COMPUTERIZED INVENTORY CONTROL SYSTEM

A CASE STUDY OF

(NATIONAL ORIENTATION AGENCY, ABUJA)

BY

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I

DEDICATION

This project work is dedicated to the Almighty Allah for granting me strength throughout my period of study.

CERTIFICATION

This is to certify that this project work was carried out by Nura .M. Bako with matriculation number PGD/1106 under the supervision of Prince R. Badamus.

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Also to my friends at work and also my course mates I want to say a big "THANK YOU" to you all for being so wonderful even though troublesome, I love you all. And to my family, I thank my parents for laying the foundation of education for my siblings and me on which much gain we have seen. I say Allah is the only great Rewarder. To my brothers and sisters no better love than the one you all have exhibited can be felt.

TABLE OF CONTENT

ABSTRACT

This project is an attempt to solve the conventional problems associated to the use of the traditional manual stock/inventory control system in the store.

From the study carried out, the following lapses were identified as part of the impediments associated to stores administration. Time wasting in stock record update possible over invoicing mutilation or outright loss of documents, pilfering or stealing and duplication of work schedule among personnel in the store.

The problems identified above were critically investigated and this informed the writer to adequately proposed and designed a possible solution to the problem using a computer system, which gave so many advantages over the manual/conventional system.

The new system designed allows for large volume of operations with an incredible high speed coupled with accuracy thereby improving the job performance greatly.

CHAPTER ONE

1.0　INTRODUCTION

A computer can be defined as a machine that processes or acts upon the data entered into it with the aim of generating an output which is regarded as information.

The machine accepts raw data from input device; perform arithmetic and logical operation in accordance with a pre-defined program or procedure before finally bringing/displaying the output through the screen or any of the output devices.

Before now, the entire job of stock/inventory system was manually handled. Thereby giving room for some avoidable problems to occur and reoccur. These costly mistakes experienced could be attributed to the complex nature of the assignment or deliberate attempts to commit fraud.

With the advent of the computer, which has the ability as an electronic data processing machine to handle string and variable, retrieving and manipulation large data at a very high speed. Today it has become the best tool in achieving greatness in modern organizational set up. If computer is introduced to National Orientation Agency **(NOA)** Headquarters, Abuja therefore it will

enhance the activities of the office. There will be effective control of the stock inventory with a minimum degree of error if any.

1.1 <u>HISTORICAL BACKGROUND</u>

National Orientation Agency (**NOA**) as a scheduled organization was formally established in August 1983 to operate as a parastatal under the Federal Ministry of Information and Culture as it was then called.

The Agency was borne from the Government decision to merge in 1993 the Directorate for Mass Mobilization and Economic Recovery (**MAMSER**) with some other similar bodies so as to pool together and consolidate all the efforts and resources of the bodies in the areas of public enlightenment, mass mobilization and value re-orientation. The merger of the public Enlightenment (**PE**) and the War Against Indiscipline/National Orientation Movement (**WAI/NOM**) Divisions of the Federal Ministry of Information and Culture with **MAMSER** now became National Orientation Agency (**NOA**).

NOA was structured to operate as a three-tier organization for effective dissemination of information to all.

2

Thus, we have;

a) A national head quarters in Abuja.

b) State Directorate in all the state of the Federation and Federal Capital Territory (**FCT**).

c) Local Government Formation in all Local Government Areas, nationwide.

The agency was initially challenged with three principal roles on their road to achieving their objective directive. One of these roles is to inform, educate, enlighten and sensitize the people on the policies, programmes, projects and activities of government and all other public issues, in order to gain the public support for government; and contribute their quota in nation building.

In pursuance of its goals and objectives, the public must be adequately informed about government policies/programmes so as to understand and appreciate the effect of these policies on their lives.

Equally the complaints and expectations of the people must be relayed back to the government. This feedback information flow will assist even the government to make prompt policies/decisions that will meet the immediate needs and expectations of the people.

The second role is to sensitize people on value re-orientation because Nigeria belongs to all Nigerians, no other country except our own. Hence we must be loyal and patriotic so as to collectively light the menace of the society and carry out necessary correction to the benefit of us all.

The third role of the Agency is mobilization of Nigerian people because mobilization is a process of pooling together and harnessing the creative energies of the people for national development. These could not but be agreed to by the political Bureau report which says "To mobilize a people is to increase their level of awareness of certain set objectives with a view to achieving those objectives".

