M.KUMARASAMY
COLLEGE OF ENGINEERING
NAAC Accredited Autonomous Institution
Approved by AICTE & Affiliated to Anna University
ISO 9001:2015 & ISO 14001:2015 Certified Institution
Thalavapalayam, Karur – 639 113.

A Minor Project Report

On

PHARMACY MANAGEMENT SYSTEM

Submitted in partial fulfilment of requirements for the award Degree

of

BACHELOR OF ENGINEERING

In

COMPUTER SCIENCE AND ENGINEERING

Under the guidance of

Dr.K.MAKANYADEVI
Assistant Professor/CSE

Submitted By

AASHIQ S (927621BCS001)

ARUNKUMAR E (927621BCS011)

AVINASH M.V (927621BCS015)

DEEPAN RAJ G (927621BCS018)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

M.KUMARASAMY COLLEGE OF ENGINEERING

(Autonomous)

KARUR – 639 113

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(Autonomous Institution affiliated to Anna University, Chennai)

KARUR – 639113

BONAFIDE CERTIFICATE

Certified that this minor project report **"PHARMACY MANAGEMENT SYSTEM "**is the bonafide work of **"AASHIQ S (927621BCS001), ARUNKUMAR E (927621BCS011), AVINASH M.V (927621BCS015), DEEPAN RAJ G (927621BCS018)"** who carried out the project work during the academic year 2022- 2023 under my supervision.

Signature

Dr.K.MAKANYADEVI

ASSISTANT PROFESSOR/CSE,

Department of Computer Science
and Engineering,
M. Kumarasamy College of Engineering,
Thalavapalayam, Karur -639113

Signature

Dr.M.MURUKESAN M.E.,Ph.D.,

HEAD OF THE DEPARTMENT,

Department of Computer Science
and Engineering,
M. Kumarasamy College of Engineering
Thalavapalayam, Karur -639113.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION OF THE INSTITUTION

- To emerge as a leader among the top institutions in the field of technical education.

MISSION OF THE INSTITUTION

- Produce smart technocrats with empirical knowledge who can surmount the global challenges.
- Create a diverse, fully-engaged, learner-centric campus environment to provide quality education to the students.
- Maintain mutually beneficial partnerships with our alumni, industry, and Professional associations.

VISION OF THE DEPARTMENT

- To achieve education and research excellence in Computer Science and Engineering.

MISSION OF THE DEPARTMENT

- To excel in academic through effective teaching learning techniques.
- To promote research in the area of computer science and engineering with the focus on innovation.
- To transform students into technically competent professionals with societal and ethical responsibilities.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Graduates will have successful career in software industries and R&D divisions through continuous learning.

PEO 2: Graduates will provide effective solutions for real world problems in the key domain of computer science and engineering and engage in lifelong learning.

PEO 3: Graduates will excel in their profession by being ethically and socially responsible.

ABSTRACT WITH PO AND PSO MAPPING

ABSTRACT	POs MAPPED	PSOs MAPPED
The pharmacy management system is intended to increase accuracy, safety, and efficiency in the pharmacy. It is a computer-based system that stores information and makes medical stores run better. Pharmacists can use the Pharmacy Management System program to help them methodically manage their pharmacies. When a medicine's name is given, the Pharmacy Management System can help by providing the details about the medicine. This system displays information about the medicine, such as, its dosage and expiration date. In large medical stores, manually handling the specifics of all the drugs becomes very tough. We can keep track of all the medicines by using this pharmacy management system. It is updated with new information as new medicines are introduced, and it includes an expiration date as well as a search option.		**PSO 2(2)**

SUPERVISOR **HEAD OF THE DEPARTMENT**

Engineering students will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentation, and give and receive clear information.

