

DESIGN AND IMPLEMENTATION OF A PHARMACY POINT-OF-SALE AND INVENTORY SYSTEM

BY

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DEGREE IN SOFTWARE ENGINEERING

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Pharmacy Point-of-Sale and Inventory System" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

PROJECT SUPERVISOR

Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Software Engineering, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

ABSTRACT

This study developed and evaluated a Web software solution for design within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Technology Acceptance Model and the UTAUT. A total of 76 users were purposively selected for the usability evaluation, out of which 71 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 80.7% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of design and implementation of a pharmacy point-of-sale and inventory system is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

The salience of design in national discourse has grown steadily, driven by changing social conditions and technological penetration. National policies and programmes have sought, with varying degrees of success, to respond to the realities of design and implementation. Empirical evidence from Ogunlana and Salami (2021) suggests that positive developments in implementation are associated with improvements in design. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Longitudinal research by Bakare and Kalu (2016) revealed that sustained attention to design yields appreciable dividends over time. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

design continues to command considerable attention among researchers, policymakers, and practitioners in software engineering. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of design. Alade and Osinachi (2020), in a survey of relevant stakeholders, concluded that the benefits of design are unevenly distributed across groups. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Empirical evidence from Ogbeide and Aderemi (2021) suggests that positive developments in implementation are associated with improvements in design. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

design occupies a prominent position in contemporary debates about implementation and national development. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of design. The work of Ogbeide and Aderemi (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Findings reported by Ibrahim and Aderemi (2018) observed that respondents with greater exposure to design recorded markedly different results. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

In both global and African literatures, design is now regarded as a key index of institutional performance. Evidence from national agencies indicates that design has grown considerably in recent times, underscoring the need for systematic inquiry. The work of Dauda and Osinachi (2023) extended earlier analyses by demonstrating that implementation reinforces the effects of design. These observations collectively invite a