

Retail Sales Platform Management System A Case Study Of City Oil

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Abstract: *The study's objectives included an assessment of the firm's current point-of-sale system, collecting background information for pragmatic theory research, creating a solution to the problem with the overall sales systems, and putting an automated system for managing online sales platforms in place. The retail sales dashboard control was the study's main topic. The usage of basic data storage techniques, the retrieval of product records, and the flow of information all experienced noticeable delays, according to the findings of the study's surveys, interviews, and epidemiological research. Software results showed how many humans communicate with the framework and how separate entities relate to each other, indicating that the case formulation satisfies the needs of each user and considers their conversations with the plan and their connections with other system components. In order for the application to report on items which have been leased out, the researcher suggests that it be updated. To meet the data requirements for human resources management, the platform may be updated.*

Keywords: retail sales platform, management system and lubricants

Background of the study

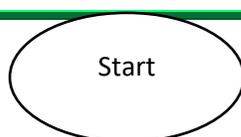
City Oil is a business that focuses on selling gasoline and lubrication products, both of which are vital to a rapidly expanding economy. This is a well company in the automobile customers service and hospitality industries and is owned by Hassan and Hussein Ahmed, who have over 14 decades of combined experience working in the sectors of oil products, nat gas, and motor vehicle services.

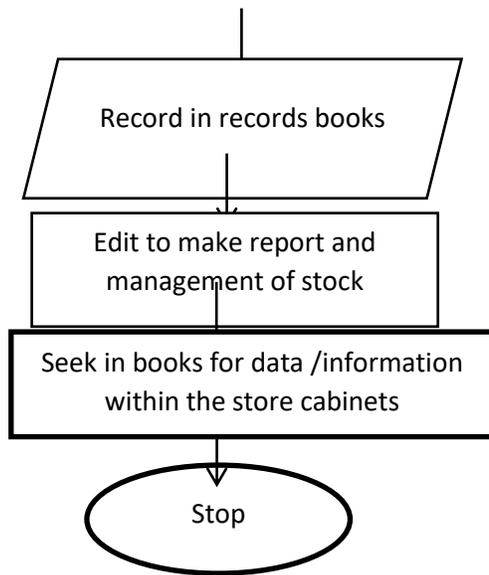
City Oil has a rich history and is spread out all throughout Uganda. The investigation, though, need to concentrate primarily on the City Oil location on Bombo Road, close to Sir Nelson International College and Sema Properties Limited.

Challenges of the Existing System

The information gathered made it clear that most problems with the current (manual) system were caused by ineffective record tracking brought on by an overreliance on paper work, in addition to the waste of office space brought on by the accumulation of manual files. A new system was required to handle problems with stock control, data redundancy, time wastage, time consumption, simple computation, and the ability to sort information and produce reports, amongst many other things. This was because it took a long time to store, collect, and manipulate data as it was required.

Figure 1; The flow diagram of the existing system





Problem statement

City Oil Corporation uses the automatic sales force field of application max to allocate stock inventory, input scheme data, and assign and approve daily van routes for the sales people. The automated sales force programs that print receipts and report sales data are tied to mobile tablets with payment scanner, however the connection to the main server can periodically go bad. Sometimes it is not efficient enough just to allow salesmen to generate receipts after selling anything because of regular network failures, sluggish reaction times, and association problems. The proposed system is anticipated to function and offer a fix for the flaws of the existing system used at that time to produce an easy-to-use time management and customer service delivery system. Such problems have therefore prevented us from increasing the productivity of the selected city oil targets.

Specific objectives

1. To analyze the current system of the company used for sales and gather requirements in theoretical research to practical.
2. To design and develop the solution for the problem with the current sales systems.
3. To implement an automated online sales platform management system.

Research Questions

1. What are the problems associated with the existing sales automated management system?
2. What are the requirements for designing the retail sales platform management system?
3. What are the methods used to test and validate the proposed system?

Methodology

System Investigation

System inquiry was done to assist the researcher in learning more about the company's mission and goals, as well as the type and extent of the issue under review.

Population Research

Twenty people were the target audience, including city oils' management, customers, and employees. The location was picked because the researcher could easily access all the data required for the investigation.

Data Gathering Techniques

One must systematically and appropriately gather and experimental measurements on relevant variables in order to respond to specified research objectives, testing hypotheses, and evaluate results. Data collection is the method that is being used. The following is a list of the data collection tools used.

