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Stock Management System

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ABSTRACT-

To manage the organization's inventory system, this project aims to develop the Stock Management System web application. By conducting the survey in several businesses and malls, The word The term "stock management system" describes the processes and techniques utilized by a business to manage its inventory while implementing technological solutions. This system can be used to maintain track of inventory, update inventory depending on sales data, and produce daily or weekly sales and inventory reports. Software called an inventory management system is useful for companies that run hardware stores where the owner maintains records of sales and purchases. Workplace mistakes, manual delays, and process speeding up. A store owner can use an inventory management system to keep track of sales and available stock, as well as to determine when and how much to reorder.

Keywords: Python, inventory management system, Products, Sell.

INTRODUCTION -

A web-based system called Stock Management System is used to keep track of orders, sales, and deliveries. Stock management software's functions include maintaining an ideal stock level, tracking products as they are moved between locations, receiving new inventory, managing warehouse operations like picking, packing, and shipping, preventing product obsolescence and spoilage, and making sure your products are always in stock.

Stock management software's functions include maintaining an ideal stock level, tracking products as they are moved between locations, receiving new inventory, managing warehouse operations like picking, packing, and shipping, preventing product obsolescence and spoilage, and making sure your products are always in stock. Stock management software automates what was formerly a labor-intensive, manual process of counting each item one at a time and documenting it on paper. This technique can be digitized to increase accuracy while also saving time.

Today, it is increasingly popular to conduct business online in order to increase a company's target market. Given that the customer can save time and consider it hassle-free, it becomes more efficient. The sales system and inventory system combine to form a web-based system, which is the most often used system by several businesses.

LITERATURE SURVEY –

Decision Support System for Inventory Management in Pharmacy Using Fuzzy Analytic Hierarchy Process and Sequential Pattern Analysis Approach, R. Gustriansyah, D. I. Sensuse, and A. Ramadhan, 2015:

Before being supplied to the customer, pharmaceuticals are often stored in warehouses by pharmacies. The difficulty of predicting the stock of each product to the right in order to avoid excess/shortages arose since stacking products in a warehouse might decrease the productivity of the warehouse and increase the costs connected with inventory.

Development of an inventory management system by Y. Fan, 2010:

This paper introduces agent technology into domestic storage management and uses the autonomy, reactivity, and sociality of agents to define interaction and cooperation mechanisms among different agents, realising the seamless connection among enterprises, achieving the goal of reducing and even eliminating inventory, making it a practical idea and method for enterprises to realise effective storage management.

"Autonomous Robot for Inventory Management in Libraries," R. Mehta and A. Sahu, 2020:

In order to save labour costs, improve the effectiveness of current inventory management systems, and offer a way to create an automatedinventory, this study suggests an autonomous robot.

Taking care of a college library is one example of inventory management. Similar to an inventory management system, the library has issues with book availability.

METHODOLOGY –

By using python flask Stock management system is developed and also python sqlalchemy.

From python flask we have used wtforms library to create forms and take input from user. And we've used sqlalchemy to connect database and insert, update operations.

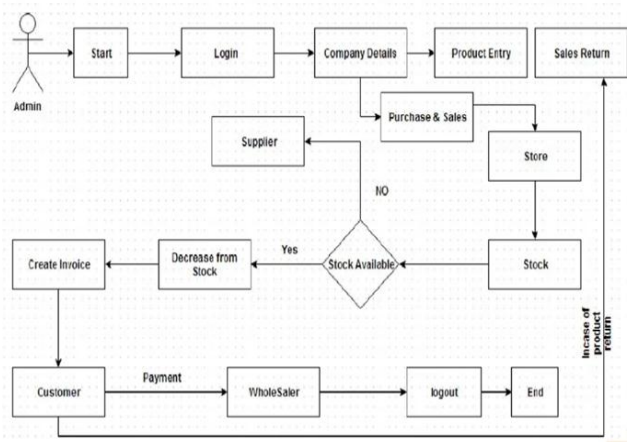


Fig. 1: How System Works

Above figure shows the system work i.e How actually system works. In the stock management system when user start this web application he/she will get a first page i.e Home page. In that he/she needs to register his/her store if they are using this first time and after they can login. After this user should have to add products of remaining stock from his/her store. Then after he/she can view how stock is remaining and other all the information like Products arrived date, manufacture date and expiry date. After this user can sell the products by selecting products and then user will get the bill of his purchased order.

