

Pharmacy Drugs Inventory Management

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Business Problem:

Efficient inventory management enhances gross profits and net profits by reducing the cost of procured pharmaceutical products and associated operational expenses. We are focusing on selecting appropriate fulfillment strategies that match the business's size and the volume and type of orders it receives. Based on these strategies we can help the organization maintain an inventory that can ship products faster, minimize waste, and improve customer satisfaction which will help maintain the most effective workflow.

The model will include the data required for the day-to-day operations to help maintain information about the inventory. At a high level, this includes data about transactional data like receiving and shipping inventory, fulfilling orders, and managing inventory in warehouse space. This model ensures that the product will be utilized before it expires and should help your organization to achieve greater efficiency and fulfill orders more accurately so you can do more at a lower cost.

Theory:

Inventory management encompasses the principles and processes involved in running the day-to-day operations of a retailer. At a high level, this includes receiving and organizing inventory space, scheduling labor, managing inventory, and fulfilling orders. Zoom in closer and you'll see that effective business management involves optimizing and integrating each of those processes to ensure all aspects of a warehouse operation work together to increase productivity and keep costs low.

In our project, we are going to track the movements of the drugs on a basis of day to day from warehouse to seller and to customer. We are going to record their Drug ID, Drug Name, Warehouse ID, expiry date, date of purchase, and how many items are left in the store. From the warehouse supplier, we are going to record the Warehouse ID, Warehouse Name, Drug ID, Count of the packs, expiry date, and date of arrival.

The process of the supply chain is recorded, the retail store needs to record the supplier's ID, name, address, and city. For products, the company needs to know their ID, name, type, and available quantity. At the same time, the purchase price and delivery period of the products also should be recorded. Each time when a customer purchases a product from the store, they will generate an order number and corresponding product type, order time, quantity, and product price. In the background, it needs to verify if the stock of that product is less than the threshold, and it should be notified to the respective owners.

Other Requirements:

1. A warehouse can hold one to infinite orders to fulfill the inventory requirements. A supplier can supply to any number of stores in the city.
2. An inventory can sell one to infinite orders to the customers, the store can sell different drugs at a time.
3. We are going to have a master table that contains all the drug names and drug ids, these ids can be mapped to all the different tables.
4. Warehouse can contain products in bulk, which can be stored as Product Id, Product Names, quantity, and expiry date, this is used to handle the inventory orders.
5. Strengthening the relationships with the warehouse as well as customers
6. Ensuring resources are used optimally and without loss
7. Provide insight into inventory location and quantity using predefined rules for receiving, picking, and packing orders
8. Checking in and logging incoming items. Verify that you're receiving the right quantity, in the right condition, at the right time.
9. Move items from the receiving dock to their correct storage locations.
10. Safely store and logically arrange inventory to enable fast and accurate picking collects the items needed to fulfill sales orders.
11. Prepare the picked items for shipment. They must be safely packed into the correct packaging with an accurate packing slip.
12. Send out the finalized sales orders, ensuring that they are on the right vehicle, at the right time, with the correct documentation, so customers receive their orders on time.