To achieve the aforementioned, series of programmes, drawing largely on the print, electronic media and oral media were employed as means of communication. These made the Agency have constant and continuous touch with the people through rallies, for a seminar, workshop, and face-to-face discussion session.

The Agency has a comprehensive network of structures with grassroots touch as its being adequately monitored from the Headquarter in Abuja.

Objectives:

The main objectives as clearly spelt out in decree 100 of 1993 are to:

- Ensure that the general public better understands government programmes and policies.

- Mobilize favorable opinion for such programmes and policies;

- Encourage informal education through public enlightenment activities and publications;

- Establish feedback channel to government on all aspects of Nigerian national life;

- Establish appropriate national framework for education orientation and indoctrinating Nigerians towards developing socially desirable attitudes, values and culture, which project individual's national pride and positive image for Nigeria;

- Awaken the consciousness of Nigerians to their civic responsibilities to the promotion of national unity, citizen's commitment to their human rights to build a free, just and progressive society;

- Develop among Nigerians of all ages and sex, social and cultural values and awareness which will inculcate the spirit of patriotism, nationalism, self discipline and self-reliance;

- Encourage the people to take part actively and freely in discussions and decisions on matters affection their general welfare;

- Promote new sets of attitudes and culture for the attainment of the goals and objectives of a united Nigerian state;

- Restore and sustain discipline in our national life;

- Instill in the populace a sense of absolute loyalty to the fatherland;

- Ensure and uphold leadership by example; and

- Foster respect for constituted authority.

1.2 STATEMENT OF PROBLEM:

From experience, I found out that due to demands and pressure on the storekeepers, the present manual method of inventory/stock control does not adequately measure up with the modern ways of handling stores or warehouse. Hence several lapses including

mutilation of document, loss of record deliberate stealing among others are eminent.

The management should equally consider the trouble of having to take decisions using wrong information due to improper entries. Has the Management considered that "**Material is Money**" and if the organization's asset is not in good hands, it could spell doom for such organization.

Above are some of the observation which is thought technical that has to be considered or looked into in a warehouse management.

1.3 OBJECTIVE OF STUDY:

As a result of the various lapses associated with the use of the conventional manual stock/inventory system, the writer of this project is carrying out a research using a computer to automate the stock/inventory control system.

Since the computer has a capacity to store, retrieve and manipulate data at a very high speed with accuracy, it will assist the management to achieve maximum output in store management in taking a useful and timely decision.

1.4 SIGNIFICANCE OF STUDY:

It will be of immense benefit for **NOA** to have her store/warehouse automated owing to the fact that the demand from the organization by the entire country is tremendous. To satisfy the need yearning of the populace therefore the writer concludes that the automation of the warehouse/store is inevitable.

For the purpose of this research work, the central store of the headquarters in Abuja shall be the main focus, bearing in mind that the headquarters and states offices are interrelated.

1.5 LIMITATIONS:

The initial constraints of the writer were funds. This lack of funds actually delayed my sourcing for adequate information when the research started.

Secondly, the secrecy attached to official information in Government establishment poses another problem to the researcher.

Against all odds, the researcher was able to assemble all data and information needed for the research work though time consuming.

1.6   DEFINITION OF TERMS

MANUAL SYSTEM:

These are non-automated or non-computerized system of operation.

DATA:

These are raw facts collected and collated to form the input for the system where useful information is produced.

MINIMUM STOCK:

This is a level at which stock should not be allowed to fall below. It is the lowest permissible level of stock allowed. Expressed either in unit or amount.

MAXIMUM STOCK:

This is the highest level of stock permissible at a time. It could either be expressed in unit level or cost.

Store – Room (s) where stock are kept.

Stock – Items kept for day to day running of an organization.

COMPUTER SYSTEM:

This is an integrated electronic machine, which accepts data from an input device; perform logical operations in accordance with predetermined set of rules.

COMPUTERIZATION:

This is the designing and implementation of a computer base data processing system that enhances the efficiency and fast retrieval of records.

CHAPTER TWO

2.0   LITERATURE REVIEW

The whole world as a global village has adopted automation as a modern means of achieving excellent results in their assignment. Nigeria is no exemption, as this is attested to by the recent pronouncement by Government that all stakeholders in Government should be computer literate.

