# **Retail Store Stock Inventory Analytics**

# **Domain – Data Analytics**

Retail Store Stock Inventory Management is a management of process of distributing the products to the Shop owners from retailers. This inventory management reduce the working cost & operational cost and helps to know the demand over the customers. It is used the calculate the profit and losses.

### **Social impact:**

More varieties – availability of products

### **Business impact:**

Decision making process by reducing cost and increasing the profits and revenues

Customer demand & needs -supply

### **Recommended Technology Stack:**

Cognos Analytics, Tableau, Data Analysis with Python, Power-BI, etc.

# **Existing Solution:**

# 1) My Bill Book –

https://mybillbook.in/inventory-management-software

It is for Stock Management, Product Listing, Faster Billing. This Software is for Retailers, Wholesalers, Distributors and Manufacturers

#### **Features:**

- Free trial 14 days after this INR 142 per monthly subscription
- Detailed product listing:

This software enables easy addition of items with required details, name, image, item code, SP, Stock value, CP, MRP, Wholesale price etc.,

#### • Bulk edit and add:

We can use the excel file. Inbuild library add up to 1 lakh products. First user means add and edit the bulk data from other software including Vyapaar, Tally, Marg, and others.

### • Barcode Generation & Scanning:

For faster billing, unique barcode is generated for each items/product. New product means – new barcode generation ->print the barcode. In addition, use a barcode scanner to add items to your invoice.

### • Easy Categorisation:

Add products in the category – for quick filtering process.

# **Inventory Reports**

#### • Centralised Dashboard:

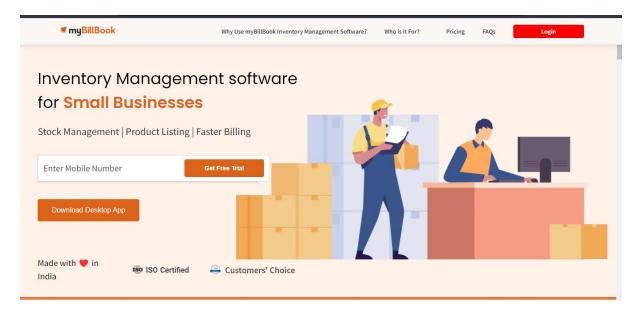
Gives quick glance of your inventory status. We can see latest transactions, the number of low stock items, current stock value, pending transactions and payments, payments from smart collect, and cash in liquid and the bank. It also displays the sales report for the past 7 days.

- Available in desktop app & mobile app
- Made in India
- ISO certified

### **Benefits:**

- Easy tracking
- Auto stock update
- Faster billing
- Smooth stock rotation
- Save time and cost
- User-friendly

Information			Trending Articles
Refund Policy	Blog	Invoicing Software	SAC Code
Privacy Policy	Service Pages	Inventory Management Software	Delivery Challan
Terms & Conditions	myBillBook Coupon Code	Retail POS Software	Credit Note Format
FloBiz Business Groups	Service pack	Accounting Software	Debit Note Format
License keys	Pricing Plans	Billing Software For PC	Proforma Invoice Format
Customer care	HTML Sitemap	Offline Billing Software	Direct Indirect Expenses
Become Reseller		E-Invoicing Software	



### 2) **ZOHO**-

https://www.zoho.com/in/inventory/

It Manage orders, Track inventory, Handle GST billing, Oversee warehouses, One inventory management software to run all your inventory operations.

### **Features:**

• Detailed product listing:

We can identify the total number of products, products shipped, to be delivered, to be invoiced. This software enables to find the purchase order, top selling items and sales order with help of analytics and GSTIN User

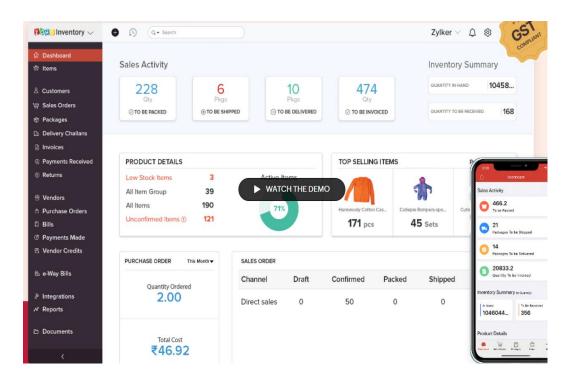
#### To enable:

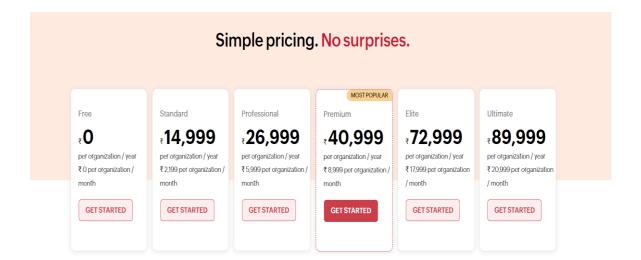
- Go to Settings > Taxes > GST Settings.
- Select Yes for the option Is your business registered for GST?
- Enter you 15-digit GSTIN and click the option Get GSTIN Details to view the details of your tax registration, previous returns filed, and so on.
- Enter the date of GST registration.

