CHAPTER I
INTRODUCTION

1.1 Background

Development and implementation of an advanced pharmacy management system in Somalia that is intended to improve the security and management system's accuracy, and efficiency in drug stores. This system was created for the Three Stars Pharmacy, which offers residents of the trading area comprehensive pharmaceutical care. It will also function as a wellness hub, offering advice, products, and information to encourage the maintenance of good health and a healthy way of life. This will require placing a focus on not only the accessibility of high quality pharmaceuticals, medical supplies, and equipment, but also and perhaps most importantly the accessibility of a licensed professional pharmacist who can provide patients with guidance, oversee drug therapy, and work with doctors and other healthcare providers to improve the standard of care for those patients.[1]

The Pharmacy Management System we're developing is a sophisticated software solution tailored specifically for the pharmacy. It encompasses advanced features based on robust theoretical foundations, ensuring seamless operations and enhanced user experience.

By dedicating this system to the pharmacy, its owner, and the supportive staff, you're not just implementing software; you're investing in the pharmacy's future. The enhanced efficiency, improved customer service, and secure operations will collectively contribute to the pharmacy's success and the satisfaction of both staff and customers.

Patient safety is jeopardized by errors, inefficiencies, and manual processes that plague the pharmacy management systems that are currently in use. Medication errors and increased workload are the result of pharmacists' struggles with time-consuming tasks like manual data entry and ineffective inventory management. [2]

These difficulties highlight the pressing need for an up-to-date pharmacy management system that improves patient care and operational efficiency by automating workflows, guaranteeing accurate prescription management, and optimizing inventory.

To address the pressing challenges within pharmacy management in Somalia, a comprehensive mixed-methods research approach will be employed. This involves gathering qualitative insights through interviews with pharmacists to discern the intricacies of existing systems. Simultaneously, quantitative data analysis will be conducted on large datasets related to prescription management and inventory tracking. [3]

Collaborating with software developers, a user-friendly Pharmacy Management System will be designed, focusing on real-time inventory tracking, automated prescription management, and seamless integration with healthcare databases. This innovative system will be implemented in select pharmacies, and rigorous testing will ensue to ensure its reliability and security in real-world scenarios. The anticipated outcomes include enhanced operational efficiency, a substantial reduction in medication errors, improved inventory management, an enriched patient experience, and overall cost-effectiveness. This research endeavours to revolutionize pharmacy management, offering a streamlined and error-free system that positively impacts both pharmacists and patients in Somalia.

The Pharmacy's skilled team of technicians and pharmacists works hard to give customers prompt courteous service. They will not renege on their commitments to accuracy and quality. These are the services they offer:

a) Free delivery;

b) Competitive prescription pricing;

c) Refills via phone or online.

The pharmacist contributes to enhancing medical safety; and the pharmacy management system are all computer-based inventory management systems. When the opening practice is complete, the user is able to stock and sell a specific product or production system based on the drug's expiration date in addition.

The system will display the list of products for a given product's expiration date prior to the end date. For a period of time, whenever a new batch of monthly medications arrives, pharmacists need to manually enter the drug information into the pharmacy system.

This process involves updating the medicine inventory with every movement of drugs in and out of the pharmacy. g. Customers can get details about medications and their movement by creating reports about the pharmacy, their expiration date, the date they were purchased, and whether or not any other medications are present at that particular pharmacy. [4]

The manual system is still in use in pharmacies today. Every drug that is available in the pharmacy needs to be manually inspected. This frequently causes errors in the work of the pharmacist and this Pharmacy Management System will definitely help.

1.2 Statement of the Problem

Every organization today invests thousands of dollars to ensure that it keeps up with the trends of the technology industry's global expansion. Given that transactions are now computerized or networked to be completed over the well-known Internet, this has made the exchange of goods and services easier.

Working hard to find better and more affordable ways to manage how things move in and out of a business. Doing things by hand can lead to mistakes, so we're looking for ways to make it more reliable and less prone to errors. Keeping track of how much stock we have can be a real challenge.