The stock/inventory control system as a modern phenomenon must comply with this global trend if it must achieve excellence. Great scholars in this field have concluded that no organization can function well without a good stock and inventory control system.

This chapter therefore will attempt to harness the idea of past scholars relation to this topic.

The term inventory control as defined by K.S MENON (1993) relates to a set of policies and procedures by which an organization determines which material it will hold in stock and the quantity of each one of them that it will carry. He further argued this to meet with the demand of ever-increasing population explosion yearly; therefore, a speedy and effective operation system must be adopted. This means

that the system must be computerized, to ensure for proper coordination and accurate result.

Lapin L.L. (1981) confirmed in his study that there are two phenomena, which have contributed to improvement in controlling inventories. One was the application of mathematical models and optimization techniques to achieve efficiencies while the second one was the development of the digital computers, which has improved information processing, and retrieval capabilities.

2.1   NEED FOR INVENTORY CONTROL:

The fundamental need of inventory control is to satisfy the "customer" whether he is outside the organization or a user of stores within the organization.

Donnelly J.A. Jr, etal (1987) in his work applying the use of computer to achieve inventory, control, stated the following as good result achieved from the exercise.

I.   The plants were not shut down to take inventory.

II.   Inventory level increased by 57%.

III.   Record keeping accuracy increased from 64% to 94%.

IV.   On-time delivery of stocked items to customers was increased from 40% to 99%.

K.S. Menon (**1993**) stated that in the past managers assumed that just stocking the warehouse was beneficial not minding the necessity to control them. Today such large stock is termed a grave yard and unnecessary hence this has necessitated the new change and the introduction of automation in the inventory control system. However he was not detailed on the procedural steps to be taken in achieving the good results expected.

In the study conducted by **Alex Morison (1992)**, he stated the following as the reasons for keeping stock/ inventory record.

I. To indicate the amount of stock of any item at anytime without it being necessary for the stock to be physically counted.

II. To establish a link between the physical stock and the stores accounts. At any time the evaluated price should correspond to the value of the balance stock.

III. To provide a means of provisioning. That is to determine how much should be ordered to maintain stocks at required level.

IV. To supply information for stocktaking, whereby the quantities physically counted should correspond with actual balance in the books.

V. To provide a method of informing the storehouse staff of the location of goods in the store. This is easily achievable by coding system.

VI. To serve the purpose of price list.

In designing a system for any particular application he further stated would depend on the extent of the information to be provided the number of the above purposes, which it's expected to serve, will govern this. Thus introducing a computer into the system he argued will increase the efficiency and the accuracy of stock inventory control system.

Burton J.A. (1981) noted with dismay the distractions while manual system is being used due to mere conversation. This in turn leads to a set back in the process of their activities for example updating the Bin Card. He argued further that the manual methods have now become too slow to meet the speed of information needed by the management. Burton therefore went further to suggest that computers are better management tools, which have great flexibility

and characterized by their speedy operation and accuracy in the processing of inventory.

2.2 FACTORS INFLUENCING INVENTORY CONTROL:

There are a number of factors that should be considered while the mention of inventory control is made, because they have important bearing on it **MENOM, K.S (1993)**.

a) **Requirements:** Adequate information on the actual stock needed time-wise is very important to avoid unnecessary capital lock up in forms of goods stocked.

b) **Obsolescence:** Since there are possibilities of design changes or other factors, which could make the materials obsolete, hence considerations should be taken to avoid stocking outdated materials.

c) Rentals for space occupied by the stores and taxes payable.

d) Insurance premium payable on goods.

e) **Quantities and qualities of stock items:** from the stores, information is obtained about stock balances and unfulfilled purchase orders. In addition, information are gathered about materials that has stayed for a long time

in the store which has either reduce in size (**shrink**) or in case of chemicals evaporated which will lead to reduction in volume.

Finally, Menon K.S. Advised that the stock-out should be avoided because it could cause stoppage of production and thereby leading to idle time of machine and labour loss. Consequently causing loss of production, loss of profit and loss of good will from customers.

All the scholars and experts in the field agreed that the automation of stock/inventory control system is a means of enhancing the efficiency of the store personnel in achieving greater accuracy. This is why the writer is suggesting that National Orientation Agency adopt this modern phenomenon called '**automation**' of the stock/inventory control system.