ABSTRACT

The pharmacy management system is intended to increase accuracy, safety, and efficiency in the pharmacy. It is a computer-based system that stores information and makes medical stores run better. Pharmacists can use the Pharmacy Management System program to help them methodically manage their pharmacies. When a medicine's name is given, the Pharmacy Management System can help by providing the details about the medicine. This system displays information about the medicine, such as, its dosage and expiration date. In large medical stores, manually handling the specifics of all the drugs becomes very tough. We can keep track of all the medicines by using this pharmacy management system. It is updated with new information as new medicines are introduced, and it includes an expiration date as well as a search option.

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INTRODUCTION

Pharmacy management is the administration and operation of a pharmacy or group of pharmacies. It involves the coordination of various activities, such as drug procurement, inventory management, prescription processing, patient counseling, and staff management. Effective pharmacy management is crucial in ensuring that patients receive safe, effective, and timely access to medications. Pharmacy managers are responsible for developing and implementing strategies to optimize the pharmacy's performance, improve patient outcomes, and maximize profitability. Some key responsibilities of pharmacy managers include overseeing staff training and development, ensuring compliance with regulatory requirements, managing the pharmacy's financial resources, and maintaining positive relationships with customers, healthcare providers, and suppliers.

It also involves keeping up-to-date with industry trends and advancements in technology, as well as identifying opportunities to expand services and improve patient care. Effective pharmacy management requires a combination of strong leadership skills, business acumen, and a commitment to patient-centered care. Effective pharmacy management requires strong leadership skills, business acumen, and a commitment to patient-centered care. Successful pharmacy managers are able to balance the needs of patients, healthcare providers, and the pharmacy's financial goals. They are also able to adapt to changes in the healthcare industry and identify opportunities for growth and expansion.

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1.1 OVERVIEW

Pharmacy management is the process of planning, organizing, directing, and controlling the activities of a pharmacy or group of pharmacies. The goal of pharmacy management is to ensure the safe and effective use of medications while maximizing the profitability and efficiency of the pharmacy.
Pharmacy management involves a variety of tasks and responsibilities, including:

1. Drug procurement: selecting and purchasing medications from wholesalers or manufacturers.
2. Inventory management: managing the inventory of medications and supplies, including ordering, receiving, storing, and tracking the inventory.
3. Prescription processing: verifying prescriptions, entering data into the pharmacy system, and dispensing medications.
4. Patient counseling: providing patients with information on medication use, side effects, and interactions.
5. Staff management: recruiting, training, scheduling, and supervising pharmacy staff.
6. Compliance: ensuring compliance with federal and state laws and regulations, as well as accreditation standards.
7. Financial management: managing the pharmacy's budget, including revenue, expenses, and profitability.
8.Technology: keeping up-to-date with advancements in technology and utilizing technology to improve pharmacy operations.

1.2 DOMAIN INTRODUCTION

Pharmacy management is a multidisciplinary field that covers a wide range of domains related to the operation and management of pharmacies. Some of the key domains in pharmacy management include. Pharmaceutical economics: This domain focuses on the financial aspects of pharmacy management, including budgeting, reimbursement, and pricing strategies.

Medication safety: This domain encompasses strategies to reduce medication errors, adverse drug events, and other medication-related problems.

Pharmacy informatics: This domain focuses on the use of technology to improve pharmacy operations, including electronic health records, pharmacy automation, and clinical decision support systems.

Human resources management: This domain covers the recruitment, training, and management of pharmacy staff, including pharmacists, pharmacy technicians, and support staff.
Quality management: This domain encompasses strategies to improve the quality of pharmacy services, including quality assurance, quality improvement, and performance metrics.

Regulatory compliance: This domain covers the legal and regulatory requirements that pharmacies must comply with, including state and federal laws, accreditation standards, and professional guidelines.

Patient care: This domain focuses on the provision of patient-centered care, including patient counseling, medication therapy management, and clinical services.

Supply chain management: This domain covers the procurement, inventory management, and distribution of medications and supplies.
Marketing and business development: This domain encompasses strategies to promote the pharmacy's services, expand the customer base, and increase revenue.

