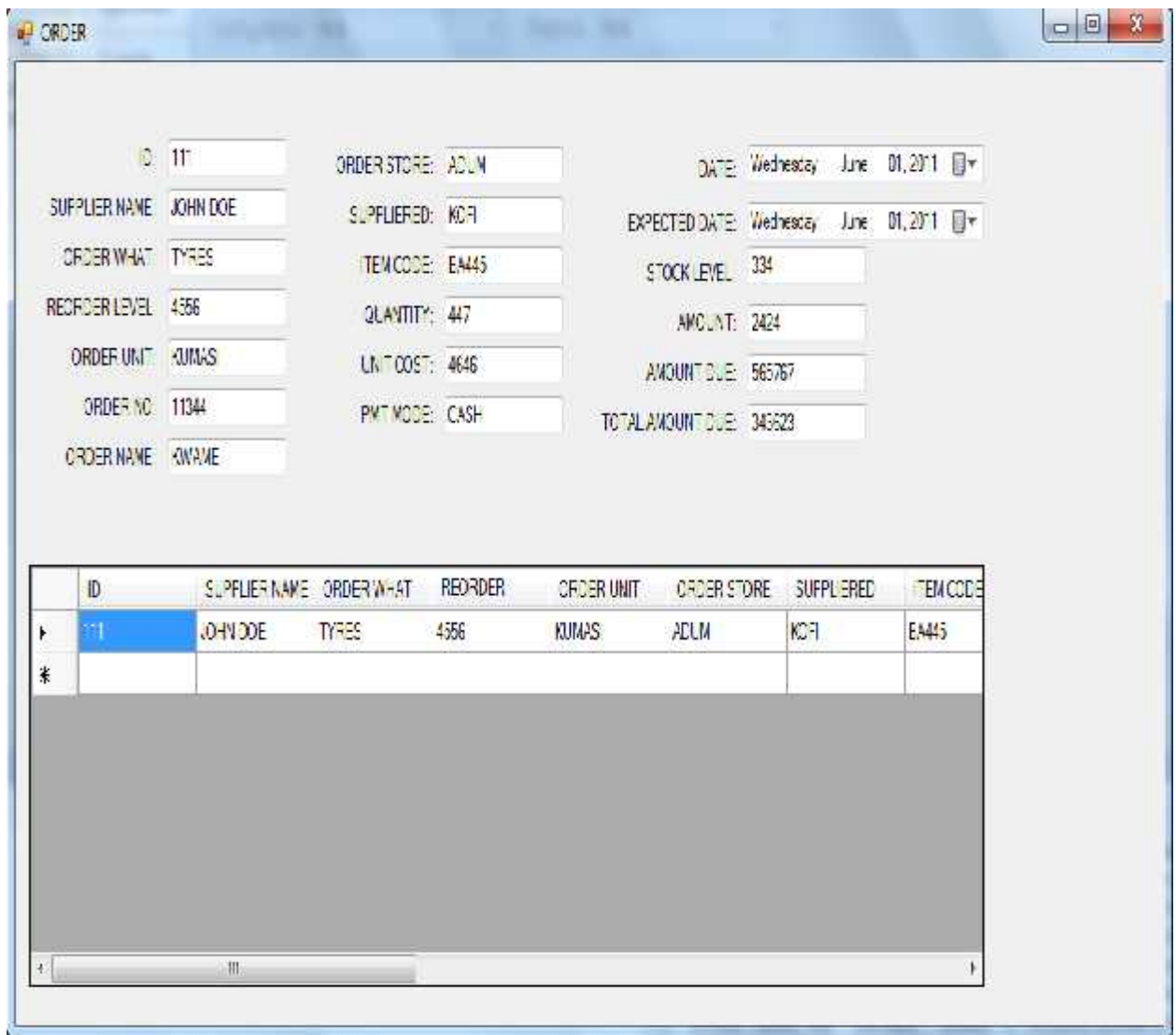


Figure 2: System user form enables users in their capacity to be able to enter data.

ORDER FORM

System user form is the order form that enables the user in their capacity to perform order functions by ordering various items from suppliers.



The screenshot shows a window titled "ORDER" with a grid of input fields. The fields are arranged in three columns:

- Column 1: ID (11), SUPPLIER NAME (JOHN DOE), ORDER WHAT (TYRES), REORDER LEVEL (4366), ORDER UNIT (KUMAS), ORDER NO (11344), ORDER NAME (KNAME).
- Column 2: ORDER STORE (ADLM), SUPPLIERED (KCFI), ITEM CODE (EA445), QUANTITY (447), UNIT COST (4646), PMT MODE (CASH).
- Column 3: DATE (Wednesday, June 01, 2011), EXPECTED DATE (Wednesday, June 01, 2011), STOCK LEVEL (334), AMOUNT (2424), AMOUNT DUE (565767), TOTAL AMOUNT DUE (343623).