CHAPTER THREE

3.0   SYSTEM ANALYSIS AND DESIGN

3.1   ANALYSIS OF THE MANUAL SYSTEM:

Typically, the storage system employed in an organization for the safe keeping of its stock items such as movable assets, materials and consumables entails a lot of record keeping. Considering an organization such as **NOA** as our case study, it is expected of the store manager to keep adequate records of every new items being brought to the store and also be able to supply an up-to-date information about the state of the stock items usually in terms of quantity especially for items that wear out or that can expire.

Apart from the above, the store, being a service department, which is responsible for issuing out the materials required, by the other departments is expected to keep adequate record of all its transactions with other departments making requisition. This is mainly for accounting purpose since it is pertinent for an organization whether a profit making or non profit making organization to at least be able to account for the materials or stock items expended during a particular accounting period, perhaps a year. It is also important to

note that requisitions are treated using the updated information about the state of the stock items as mentioned above.

Another vital area of store management that requires adequate record keeping is the area of processing of supplies.

This refers to the relationship that exists between the store and supplier of the materials – that is in a situation of non direct purchase or purchase through a contractor or supplier. It can also be applicable to the relationship between the store and the seller in the market – that is in a situation of direct purchase.

Here it is important to keep records of facts such as the name and addresses of such suppliers or seller's date of supply and the price or the cost of purchase as the case may be, in order to have adequate information for carrying out future purchases.

As it can be seen that the need for adequate record keeping cannot be over-emphasized in a store in order to ensure a proper stock or inventory system and more so for ease of stock taking. In a manual system, there are designed formats that are used to document all the necessary facts relation to the movement of stock. The Goods Received Note (**GRN**) and the Material Return Note (**MRN**) are the two basic formats used for documenting the movement of goods or

materials into the store. The **GRN** is used only when the goods or materials ordered for have been brought in by the outside supplier while the **MRN** is used whenever an item already issued out perhaps to a department is to be returned to the store.

Moreover, the basic format used to document the movement of items out of the store is known as **Store Issue Note (SIN)** or the **Store Requisition Note (SRN).** Another format that should be mentioned is the **Stock Card,** which is used to document movement of items both into and out of the store. Each item in the store must have a stock card with which to record its movement.

3.2   DEMERITS OF THE MANUAL SYSTEM:

I.   **Tiredness:** It can easily be inferred from the above that the manual system of stock management is fraught with a lot of paper work, which makes it rather cumbersome and tiring.

II.   **Loss or destruction** The loss or destruction of any of the record keeping documents – stock card, **GRN, SRN** etc. could easily disrupt the normal functioning of the store thereby making stock taking (**both perpetual i.e. contains or carried out whenever an item is received or issued and**

periodic i.e. taking place at specified period) rather difficult.

III. **Non-detection of irregularities:** In manual system of stock management, it is quite easy to have irregularities such as incorrect entry of data (**errors**), pilferage of store items of even outright fraud goes undetected. It is possible for criminally minded individuals to outsmart the store manager. It is also possible for such individuals to collude with the store manager there by getting the organization defrauded.

IV. **Delay in processing:** The manual system of stock management could follow a rather slow process and this may not be desirable especially during peak periods. Also, the fact that the management usually requires quick information for guide decision taking needs to be considered.

3.3 <u>JUSTIFICATION FOR AUTOMATION:</u>

Having analyzed the manual system, on ground and critically studying the demerits with a view to overcoming such demerits and others that are not immediately apparent, it is considered that automation, that is, with the use of the personal computer, the basic operations of the store would go a long way in ensuring an efficient

and effective stock management system. Automation or computerization, contrary to common opinion is not meant to enhance the job of the store staff both in terms of efficiency and effectiveness.

Stocktaking is a very vital aspect of store operations. It is an inventory control procedure that serves as a check to store activities. It is also necessary for the purpose of obtaining the worth of all the store items as a basis of drawing up the organization's final account. This implies that stock taking (**whether perpetual or periodic**) is a procedure that involves taking even the minutest details into consideration. Obviously the manual process of this procedure cannot be easily carried out to such a detailed level but with an automated system, all details required for proper stock taking arte easily acquired. Moreover, the automation or computerization of the store operations made the production of detailed reports on the store items very easy. Such reports are indispensable for management decision-making.

