

**TRIBHUVAN UNIVERSITY**

**INSTITUE OF SCIENCE AND TECHNOLOGY**

**AMRIT CAMPUS**

A

Minor Project on  
“Inventory Management System”

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JULY, 2024

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# ABSTRACT

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CHAPTER 1: INTRODUCTION

1.1 Introduction

In today’s dynamic business environment, efficient inventory management is crucial for operational success and customer satisfaction. An Inventory Management System (IMS) is designed to automate and optimize the process of tracking and managing inventory. This system ensures accurate monitoring of stock levels, order status, and inventory movements, thus enabling businesses to streamline their operations and make informed decisions.

The Inventory Management System developed for this project is a comprehensive application designed to handle various aspects of inventory management. It provides a user-friendly interface and robust functionality, addressing the critical needs of businesses in managing their inventory effectively. By automating routine tasks and offering real-time insights, the system aims to enhance operational efficiency and reduce manual errors.

1.2 Problem Statement

Traditional inventory management methods often involve manual tracking, which can lead to several challenges, including:

* Overstocking: Excess inventory can lead to high holding costs and wasted resources.
* Stockouts: Insufficient stock can result in missed sales opportunities and customer dissatisfaction.
* Inaccurate Tracking: Manual records are prone to errors, leading to discrepancies in stock levels and financial reporting.
* Inefficient Processes: Time-consuming manual processes can affect overall productivity and operational efficiency.

To address these challenges, there is a need for an automated solution that provides real-time tracking, reduces manual intervention, and offers comprehensive reporting capabilities. The Inventory Management System is designed to solve these problems by integrating various functionalities into a single platform.

1.3 Objectives

The primary objectives of the Inventory Management System are:

* Automation: To automate inventory tracking and management processes, reducing the need for manual intervention and minimizing errors.
* Real-Time Data: To provide real-time updates on inventory levels, transactions, and order statuses, facilitating better decision-making.
* Cost Efficiency: To optimize inventory levels and reduce costs associated with overstocking and stockouts.
* Enhanced Customer Satisfaction: To ensure product availability and timely order fulfillment, improving customer satisfaction.

1.4 Scope

* **System Overview:** The Inventory Management System is designed to handle essential inventory tasks, including managing product categories, units of measurement, storage racks, suppliers, customers, products, purchases, and transactions. It features reporting capabilities such as custom reports, detailed reports, and stock level summaries.
* **User Roles and Permissions:** The system supports three distinct user roles:
  + **Super Admin**: Manages user accounts and has full access to all features.
  + **Admin**: Executes all operations, including CRUD (Create, Read, Update, Delete) actions and report generation.
  + **Normal User**: Limited to basic functions like billing and viewing product lists.
* **User Interface:** Designed with an intuitive and user-friendly interface to ensure ease of use across different functionalities, aiming to streamline inventory management processes.

1.5 Limitations

While we strive to deliver a robust and feature-rich "Inventory Management System" certain limitations should be acknowledged:

* **Financial Management**: The system does not encompass detailed financial accounting features such as cost analysis, profit and loss statements, or comprehensive financial reports. It focuses primarily on inventory management rather than full financial oversight.
* **External Integration**: The system does not offer integration capabilities with external software or third-party applications, limiting its functionality to internal operations only.
* **Scalability Constraints**: While effective for standard inventory tasks, the system may require additional customization to handle larger-scale operations or more complex inventory needs.
* **Advanced Analytics**: Reporting features are basic and do not include advanced analytics or predictive tools. Users seeking in-depth data analysis may need to use additional software.
* **Training Requirements**: Effective use of the system necessitates proper training. Although the system interface is user-friendly, training is essential to ensure users can fully utilize all features.
* **Customization Limits**: The system’s customization options are confined to built-in functionalities. Users with specialized needs may require further development to adapt the system to unique requirements.