

BHAKTAPUR MULTIPLE CAMPUS

(Affiliated to Tribhuvan University)

Doodhapati, Bhaktapur



**Seventh Semester Project Proposal
On
Inventory and Order Management System**

**For the partial fulfillment of Bachelor's Degree of Computer Science
and
Information Technology**

Under the supervision of

Submitted By

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**Bhaktapur Multiple Campus
Department of Computer Science and Information Technology
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Inventory and Order Management System

1. Introduction

Inventory Management and Order System is an online software application which fulfills the supervision of non-capitalized assets (inventory) and stock items.

It provides the interface to users in a graphical way to manage the daily transactions as well as historical data. Also provides the staff management tools like staff attendance, staff location tracking and monthly task management.

This application maintains the centralized database so that any changes done at a location reflects immediately. This is an online tool all user can use at a time and gets real time is change in system and use the tool provided by system simultaneously.

The aim of this application is to monitor the stock, maintains the inventory, purchase, order, sales record with invoice and pending payment.

2. Statement of Problem

As we all know that marketplaces are constantly changing. For starters, the international trading landscape is more uncertain the ever. In addition, e-commerce is driving increased competition from traders across the globe, both small and large.

And with customers being more demanding and more vocal about their experiences, the need to provide an exceptional service at top is becoming the norm.

Small and medium-sized businesses must respond to external market pressures and are therefore up against a multitude of inventory management challenges. Using manual approach to compete in modern world may not be the optimal solution however this Smart Inventory Management System may help us with addressing the on time complexity of the supply chain network increased with globalization.

It is crucial for an organization today to understand its inventory to achieve both efficient and fast operations, that too, at an affordable cost.

An effective management of inventory helps in reducing costs which further keeps accounts and finances in check.

From a customer's point of view, it helps you to provide better customer services through fast delivery and low shipping charges, hence, meeting customer expectations.

3. Scope and Objectives

The objective can be defined as:

- to keep trace of firm inventory and offer a centralized view of stock.
- to control cost by making stock reports for analysis of firm inventory.
- to improve delivery by managing stock-outs and meeting customer expectations.
- to manage planning and forecasting by analysis data trends.
- to reduce the time for managing inventory by keeping records in place
- to manage and keep trace of orders of inventory by their customer.
- to mobilize staffs of organization efficiently.

4. Literature Review

In today's world every business tries to strike a balance in inventory between what is needed and what is demanded, considering the major factor of cost cutting/reduction. Inventory management focuses on the capacity of the inventory, the place in which it is located so that one can use it when needed, the supply chain management of the raw materials and goods. Maintaining Inventory also involves holding or carrying costs along with an opportunity cost. Efficient Management goes a long way in successful running and survival of business firm. Edwin Sitienei and Florence Memba(2015) conducted a study on Effect of Inventory Management on profitability of Cement Manufacturing Companies in Kenya. The study concluded that Gross profit margin is negatively correlated with the inventory conversion period, increase in sales, which donates the firm size enriches the firm's inventory levels, which pushes profits upwards due to optimal inventory levels. It also noted that firms inventory systems must maintain an appropriate inventory levels to enhance profitability and reduce the inventory costs associated with holding excessive stock in warehouses.

5. Research Methodology

5.1.Data Collection

The methodology resorted to data collection is in both

5.1.1. Primary data

Primary data is collected by interacting with different firm managers, staffs. The data regarding the present systems of controlling inventory were collected

5.1.2. Secondary data

The secondary data was obtained from the past records and files of the organization and also from books, journals, magazines and newspaper.

Also, by interacting with the customer of organization who are manually managing their inventory.

5.2.Development Model

5.2.1. Waterfall model

Since the project is concise and clear and the project do not have any changing requirements, we will be using Waterfall model. As per the model, we will start the project with planning on various steps to be taken followed by user interface and system design. Then we will be implementing the various algorithms on different data sets collected. As per the model, we will test the system and perform verification and validation.

5.3. Algorithm used

Matrix Factorization for product recommendation

5.4. Tools used

- Android Studio
- Visual Studio
- VS Code
- Web Browser (Google Chrome)
- Azure (As server)

6. Expected Outcome

As final outcome, we expect to develop a simulation of real-world Inventory Application that allow user to efficiently organize workforce and goods also track goods across business supply chain and mapping the complete journey of a product.

7. Time Schedule/Gant Chart