Finally, it is necessary to mention the fact that introducing a new and automated system through the use of the personal computer to the operations of the store will go a long way in reducing a lot of

paper work and also minimize all such irregularities as incorrect data entry, pilferage or outright fraud.

3.4   SYSTEM DESIGN:

The ultimate aim of the automated system being introduced to aid the performance of the stores operation is to generally ensure the effective and efficient control of store inventory or stock items. The automated system is therefore designed following a menu based structure and each item on the menu being a basic structure or inventory control operation.

Being menu driven, the system is also interactive in that whenever necessary, it permits users to take specific action due to it's multiple user document interface proceeding on the operation being carried out. It is designed using Visual Basic Application software hence it consist mainly of a number of related modules. The related modules all make up the application software. It should also be pointed out that the access to the automated operations is controlled through the use of a password. It is only by typing the password that a user can have access into the main system. This is just to introduce some measure of security to the database and even the entire automated system in general.

The working of the system is fully described by the flowcharts in appendix.

3.4.1 <u>USER INTERFACE DESIGN:</u>

As mentioned earlier, the system has a menu-driver user interface. It however starts with the introductory display on the screen, which then leads on to the password entry screen. Access to the main menu depends on entering the correct password.

Having entered the correct password, a menu is displayed showing the following options as pull down menus:

1. Addition of new items.

2. Update/Editing of stock items.

3. Issuance of stock items.

4. Processing supplies

5. Report Generation.

6. Exit

While option No. 1 is like registering a new item to be recognized by the system. Option No. 2 on the menu enables the authorized user to edit or carry out an update operation on the record of any particular stock item. Option No. 3 is like a simplified way of processing the Store Issue Note (**SIN**) or the Store Requisition Note (**SRN**). It enables the user to issue out store items to requesting department without excessive paper work.

Also, option No. 4 enables the user to transact business with the suppliers of the store items in order to access any particular store item.

It is rather a simplified way of recording the movement of items into the store and without excessive paper work as in the case of the Goods Received Note (**GRN**).

Finally, option No. 5 on the menu leads to another sub menu, which takes care of the production of, specified reports about the store items. Three major options of report production are included under this option.

    I. A report displaying the current stock level of each item in the store;

II. A report showing details of items supplied within specified periods or dates;

III. A report showing details of items issued out and the requesting departments within specified periods or dates.

Apart from being essential for stocktaking activities such reports as these are expected to supply adequate information about the organization's assets or stock to the management.

3.4.2 <u>SYSTEM INPUT DESIGN:</u>

The necessity for a quick response from the automated sustem justifies the need for an on-line type of input. Also, every item of stock, which has its records, stored in the database is referred through an item code. This item code is the key for searching through the relational database in order to access any particular store item.

Furthermore, in carrying out any of the operations related to option 1 to 4 on the main menu as listed in 3.4.1 above, the system first prompts the user to supply the item code of the stock item concerned and then goes on to search through the database file concerned. It should be noted that several other inputs to the system are taken from the data stored in the files making up the database.

Table 3.1 shows the structure of the major file required for running

option 1 that is addition of new item.

FIELD NAME	FIELD TYPE	FIELD WIDTH
IT CODE	CHARACTER	6
DESCRIBE	CHARACTER	25
Q STOCK	NUMERIC	4

Table 3.1 (stock table)

Table 3.2 and 3.3 are the structures of the data files, which are

linked together with data file structured in 3.1 above in order to run

option 2 that is update/editing of stock item.

FIELD NAME	FIELD TYPE	FIELD WIDTH
IT CODE	CHARACTER	6
DESCRIBE	CHARACTER	25
ISDEPT	CHARACTER	15
SSDAT	DATE	8
QISSUE	NUMERIC	3.0
BALCE	NUMERIC	3.0

Table 3.2 (issue – table)

FIELD NAME	FIELD TYPE	FIELD WIDTH
IT CODE	CHARACTER	6
DESCRIBE	CHARACTER	25
SUPPLIER	CHARACTER	25
SUPDAT	DATE	8
QTY SUP	NUMERIC	3.0
RATE	NUMERIC	8.2
VALUE	NUMERIC	12.2

Table 3.3

Also, the data file structured in table 3.2 is linked together with
the data file structured in table 3.1 in order to run option 3 on the main
menu to process departmental requests while the data file structured in
table 3.3 above is linked together with the data file structured in 3.1 in
order to process option 4 on the main menu, that is processing
supplies.