Interviews

An interview is a conversation between two or more persons (the interviewer and the respondent) in which the interviewer poses inquiries in an effort to learn more about the interview subject. 2007; The Free Dictionary With the aid of various organizations and modern technology, such as the participation of city oil workers and clientele, interviews are held.

Interviews were used as they helped us learn more about the personalities of potential users and managers of city oil, which is both academic and useful. The investigator was thus in a more advantageous position to recognize demands.

The researchers used the interview schedule to document the collection and assessment of users' needs. The answers to each interviewing process were from managers, salespeople, and customers. Their rebuttals were so beneficial to him that he was capable of creating the System as a consequence.

Questionnaires

Most people are accustomed to completing surveys because almost everyone has some experience doing so, and the usual question style tends to minimize bias. The researchers' ideas were shaped by the participants' responses, which provided exceptional anonymity and made it easy to utilize SPSS and Excel to analyze the data and create in-depth findings.

The researchers used the surveys to interview customers, managers, and sales people. The researchers employed shuttered surveys to collect information on their subject that was valuable for analysis, and that was utilized to create the system.

System Analysis

After using the various data gathering tools, the respondents' feedback was analyzed to determine the requirements for new system to be developed. This provided a clear understanding of the changes to be done in the new systems, identifying and addressing the impact of project on the company etc. The information provided a basis for drawing plans that guided in the project schedule and resources accordingly.

System Design

Systems analysis and design of the proposed retail sale platform Management System was achieved by designing a database using conceptual, logical and physical database a design.

These were developed using tools such as Microsoft Visio cascading style sheet. Project management tools such as Microsoft project professional were used to present the time schedules for the system development procedures, task dissemination and ordering.

RESULTS

Determining the requirements of the system

A comprehensive system analysis was conducted to guide the development of the system. This chapter unveils three concrete requirements that identify user requirements, functional requirements and non-functional requirements.

User requirements

1. Input and update information about products in the stock
2. View and search for information about different users, customers, vendors, Products and Orders of the customers
3. The user should be able to subscribe or login from the company whenever he or she likes

Functional requirements

The system should perform the following functionalities;

1. The system should allow users to change passwords for security purposes
2. ii. The system allows users to create a password of 5 char long when changing their passwords
3. The system should allow users to record all information about products purchased, products sold and those remaining in the store
4. The system should be able to export all the records stored to Microsoft excel as reports for Analysis

Nonfunctional requirements

1. The system must be able to install with ease
2. The system must not occupy more than the required space for a normal program to disk space
3. It must be easy to learn and be used by a given set of user
4. The system must be platform independent

Software Requirements

The system's software requirements are outlined in the table below; Microsoft Access 2010 RDBMS and Windows XP, Vista, 7, and 8. Hardware specifications Here is a list of the system's minimal hardware requirements; Minimum requirements are a Pentium 4 processor, 512MB of Memory, and a 40G4 hard drive. 3 Design of the proposed system

The architecture, modules, components, various interfaces of those components, and the data that flows through that system make up the Retail Sales Platform Management System design. It is designed to meet certain goals and requirements of a company or organization by creating a system that is cohesive and efficient.

System Modeling

In System modeling, systems need to be accepted by users; by having a user friendly interface and the system itself should be functioning. In this study the researchers used a User case as a model approach.

Database Design

In this phase, the researchers focused on defining the data and constraints about the key entities, it involves identifying who are the entities, what data is stored about the entities and which fields about the entities are unique (primary keys) in designing the database for Inventory Management system.

Logical Design Table

Table 1: Structure of the product table

Field Name	Data Type
Product code	Text
Product name	Text
Category	Text
Price	Number

Table 2: shows Structure of the ordered product table

Field Name	Data Type
Order No	Text
Product Code	Text
Product Name	Text

Table 3: Shows Structure of customer table

Field Name	Data type
Name	Text
Address	Text
City	Text
Zip code	Text

Table 4: Structure of Stock Table

Field name	Data type
Stock id	Text
Product name	Text

Category	Text
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Table 5: Shows the Structure of Inventory category table