1. How to develop pharmacy management system in Somalia?
2. How to test this web based online pharmacy management system?

1.3 Identification of Problems

In today's rapidly evolving technological landscape, organizations invest substantial resources to stay abreast of global trends. The increasing reliance on computerized and networked transactions, especially over the Internet, has streamlined the exchange of goods and services. Recognizing the need for efficiency and accuracy, businesses strive to find cost-effective solutions for managing their operations.

However, challenges persist in manually handling transactions, which can be error-prone and unreliable. One significant area of concern is the management of inventory, where keeping track of stock levels poses a real challenge. In light of this, the following specific problems are identified:

1. Development of Pharmacy Management System in Somalia:
   The absence of a streamlined pharmacy management system in Somalia poses a challenge. There is a need to explore and implement a comprehensive solution tailored to the specific requirements of pharmacies in the region.
2. Testing the Web-Based Online Pharmacy Management System: Developing a web-based online pharmacy management system introduces the need for thorough testing. Ensuring the reliability, security, and functionality of the system in the real-world context is a critical challenge.

1.4 Research of the Purposes

The purpose of this project is to build software for the efficient management of a pharmacy that can accomplish the followings:

a) Maintaining an accurate database by giving users the option to update their stock of medications;
b) Regulatory Compliance: Ensuring adherence to rules and regulations by providing accurate information about the medicines in stock.

1.5 Benefits of the research

The research yields significant benefits by introducing a tailored Pharmacy Management System for Somalia, contributing to improved pharmacy operations, enhanced patient safety, streamlined inventory management, regulatory compliance assurance, cost-effective solutions, community engagement and trust, global technological contribution, efficient testing procedures, knowledge advancement, operational excellence, and a valuable contribution to the field of healthcare technology. Some of these benefits include:

a) Helps Pharmacies Work Better;
b) Makes Medicines Easier to Find;
c) Keeps Patient Information Safe;
d) Saves Time and Money;

e) Helps Pharmacies Plan Better;

f) Helps the Staff Understand Medicines Better.

1.6 Scope of The Problem

Within the context of the development and implementation of an advanced pharmacy management system in Somalia, several critical issues have been identified. The existing pharmacy management systems suffer from inefficiencies, reliance on manual processes, and the use of outdated technologies. Pharmacists grapple with challenges in maintaining precise inventory records, effectively managing prescriptions, and ensuring the seamless operation of pharmaceutical services. The persistent reliance on manual data entry not only contributes to an increased workload but also elevates the risk of medication errors, thereby compromising patient safety and the overall quality of healthcare delivery.

The fundamental question arises: "How can the identified challenges be systematically addressed and resolved during the developmental and implementation stages of the advanced Pharmacy Management System?"

Qualitative insights gleaned from pharmacist interviews, coupled with rigorous quantitative data analysis, will serve as the cornerstone for pinpointing specific pain points within the existing systems. This strategic identification forms the basis for the meticulous development and implementation of an innovative Pharmacy Management System, tailored to not only mitigate the current challenges but also to significantly enhance the standards of pharmaceutical care throughout Somalia.

By being aware of these potential challenges and planning for them in advance, you can significantly minimize their impact and facilitate a successful implementation of the Pharmacy Management System. Regular communication with all stakeholders, training, and ongoing support are key to overcoming these hurdles effectively.

1.7 Framework of Thought

The Framework of thought in the development of Pharmacy Management System for improved healthcare delivery in Somalia case study of Pharmacy Management System involves several key components.