3.4.2 SYSTEM OUTPUT DESIGNED

Apart from the output displayed on the screen while running
options 1-4 on the main menu, the only other set of outputs are the

reports, which are generated using options 5, and they have been

outlined in 3.4.1 (i) – (iii) above. The data files structured in tables 3.1

– 3.3 above are also used to generate the report types outlined.

CHAPTER FOUR

SYSTEM IMPLEMENTATION AND EVALUATION

4.1 IMPLEMENTATION REQUIREMENT:

For purpose of simplicity, and ease of use, the system is designed to run on any modern personal computer – pc.

Typically, a 30 Megabyte **RAM (Random Access Memory)** multimedia system with Pentium processor or even Intel 486 system is quite adequate to run the inventory control system.

On the software aspect, the inventory control system was developed using the Visual basic application package on various Windows operating system; or a single user operation system. Moreover, Visual Basic apart from being a very reliable rapid application developer system also provides adequate set of commands and functions, which are used to connect to databases.

Generally, Visual Basic application package can be considered quite suitable for developing systems such as this for the following reasons:

I. Visual Basic is very good for the development of an interactive system and easily understandable.

II. A modular approach is used in the development of the system and Visual Basic is very efficient for modular programming.

III. The system has a one entrance and one exit structure and this is easily implemented using this application package.

IV. Data management operation such as sorting and searching or traversing an entire data file is easily carried out using VB6 application commands.

V. Programs written in VB6 are easy to debug, easy to learn and flexible.

4.2 PROGRAM ALGORITHM

The algorithm of this work is based on the system design of the automated stock procedure of the case study. It is a sequence of logical steps showing the flow of operation in an automated system. The algorithm would be written in psuedocode and of the form close to the programming language used.

Psuedocode:

Start

10 Enter user_name, password

IF access = True Then permit

ELSE msg "Not a valid user" Goto 10

END IF

Enter operation type

IF Add_stock_item THEN PROCEDURE ADD

ELSE IF modify_stock_item THEN PROCEDURE MODITY

ELSE IF stock_purchase THEN PROCEDURE PURCHASE

END IF

PROCEDURE Report

PRINT report for below re-orders level

ELSE

PRINT general report

STOP

4.3   PROGRAM LISTING\DOCUMENTATION

The program listing and flow chart are attached as appendix

4.4   RESULT/ OUTPUT FORMAT

The results obtained for this project work is print out for knowing number of stocks purchased and when stock has reached below reorder level. This various report aid management decision on policies that regulate the business process of the organization. All are attached at the appendix.

4.5   CHANGE OVER PROCEDURE

The method used is the parallel change over procedure where the manual and the new system are both run together to see it the desired result is produced by the new system before it is introduced. This method is most appropriate for users of this application as this could show the true picture of the application across various platforms.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 SUMMARY:

An automated stock management system was developed with the intention of making the job of a store management is geared towards a more efficient and effective stock management system.

The system addressed the problems relating to the movement of stock items into and out of the store by ensuring that proper and adequate records of such activities are kept mainly for accounting of stock taking purposes. It further goes on to keep records of every transaction carried out with the store by other departments within the organization and also by outside marketers or suppliers on the stock items.

5.2 CONCLUSION:

Corporate organizations whether profit making or non-profit making invest in stock. Even though the extent of individual organization's investments in stock items and also being able to obtain accurate and adequate information about the stock items at any point in time for decision making purpose is what any management would desire.

The use of computers, as at the end f the twentieth century, can be said to have permeated virtually every facet of human life. As it is today, no corporate organization can survive within the global economic system without the use of computer or rather without investing in information technology to aid its operations. Suffice to say that any corporate organization that does not care enough to monitor and control its investment in stock item is merely paving in the way for a colossal waste of its resources and the only effective and efficient way, as at the present day, of monitoring and controlling such investment is through the use of a computerized or automated stock/inventory control system.

