UGANDA CHRISTIAN UNIVERSITY

MSC Data science and analytics

FINAL PROJECT PROPOSAL

For: B31367

Drug inventory management system

Introduction

Managing pharmaceutical stock is a critical aspect of health service delivery, especially in hospital clinics and pharmacies, inadequate drug inventory control can lead to shortages, overstocking or the us f expired medicines al o which ending patients health and increase operational costs [1],[5]. The project proposes the development of a drug inventory management system designed to automate and properly streamline the process of managing drug inventory n health facility

Problem statement

Many clinics and pharmacies in a a resource limited setting rely on a manual or semi - automated methods for inventory tracking and management. Hese methods are prone to man error, and real-time updates, and are inefficient in alerting the responsible about critical issues like stock depletion expiration [2],[3]. The proposed system aims to resolve these challenges by offering a digital solution that improves efficiency, reliability and safety

Objectives

- To develop a web-based application for managing drug inventory in a health facility
- To implement features for tacking stock levels , expiry dates and generating alerts for expiring drugs and low tock.
- To enhance data accuracy and accessibility through a user- friendly interface

Scope

- the system will focus on The following :
- Drug registration and this will have name, type, quantity, batch number and expire date
- Stoc in and stock out
- Basic user roles for pharmacist,
- Low stock alerts
- notification for expired or soon to

Methodology

The system development will adopt an agile software development approach as described in modern healthcare IT practices [4]. The approach allows iterative progress, continuous feedback and adaptability, in meeting end user requirements.

Development will e done sing python(Flask), HTML ,CSS

Tools and techniques

Python (lack for back end), HTL AND CSS for front end, GitHub.

References

[1] A. C. Tan and H. M. Chew, “A review of pharmaceutical inventory management techniques,” Health Information Science and Systems, vol. 5, no. 1, pp. 1–10, 2017.
[2] M. R. Myers, “Automating inventory control in healthcare systems,” Journal of Healthcare Information Management, vol. 25, no. 3, pp. 45–52, 2018.
[3] A. Kumar and D. Singh, “Stock management systems: A comparative analysis,” International Journal of Computer Applications, vol. 180, no. 31, pp. 25–30, 2018.
[4] S. Jones, “Implementing web-based inventory control systems,” in Proc. 12th Int. Conf. on Information Technology and Applications, Sydney, Australia, Dec. 2020, pp. 115–120.
[5] World Health Organization, “Guidelines for drug storage and stock control,” WHO Press, Geneva, Switzerland, 2019.

GitHub link

https://github.com/Musemma100/opp-project