**SYNOPSIS**

**Report on**

**INVENTORY MANAGEMENT SYSTEM**

**by**

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**INTRODUCTION**

An inventory management system project that allows user to manage and maintain his/her inventory with ease. The inventory management system has been developed to allow users to add an inventory, delete an inventory, enter inventory quantity and other details, update inventory status and more. The inventory management system has its own intelligently managed support system that allows user to view and manage various inventories added in the system.

**The system provides following features:**

* User may add/update/delete inventory.
* User may add/update inventory details.
* Details include cost, quantity and description.
* Includes forms for inventory inwards and outwards.
* User may create sub inventories.
* An interactive user interface.
* A flexible inventory management system.

**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. This control is called Inventory management or inventory control. Inventory is basically assets (goods and materials) which are stock of any business. Inventory management focus 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. Inventory management deals with the demand forecasting, asset management of the raw materials and goods, inventory carry cost, forecast, pricing of goods, validation of goods, to forecast the demand of future. This helps the top level manger to understand and coordinate with the supply chain management or production management, and quality management.

## Satisfactory level of service

Most company measures the ability to satisfy the customer by the following 3 factors / methods

* Number of order which act per schedule
* Number of order which are shipped as per schedule
* The idle time in inventory as well as shortage

## Minimizing inventory investments

Most company try to minimize the money associated with inventory so as to improve profitability of the company. This is measured using inventory turnover ratio

## Efficient inventory control

Efficient inventory control includes how the inventory are scheduled properly, no delays between sniffing of raw materials and goods. The amount of raw materials determines the workforce and other factors.

## TYPES OF INVENTORIES:

TRANSIT INVENTORY: Inventories many times have to be transported from one location to the other as they pass through the levels of manufacturing. These inventories are called transit or pipeline inventories as they are in transit from a location to another. Automobile manufactures make use of freight consolidators to pool in their inventories.

CASE: HPCL handles the transportation from refineries to customers through various modes like roadways, shipping, pipelining etc.

BUFFER INVENTORY: Inventories are sometimes used to counter attack the uncertainties of demand and supply. They could also be used to take care of unforeseen situations like poor transportation, poor quality etc. Buffer inventory or safety stock is the amount of stock which is in excess compared to the current demand of goods. The more safety stock a firm has very small is its probability of running into a stock out situation.

ANTICIPATION INVENTORY: Firms often purchase and hold stock which is much higher than their present requirements in anticipation of a future event. These event can include

* Seasonal variations in demand
* Price variations
* An impending labour strike

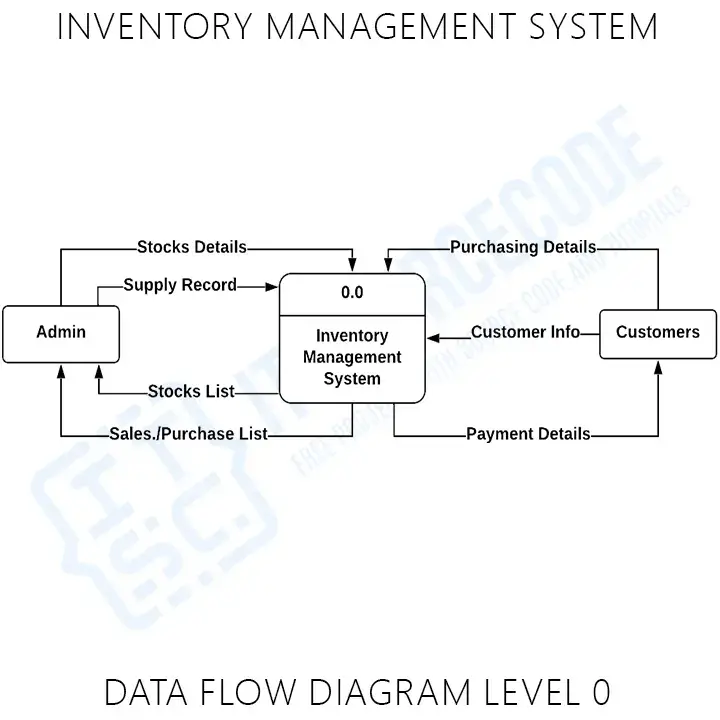
This method allows firms to build up their inventory reserves when the demand is declining and as the demand shoots up they can utilise the inventory. The firms need not increase their production capacity and overload their workers when there is a sudden rise in demand.

DECOUPLING INVENTORY: The production time of each machine used in a manufacturing plant varies. Some systems produce more products in the same time duration. The faltering of any machine must not affect the entire production process. Thus decoupling inventory acts as a shock absorber and decouples the dependence on sequential process.

**PROJECT OBJECTIVE**

1. To ensure a continuous supply of materials and stock so that production should not suffer at the time of customers demand.
2. To avoid both overstocking and under-stocking of inventory.
3. To maintain the availability of materials whenever and wherever required in enough quantity.
4. To maintain minimum working capital as required for operational and sales activities.
5. To optimize various costs indulged with inventories like purchase cost, carrying a cost, storage cost, etc.
6. To keep material cost under control as they contribute to reducing the cost of production.
7. To eliminate duplication in ordering stocks.
8. To minimize loss through deterioration, pilferage, wastages, and damages.
9. To ensure everlasting inventory control so that materials shown in stock ledgers should be physically lying in the warehouse.
10. To ensure the quality of goods at reasonable prices.
11. To facilitate furnishing of data for short and long-term planning with a controlled inventory.
12. To supply the required material continuously.
13. To maintain a systematic record of inventory.
14. To make stability in price.

DFD



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