Field Name	data type
Category id	text
Category name	Text

Table 4.5.6 shows Structure of registration table

Field name	Data type
Username	text
User password	Text
Contact no	text

Table 4.10 shows Structure of user table

Field name	Data type
User Name (PK)	Text
User password	Text

Entity relationship diagram

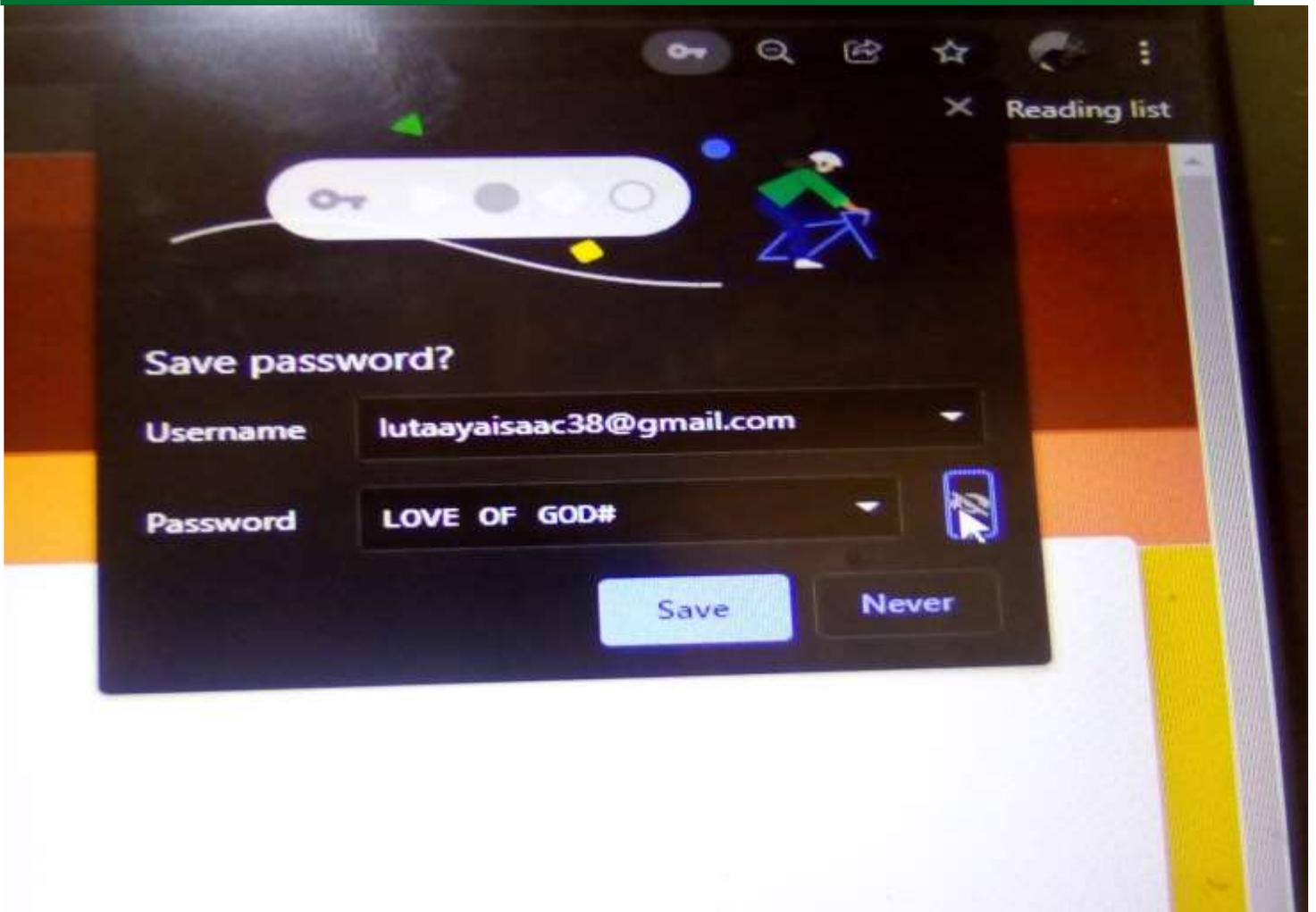
The ERD illustrates all the entities with their relations and associated attributes to make up the Inventory Management system

System Implementation

The Login forms

This is what allows users to input their valid login details to allow them to access the system. Login form loads to the real user's interface depending on who has logged in,