Scheduling –

Steps to achieve the objective of the project during the project development –

Part 1- A) Design Front-End

(a) Create Login page firstly he should be register in management system.
(b) Create Home page there are all details about IMS application.
(c) Update Profile: - He can update profile anytime.

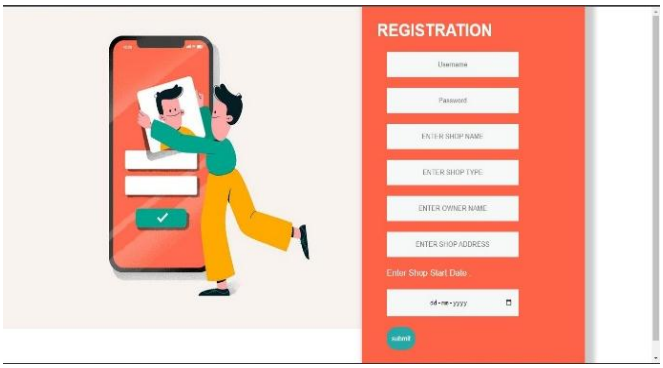
2) **Part 2 -** B) Back-End

(a) To Store data in database.
(b) Data connectivity.

1. Home:

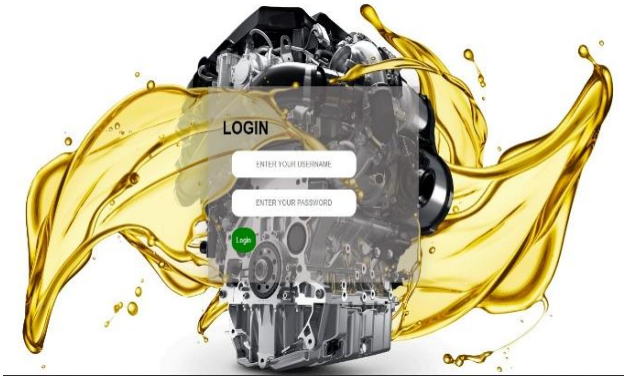
Home page of stock management system. In this page user can register his shop or if he already registered then he can login.

2. Register:



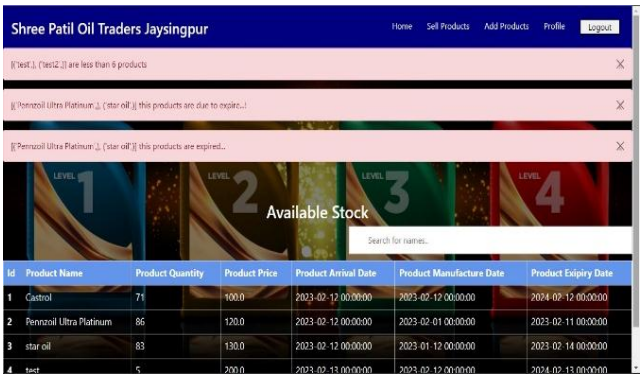
Registration page of a stock management system. In this page use can register his shop.

3. Login:



Login page of stock management system. In this page use can login by username and password.

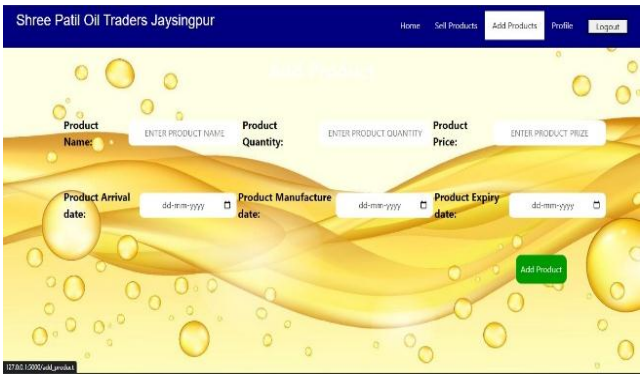
4. Search/Available stock:



Search/Available page of stock management system. In this page user will get all the available products with all the information of a products respectively. And also user will get notification of less than 6 products and expired products.