Below the grid is a table with the following columns: ID, SUPPLIER NAME, ORDER WHAT, REORDER, ORDER UNIT, ORDER STORE, SUPPLIERED, ITEM CODE. The first row is highlighted with a blue background.

ID	SUPPLIER NAME	ORDER WHAT	REORDER	ORDER UNIT	ORDER STORE	SUPPLIERED	ITEM CODE
11	JOHN DOE	TYRES	4366	KUMAS	ADLM	KCFI	EA445
*							

Figure 3: form that enables the user in their capacity to perform order functions by ordering various items from suppliers.

REQUISITION FORM

ID	REGION	DISTRICT	REGIST	DATE	PURPOSE	ISSUE	ITEMs
1	ASHANT	KUMASI	1222	6/1/2011	REPAIRS	TWO	CABLE
*							

Figure 4: requisition form It enables the store keeper to registers various details such as; quantity, stock code, department that draws the item and the purpose of the item drawn.

ISSUE FORM

The user (store-keeper) uses this form to make all the necessary updates on the stock and inventory.

The screenshot shows a software window titled "ISSUE_FORM". The window contains a form with several input fields and buttons. The fields are arranged in a grid-like structure. On the right side, there are three buttons: "SEARCH", "SAVE", "DELETE", and "UPDATE". Below the form is a table with 9 columns and 2 rows. The first row is highlighted in blue. The second row is empty and has an asterisk in the first column. Below the table is a horizontal scrollbar.

ID:	111	STOCK CODE:	0045	UNIT PRICE:	23				
ISSUED FROM:	KUAKU	VOUCHER NO:	00002254	CAPITAL JOE NO:	MF003				
ISSUED TO:	BEN	ENTERE:	ADJOA	QTY SUPPLEID:	45				
STORE LOC:	KUMASI	WEEK NO:	3	VALLE:	23				
JOB LOC:	APATRAFA	JOB NO:	MF003	TOTAL:	68				

	ID	ISSUED FROM	ISSUED TO	STORE LOC	JOB LOC	JOB NO	STOCK CODE	QTY SUPPLEID	
▶	111	KUAKU	BEN	KUMASI	APATRAFA	MF003	0045	45	2
*									

Figure 4: issue form makes all the necessary updates on the stock and inventory.

ADJUSTABLE FORM

This form flags the store-keeper to remind him of stock needed or which various stock items need to be re-ordered.

The screenshot displays the 'STOCKADJUS' application window. The form contains the following fields and values:

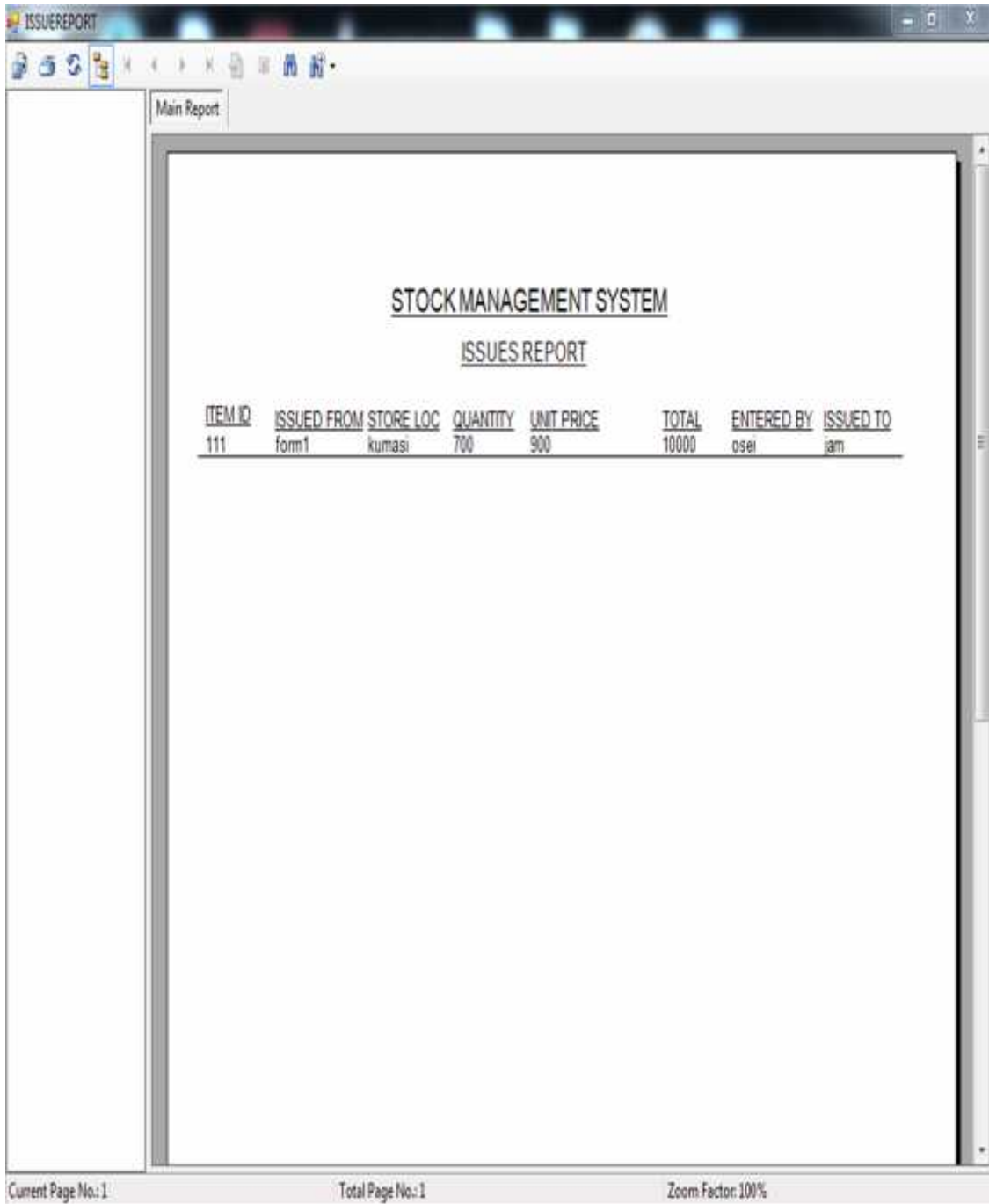
ID:	111	DESCRIPTION:	D-IRON	ADJUSTED QTY:	233363	SEARCH
STORE:	2	NEW STOCK:	23232	DATE:	Thursday June 02, 2011	<input type="button" value="SAVE"/>
OLD STOCK:	4445	ITEM UNIT:	CABLE	AUTHORISER:	KWAKU	<input type="button" value="DELETE"/>
UNIT COST:	12	COMMENTS:	NOW	AMOUNT:	35346	<input type="button" value="UPDATE"/>
REASON:	REPAIRS	ITEM CODE:	53363	TOTAL AMOUNT:	34363	
REFERENCE NO:	2363					