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ALL STOCK REPORT

ITEMS	QUANTITY	PRICE	DATE	DESCRIPTION
001/1234	16	10	11/20/2003	SOAPS
001/1342	30	25	11/20/2003	HAPIC
001/4321	27	250	11/20/2003	OFFICE TABLE
001/2341	40	150	11/20/2003	CURTAINS
001/3421	96	10000	11/20/2003	AIR CONDITIONER

STOCK BELOW RE-ORDER LEVEL REPORT

ITEMS	QUANTITY	DATE	DESCRIPTION
001/1234	13	11/20/2003	SOAPS

LOGIN
Option Explicit

Public LoginSucceeded As Boolean

```
Private Sub cmdCancel_Click()
  'set the global var to false
  'to denote a failed login
  LoginSucceeded = False
  End
End Sub

Private Sub cmdOK_Click()
  'check for correct password
  If txtPassword = "NOA" And txtUserName = "ADMIN" Then
    'place code to here to pass the
    'success to the calling sub
    'setting a global var is the easiest
    LoginSucceeded = True
    Unload Me
    frmSplash.Show
  Else
    MsgBox "Invalid Password, try again!", , "Login"
    txtPassword.SetFocus
    SendKeys "{Home}+{End}"
  End If
End Sub
```

MAINMENU

```
Dim intReturnValue As Long
Private Sub mnufileexit_Click()
End
End Sub

Private Sub mnuhelpabout_Click()
Form1.Show
End Sub

Private Sub mnuhelpcon_Click()
intReturnValue = Shell("hh " & App.Path & "\BAKO.Chm", vbNormalFocus)
End Sub

Private Sub mnuproadd_Click()
frmadd.Show
End Sub

Private Sub mnuproissue_Click()
frmDataEnv.Show
End Sub

Private Sub mnuproup_Click()
frmmodify.Show
End Sub
```

```
Private Sub mnurepall_Click()
DataReport2.Show
End Sub

Private Sub mnurepbelow_Click()
DataReport1.Show
End Sub
```

ADD ITEM
```
Option Explicit

Private Sub Command1_Click()
 Text1.Text = ""

 Text3.Text = ""
 Text4.Text = ""
 Text5.Text = ""


End Sub

Private Sub Command2_Click()
With Data1.Recordset
.AddNew
!item_no = Text1.Text

!Description = Text3.Text
!quantity = Text4.Text
!price = Text5.Text

!Date = DTPicker1
.Update
End With
End Sub

Private Sub Command3_Click()
Unload Me
End Sub

Private Sub Form_Load()
With Data1
.DatabaseName = App.Path & "\inventory.mdb"
.RecordSource = "stock_table"
End With
End Sub
```

EDIT ITEM
```
Option Explicit

Private Sub Command1_Click()
 Text1.Text = ""

 Text3.Text = ""
 Text4.Text = ""
```

```vb
 Text5.Text = ""

End Sub

Private Sub Command2_Click()
With Data1.Recordset
.Edit
!item_no = Text1.Text

!Description = Text3.Text
!quantity = Text4.Text
!price = Text5.Text

!Date = DTPicker1
.Update
End With

End Sub

Private Sub Command3_Click()
Unload Me
End Sub
Private Sub Form_Load()
With Data1
.DatabaseName = App.Path & "\inventory.mdb"
.RecordSource = "stock_table"
End With
End Sub
```

ISSUE ITEM

```vb
Private Sub Command1_Click()
Text1.Text = ""

Label5.Caption = ""
Text2.Text = ""

Text3.Text = ""
Label11.Caption = ""
Text4.Text = ""
End Sub

Private Sub Command2_Click()


With Data2.Recordset
.AddNew
!item_no = Text1.Text

!Description = Label5.Caption
!quantity = Text2.Text

!Date = DTPicker1
!department = Text3.Text
.Update
End With
```

```vb
With Data1.Recordset
 .MoveFirst
 While Not .EOF
  If !item_no = Text1.Text Then
    MsgBox "Hello 1"
    summ = !quantity
    Text4.Text = summ - Val(Text2.Text)
    .Edit
  !quantity = Val(Text4.Text)
   .Update
   Exit Sub
  End If
 .MoveNext
 Wend
End With


'With Data1.Recordset
' .MoveFirst

 'While Not .EOF
' If !item_no = Text1.Text Then
' .Edit
 ' !quantity = Val(Text4.Text)
 "  .Update
  ' Exit Sub
  'End If

' .MoveNext
 ' Wend
 ' End With
End Sub

Private Sub Command3_Click()
Unload Me
End Sub

Private Sub Form_Load()
With Data1
.DatabaseName = App.Path & "\inventory.mdb"
.RecordSource = "stock_table"
End With
With Data2
.DatabaseName = App.Path & "\inventory.mdb"
.RecordSource = "transaction_table"
End With
End Sub
Private Sub text1_GotFocus()
Text1.Text = ""
Text2.Text = ""
Text3.Text = ""

Label5.Caption = ""

End Sub
```

```vb
Private Sub text1_KeyPress(KeyAscii As Integer)
If KeyAscii = 13 Then
With Data1.Recordset
 .MoveFirst
 While Not .EOF
10 If Text1.Text = ![item_no] Then

    Label5.Caption = ![Description]


 End If
 .MoveNext
 'If .MoveLast Then Break
 'Else: GoTo 10
 ' End If
 Wend
End With
End If
End Sub

Private Sub text1_LostFocus()
With Data1.Recordset
 .MoveFirst
 While Not .EOF
10 If Text1.Text = ![item_no] Then

    Label5.Caption = ![Description]

    End If
 .MoveNext
 'If .MoveLast Then break
 'Else: GoTo 10
 Wend
End With

End Sub
```