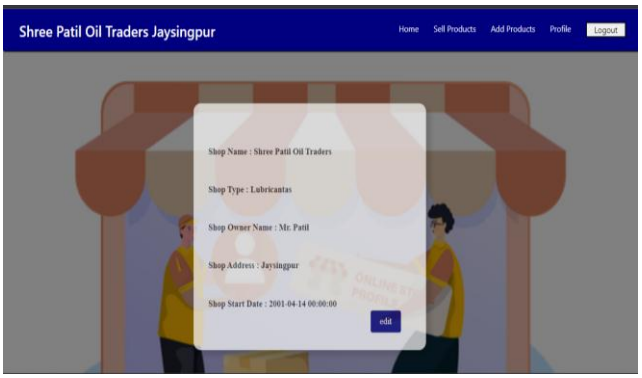
After closing of a notification user can search available products.

5. Add Products:



Add products page of a stock management system. In this page user can add products with product information like product arrived date, quantity, expiry date, manufacturer date and cost of a product.

6. Profile:



Profile page of a Stock management system. In this page user will get the all his/her shop details/information.

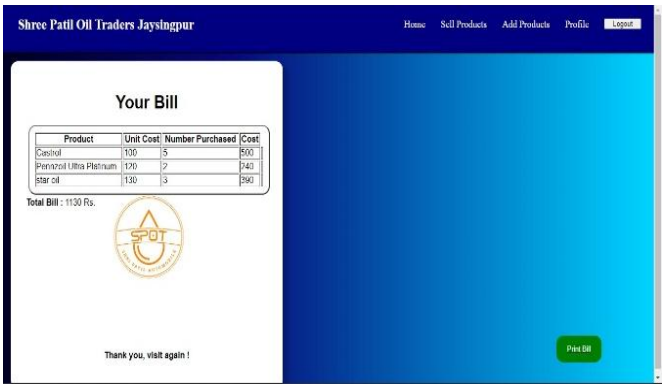
7. Update profile:

Update profile page of a Stock management system. In this page user can edit or update shop details.

8. Sell Products:

Sell Products page of a Stock management system. In this page user can sell products by selecting product quantities.

9. Bill:



Bill page of a Stock management system. In this page user will get the purchased products. By click on print button user can print the bill.

Hardware & Software used in proposed system-

- **Hardware –**

Hardware required for this system is as follows:

1. Computer System
2. HDD
3. RAM

- **Software -**

1. Pycharm
2. Xamp
3. Vscode

Programming Languages:

1. Python
2. HTML
3. CSS
4. Mysql

Advantages and Disadvantages-

Advantages:

- This algorithm finds all the possible solutions, and it also guarantees that it finds the correct solution to a problem.
- This type of algorithm is applicable to a wide range of domains.
- It is mainly used for solving simpler and small problems.
- It can be considered a comparison benchmark to solve a simple problem and does not require any particular domain knowledge.

Disadvantages:

- It is an inefficient algorithm as it requires solving each and every state.
- It is a very slow algorithm to find the correct solution as it solves each state without considering whether the solution is feasible or not.
- The brute force algorithm is neither constructive nor creative as compared to other algorithms.

Future Scope-

As we had very little prior understanding of the Inventory Management System when we began this project, we learned about the improvement capacity as we built it. These are some of the areas of focus we might broaden for improved efficiency:

- Design of an interactive user interface.
- Handle the stock godown carefully.
- Oracle is used as the database.
- The system can be made flexible by adding an online payment system.
- Making the system flexible in any type.
- To enable the return of products, a sales and buy return mechanism will be added.
- Loss and damage

Conclusion-

To sum up, an inventory management system is a basic Web application that is best suited for small businesses. It contains every essential tool needed for a small business. Our team has been successful in creating an application that allows us to update, insert, and delete items as needed. This tool also offers a straightforward report each day that includes the daily sales and purchases. Our team is convinced that the organisation will profit from the installation of this technology.

A business's capacity to effectively manage its inventory and sell products can be significantly enhanced by a well-designed and managed stock management system.

Profitability may be increased, expenditures can be decreased, and customer service can be improved with effective inventory management.

Inventory management, stock forecasting, stock control, stock accuracy, and stock visibility are crucial elements of a stock management system. Businesses can

strengthen their ability to sell things successfully by taking these aspects into account and putting the right strategies and technologies in place.

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