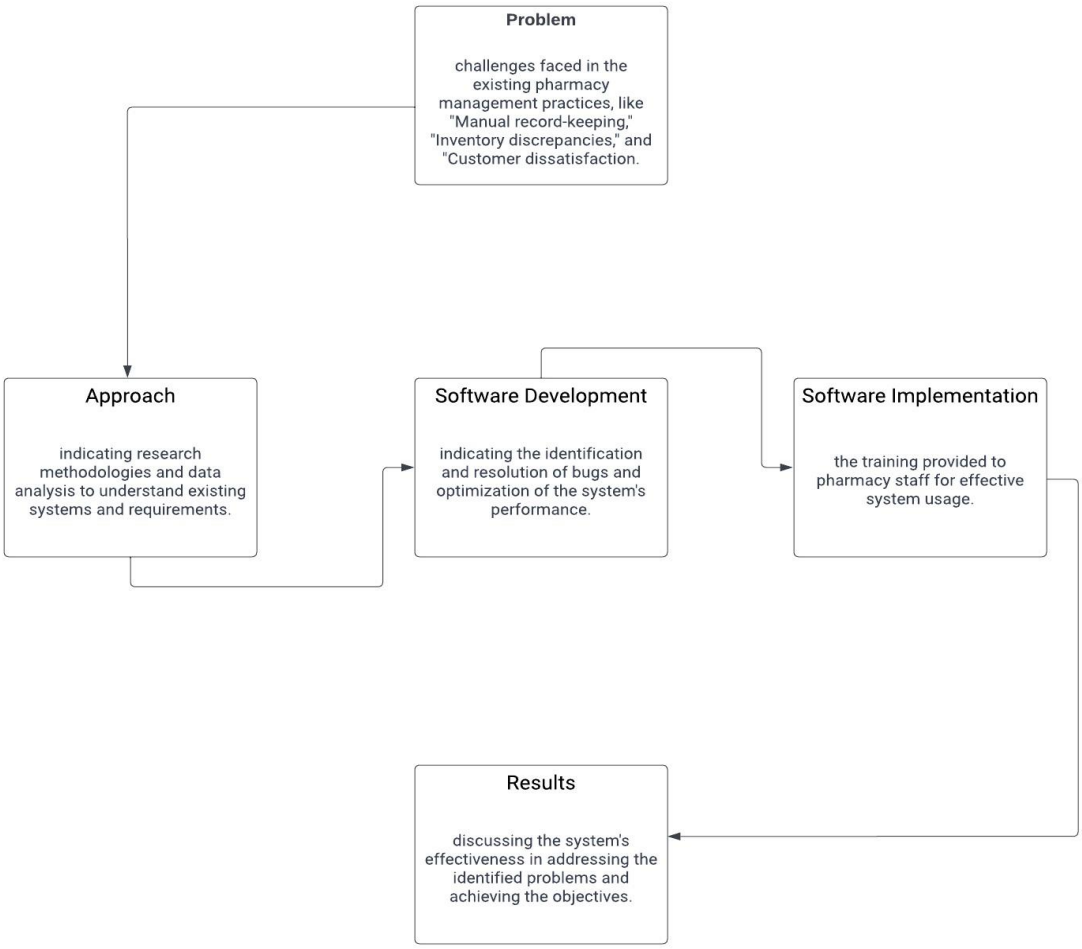

Figure 1 Framework

1.8 Systematics of writing

In this writing, the discussion is focused on the core of the problem. For this reason, the writer arranges the systematics of writing this final project as follows:

CHAPTER I INTRODUCTION

In this chapter the author will explain the background of the problem, the statement of the problem, the research objectives, the benefits of the research, the scope of the problem, the framework of thought, and the systematics of writing.

CHAPTER II: LITERATURE REVIEW

This chapter describes the results of the literature review that will underlie the research. Broadly speaking, this chapter describes previous studies related to and various concepts related to the research topic.

CHAPTER III: RESEARCH METHODOLOGY

In this chapter the author will discuss the methods applied to the research. This chapter also defines the steps that will be carried out during the research.

CHAPTER IV: RESULTS AND DISCUSSION

In this chapter, the focus shifts to the outcomes of the web based online Pharmacy Management System implementation. The findings are presented based on the research methodology, detailing the system's effectiveness in enhancing healthcare services through improved accessibility, streamlined processes, and efficient inventory management. Furthermore, the chapter delves into user satisfaction and the system's impact on healthcare service efficiency.

CHAPTER V: CONCLUSION AND RECOMMENDATIONS

This sophisticated software solution, designed collaboratively with software developers, focuses on real-time inventory tracking, automated prescription management, and seamless integration with healthcare databases.