ID	STORE	OLD STOCK	UNIT COST	REASON	DESCRIPTION	NEW STOCK	ITEM UNIT	COMMENTS
▶ 111	2	4445	12	REPAIRS	D-IRON	23232	CABLE	NOW
*								

Figure 5: This form flags the store-keeper to remind him of stock needed or which various stock items need to be re-ordered.

REPORT FORMS

This form shows the various numbers of stock and inventory items in stock or shows the different available stock items and their numbers.



The screenshot displays a software window titled 'ISSUERREPORT'. Inside, a 'Main Report' tab is active, showing a report titled 'STOCK MANAGEMENT SYSTEM' and 'ISSUES REPORT'. The report contains a table with the following data:

<u>ITEM ID</u>	<u>ISSUED FROM</u>	<u>STORE LOC</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>	<u>ENTERED BY</u>	<u>ISSUED TO</u>
111	form1	kumasi	700	900	10000	osei	iam

At the bottom of the window, the status bar shows 'Current Page No.: 1', 'Total Page No.: 1', and 'Zoom Factor: 100%'.

ORDERSREPT

Main Report

6/19/2012

STOCK MANAGEMENT SYSTEM

ORDERS REPORT

<u>ITEM ID</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>UNITCOST</u>	<u>ORDER NO</u>	<u>TOTAL</u>	<u>date</u>
111	osei	700	345	123	8277	7/31/2011 6:44:32PM

Current Page No: 1 Total Page No: 1 Zoom Factor: 100%

6/19/2011

STOCK MANAGEMENT SYSTEM REQUISITION REPORT

ITEM ID	REGON	DISTRICT	PURPOSE	ISSUE	ITEM	qty	DATE
11	ashanti	abuakwa	45	yes	co	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	coperbwire	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	coahshs	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	coahshs	45555	7/31/2011 1
11	ashanti	abuakwa	45	yes	co	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	co	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	co	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	co	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	coperbwire	45	7/31/2011 1
11	ashanti	abuakwa	45	yes	co	45	7/31/2011 1

Current Page No: 1 Total Page No: 1 Zoom Factor: 100%

STOCKAJUSTMENT_REPORT

Main Report

6/19/2011: STOCK MANAGEMENT SYSTEM
STOCK AJUSTMENT REPORT

<u>ITEM ID</u>	<u>OLD STOCK</u>	<u>NEW STOCK</u>	<u>ADJUSTED QTY</u>	<u>AUTHORISER</u>	<u>DATE</u>
111	300	400	90	jamin	7/31/2011 6:44:56P
22	88	77	666	ihkj	8/31/2011 6:44:56P
1	54	4,353	354534	sdj	

Current Page No:1 Total Page No:1 Zoom Factor:100%

The diagrams below shows do map out the different relationships between entities for the systems under study.