- Mark the box near My business is registered for Composition Scheme if you are a composition dealer and select your Composition Scheme Percentage
- GST invoice is issued by a supplier or a seller to the recipient or the buyer of goods and services. Such a document indicates the names of the parties involved as well as the details of goods or services supplied under a given transaction.
- Inventory Reports
- Available in desktop app & mobile app
- Made in India
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#### **Benefits:**

- End to end tracking
- Real time shipping rate
- Warehouse management
- Order management
- Barcode scanning
- Reports





### **Drawbacks of Inventory management:**

- Inconsistent tracking due to the customer behaviour
- Incomplete data
- Changing demand and Overselling
- Supply chain and logistics complexity including warehouse management
- Insufficient order management
- Forecasting inventory seasonal buys due to depreciation, market downs, product damage and theft
- Stock predictions
- System crash- A corrupt hard drive, power outages and other technical issues can result in the loss of needed data
- Malicious Hacks taken place and data security
- Chat bot or any other AI tools for communication will be lag
- No individual email tracking (open and close, vs mass campaign).
- Completely manual input no smart tools for form filing.

LITERATURE SURVEY							
Title	Author	year	Problem	Proposed	Results	Limitations	
			statement	System			
A Proficient Process for Systematic Inventory Management	R. Sheth, M. Vora, R. Sharma, M. Thaker and P.Bhavathankar	2020	To predict Proficient Process for Systematic Inventory Management	The System manages the stocks of organizations and helps them to better analyse the data pertaining to the storage and sales of goods to generate relevant insights from it.	This system thus helps the inventory managers to optimize their functioning with several data analytics algorithms such as regression modelling, market basket analysis, and other machine learning techniques to provide an allround solution to their needs.	There are many other advancements to predict the trend of the consumption which will include more attributes for analysis, thus including the number of attributes can increase the accuracy of the overall system	
Inventory management for retail companies: A literature review and current trends	Macas, Cinthya & Aguirre, Jorge & Arcentales- Carrion, Rodrigo & Pena, Mario	2021	To analyse and present an extensive literature concerning inventory management, containing multiple definitions and fundamental concepts for the retail sector in SMEs.	The study suggests that order quantity, inventory localization, and optimization are the main factors in which the systems, methodologies, and tools are focused.	The need to analyse their KPIs becomes highly significant, as well as their different systems, methodologies, and tools used within inventory management and optimization.	It is to mention that all retailers may not be able to employ these technologies due to their high cost of implementation and maintenance	
Demand seasonality in retail inventory management	J.C.F. Ehrenthal et.al	2014	Retailers who admitted to not taking perceived seasonality patterns into	we calculate the policy which minimizes the long-run average cost	Study will provide insights on the impact of incorporating demand	They did not focus on obtaining structural properties	

			account in	and compute	seasonality in	of the optimal
			their	the optimality	a retail	policy.
			replenishment		replenishment	
			systems.	policies which	system.	
				ignore		
				part or all demand		
				seasonality.		
				We find that		
				not accounting		
				for demand		
				seasonality can		
				lead to		
				substantial		
				optimality		
				gaps, yet incorporating		
				only some		
				form of		
				demand		
				seasonality		
				does not		
				always lead to		
				cost		
Formanatina	Xin Tian a,b,	2021	Foregoeting	savings. The MCM can	The empirical	Additional
Forecasting intermittent	Haoqing Wang	2021	Forecasting of	be as an	The empirical results show	research for
demand for	a,b, Erjiang E c		intermittent	alternative	that the MCM	managerial
inventory			demand for	method for	delivers better/	insights on
management			inventory	forecasting	more accuracy	forecasting
by retailers:			management	intermittent	at various	intermittent
A new			for needful to	demand	forecast	demand is need
approach			the Retailers.	because it is	horizons.	to predict
				easy to		Forecasting
				compute and		intermittent
				typically more accurate than		demand
				the classical		
				forecasting		
				methods.		

#### **References:**

- [1] R. Sheth, M. Vora, R. Sharma, M. Thaker and P. Bhavathankar, "A Proficient Process for Systematic Inventory Management," 2020 International Conference for Emerging Technology (INCET), 2020, pp. 1-5, doi: 10.1109/INCET49848.2020.9154038.
- [2] Macas, Cinthya & Aguirre, Jorge & Arcentales-Carrion, Rodrigo & Pena, Mario. (2021), "Inventory management for retail companies: A literature review and current trends". 71-78. 10.1109/ICI2ST51859.2021.00018.
- [3] J.C.F. Ehrenthal et.al, "Demand seasonality in retail inventory management", European Journal of Operational Research, Volume 238, Issue 2,2014, Pages 527-539, ISSN 0377-2217, https://doi.org/10.1016/j.ejor.2014.03.030.
- [4] Xin Tian a,b, Haoqing Wang a,b, Erjiang E c,\*, "Forecasting intermittent demand for inventory management by retailers: A new approach", Journal of Retailing and Consumer Services, Volume 62, September 2021, 102662, https://doi.org/10.1016/j.jretconser.2021.102662