Effective pharmacy management requires a comprehensive understanding of these domains, as well as business acumen, and a commitment to patient-centered care.

1.3 PROBLEM STATEMENT

PROBLEM STATEMENT OF RESTAURANT MANAGEMENT SYSTEM

Pharmacy management faces a variety of challenges and problems that can impact the safety and effectiveness of medication use, as well as the profitability and efficiency of the pharmacy. Some of the key problem areas in pharmacy management include:

Medication errors: Medication errors are a major problem in pharmacy management and can result in patient harm, legal liability, and decreased customer satisfaction. Strategies to reduce medication errors include staff training, technology implementation, and process improvement.

Drug shortages: Drug shortages can impact the availability of medications and increase the workload of pharmacy staff. Effective supply chain management strategies can help mitigate the impact of drug shortages.

Rising drug costs: The rising cost of medications can impact patient access to medications and the financial sustainability of the pharmacy. Pharmacy managers must develop strategies to manage drug costs while maintaining quality of care.

Technology implementation and integration: The implementation and integration of technology can be challenging and require significant investment. Pharmacy managers must develop effective technology strategies that balance the benefits of technology with the costs and challenges of implementation.

1.4 OBJECTIVE

The objectives of a pharmacy management system are to improve the safety, efficiency, and effectiveness of medication use and pharmacy operations. .

A pharmacy management system should include features that help reduce medication errors, adverse drug events, and other medication-related problems. This includes drug utilization review, drug allergy and interaction checking, and medication dispensing alerts. It should include features that help ensure compliance with federal and state laws, accreditation standards, and professional guidelines. This includes audit trails, reporting capabilities, and secure data storage. The system should facilitate communication and collaboration between pharmacy staff, healthcare providers, and patients. This includes features such as electronic health records, secure messaging, and patient portals.

CHAPTER 2

LITERATURE SURVEY

1. Design and Implementation of Pharmacy Management System by P. T. Akande and O. O. Olaniyan (2018)

This study proposed and implemented a PMS to improve pharmacy management in a hospital setting. The system was designed to automate various pharmacy processes, including prescription management, dispensing of medication, and inventory management. The authors reported that the system was effective in improving the efficiency and accuracy of pharmacy operations.

2. A Review of Pharmacy Management Systems by D. S. Rathor and S. K. Sharma (2020)

This review paper provides an overview of various PMS currently available in the market. The authors analyzed different features and functionalities of PMS, such as inventory management, billing, and prescription management. The study found that PMS has the potential to improve the efficiency and accuracy of pharmacy operations and can be beneficial for both patients and pharmacy staff.

3. Barriers to the Adoption of Pharmacy Management Systems in Healthcare by R. W. Apenteng and C. Bonsu (2021)

This study explored the challenges faced by healthcare organizations in adopting PMS. The authors conducted a survey of healthcare professionals and found that the major barriers to the adoption of PMS include lack of financial resources, lack of technical expertise, and resistance to change. The authors suggested that addressing these barriers is necessary for successful adoption of PMS.

1. Evaluation of a Pharmacy Management System in a Hospital Setting by M. A. Elsaid and A. H. Abd Elghany (2021)

This study evaluated the effectiveness of a PMS in a hospital pharmacy setting. The authors assessed the system's impact on various pharmacy functions, including inventory management, prescription management, and dispensing of medication. The study found that the system was effective in improving the efficiency and accuracy of pharmacy operations and reducing medication errors.

2. Impact of Pharmacy Management System on Patient Safety: A Systematic Review by M. T. Alhamami et al. (2021)

This systematic review aimed to assess the impact of PMS on patient safety. The authors analyzed several studies and found that PMS can significantly reduce medication errors, improve medication adherence, and enhance patient safety. The authors suggested that PMS should be implemented in healthcare organizations to improve patient safety.

3. COMPARE BETWEEN EXISTING SYSTEMS

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CHAPTER 3

FEASIBILITY STUDY

FEASIBILITY STUDY

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