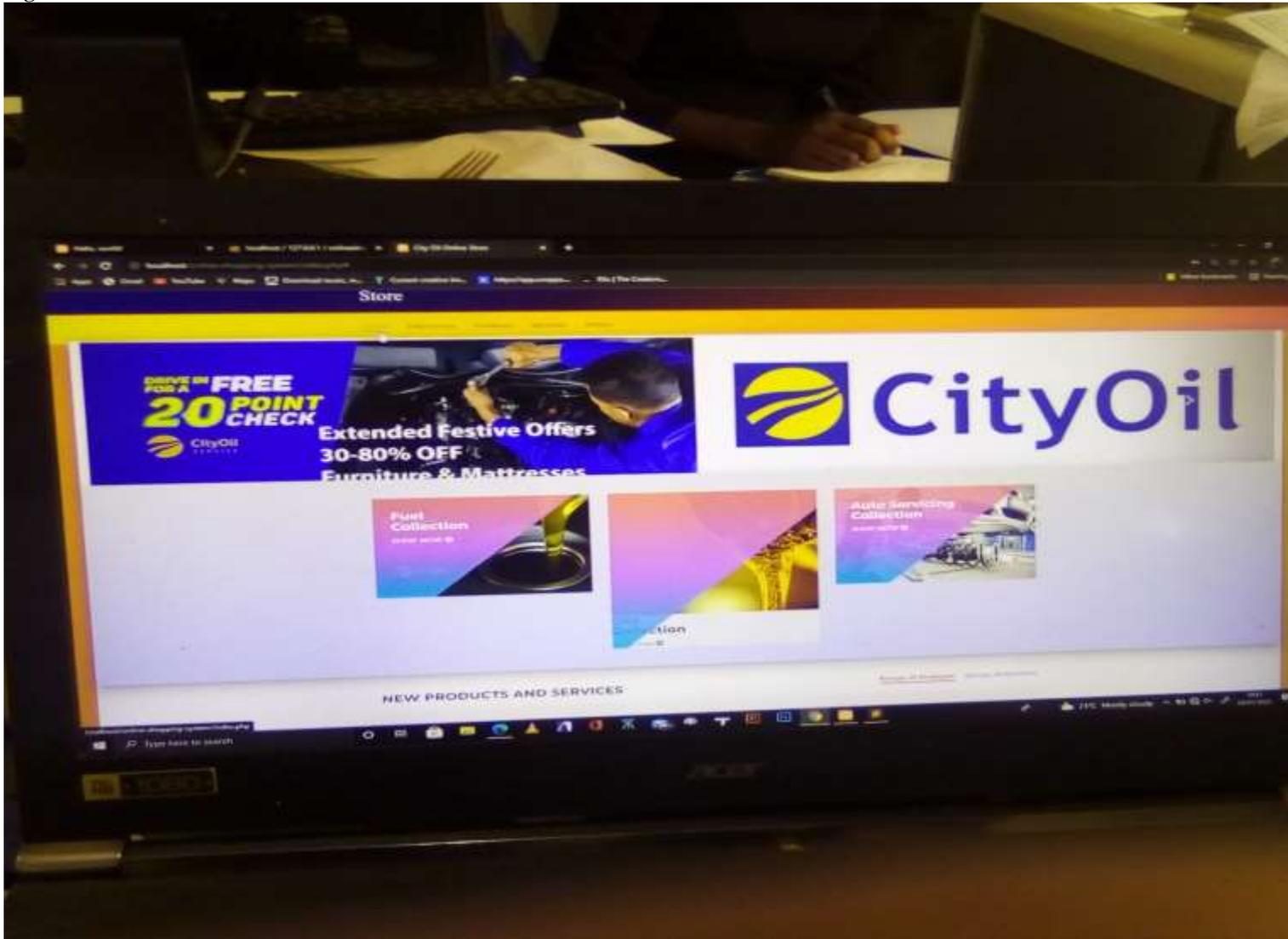
Figure 1: Login form



Switchboard

This is the main menu of the system

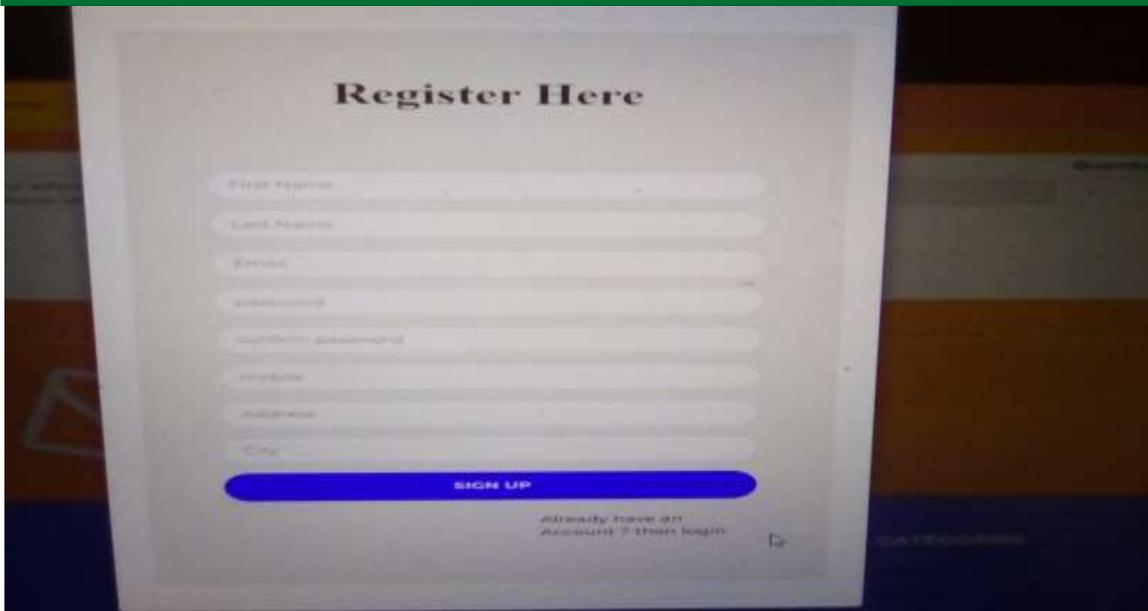
Figure 2: Main Menu



Registering customer

The User/admin uses this part of the interface for filling the information of customers in the system

Figure 3: Registering customers form



Registering Stock

This part of the interface is where stock is added, deleted or updated in the system

Registering the Categories

This is the section where User/admin add delete or update category of products in the store from the system

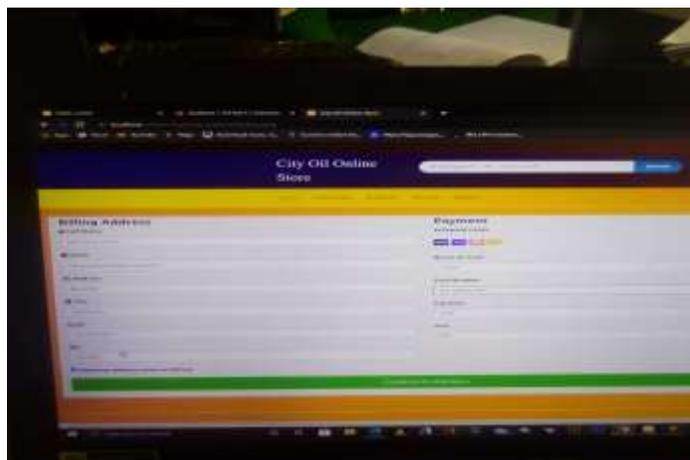
Registering Product

For this section the user/admin add deletes or updates a product in the store, categorizing the product under a specified category added in the system.

Taking orders from customers

For this section of the interface the user/admin takes the order placed by the registered customer in the system, processes it and later on generates an invoice, the system also charges a V.A.T tax of the products bought by the customers.

Figure 5 Taking Orders from Customers



System testing

The study examined the elements on the application development once the programmes had received the "all clear" in the code walk-through (Microsoft Visual Studio 2010).

Each function's code was created and run in order to verify that it served its intended purpose.

The system was debugged to get rid of any issues. The services that people needed were constructed in unique ways depending on their capacities.

Integrated testing from the bottom up entails The researcher encountered a few challenges, but in the end, he was able to combine all of the elements he had been initially testing on the Microsoft Visual Studio 2010 Unified Setup Tool, extract it as a hold system, and transmit it to a friend's laptop.

Conclusion

The flow of knowledge, the use of basic digital storage techniques, and the recovery of item records all showed observable delays, according to the study's questionnaires, interviews, and observational investigations. The results of system design showed how different humans communicate with the system and how different things relate to one another, suggesting that the designed system satisfies the needs of each user and incorporates their conversations with the structure and their relationship issues with other parts of the system.

Recommendation

The researchers proposed that the technology be made internet-based so that every branch could utilize it concurrently on the Web as the Business opened branches around the nation. The researcher recommends updating the system so it can take into account items that have been rented out. To meet the data requirements for managing people, the system can be enhanced. The researcher urged leadership to adjust the current approach of handling day-to-day activities and documents in hopes of enhancing record keeping. The researchers believe that the system be installed precisely in compliance with the game's requirements during the deployment stage to ensure effective use.

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