FLOWCHART

```
                    ┌─────────────┐
                   (    Start      )
                    └──────┬──────┘
                           │
                    ┌──────▼──────┐
                    │    K = 0     │
                    └──────┬──────┘
                           │
                    ┌──────▼──────┐
                   /  Enter user   /
                  /───────────────/
                           │
          ◄────────◇  If password  ◇────── yes ──────►
                    └──────┬──────┘
   ┌──────────┐            │
   │ K = k+1   │           │
   └────┬─────┘     ◇  If new  ◇ ──────►  ┌──────────┐
        │                 │                │   Do      │
      ◇ If ◇              │                │ Add item  │
                          │                └──────────┘
                    ◇ If update,  ◇ ───►  ┌──────────┐
                    ◇ Edit item   ◇       │   Do      │
                          │                │  Update   │
                          │                └──────────┘
                          ▼
```

Start

K = 0

Enter user

If password

yes

K = k+1

If new

If

If update,
Edit item

Do

Add item

Do

Update

```
                                                    ┌──────────────────────┐
      ○                                 ○           │     **Do item**      │
      │                                 │           │                      │
      ▼                                 ▼           │        Issue         │
    ╱────╲                          ┌───────────────│                      │──────┐
   ╱ If   ╲                                         └──────────────────────┘      │
  ╱  item  ╲────────────────────►                                                  │
  ╲Issuance╱                                                                        │
   ╲      ╱                                                                         │
    ╲────╱                                                                         │
      │                                                                            │
      ▼                                         ┌──────────────────────┐           │
    ╱────╲                                      │        **Do**        │           │
   ╱Supply ╲                                    │                      │           │
  ╱Processing╲─────────────────►                │      Supplies        │───────────┤
  ╲         ╱                                   │                      │           │
   ╲       ╱                                    └──────────────────────┘           │
    ╲────╱                                                                         │
      │                                                                            │
      ▼                                                                            │
    ╱────╲                                                                         │
   ╱Report ╲                                                                       │
  ╱generation╲                                                                     │
  ╲         ╱                                                                       │
   ╲       ╱                                                                        │
    ╲────╱                                                                         │
     Yes                                                                           │
      ▼                                         ╱──────────────────╱               │
    ╱────╲               Yes                   ╱   Print stocks   ╱                │
   ╱      ╲──────────────────────────────►    ╱                  ╱────────────────┤
  ╱ Below  ╲                                 ╱──────────────────╱                 │
   ╲      ╱                                                                        │
    ╲────╱                                                                         │
      │                                                                            │
      ▼                                         ╱──────────────────╱               │
    ╱────╲               Yes                   ╱  Print stock list ╱               │
   ╱  If  ╲──────────────────────────────►    ╱                  ╱────────────────┤
  ╱ stock  ╲                                 ╱──────────────────╱                 │
   ╲ list ╱                                                                        │
    ╲────╱                                                                         │
      │                                                                            │
      ▼                                                                            │
──────────────────────────►  ○  ◄───────────────────────────────────────────────┘
                             │
                             ▼
                          ╱──────╲
                         │  STOP  │
                          ╲──────╱
```