

# INVENTORY MANAGEMENT SYSTEM



OPTIMIZING INVENTORY CONTROL & FORECASTING | POWER BI | SQL | EXCEL

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# PROJECT OVERVIEW

- Developed an Inventory Management System to help Warehouse and In-Plant Inventory Managers
- optimize stock levels, improve forecasting, and reduce stockouts.
- The system provides data-driven insights through Power BI dashboards.

# Inventory Management Dashboard

₹ 77.33M

Current Value in WH

303

Number of SKUs

5.42

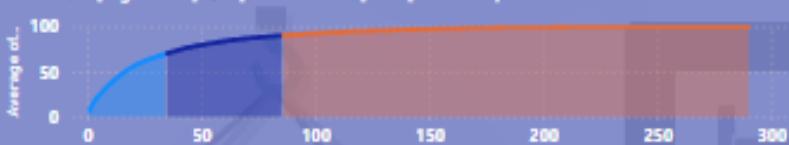
Inventory Turnover R...

## Distribution of Annual Revenue

ABC ?	X [Uniform Demand]	Y [Variable Demand]	Z [Uncertain Demand]
C [Less Value]	₹ 3.8M	₹ 15.1M	₹ 23.4M
B [Medium Value]	₹ 9.1M	₹ 25.6M	₹ 50.7M

## Distribution of ABC

ABC ? ● A [High-Value] ● B [Medium Value] ● C [Less Value]



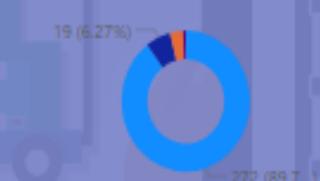
## SKUs to Re-order



## Stock Status

Stock Status

- Below Safety Stock
- In Stock
- Out of Stock



## Distribution of Inventory Turnover Ratio

ABC ?	X [Uniform Demand]	Y [Variable Demand]	Z [Uncertain Demand]
A [High-Value]	25.43	13.10	5.62
B [Medium Value]	11.54	6.13	2.01
C [Less Value]	10.44	2.64	1.38

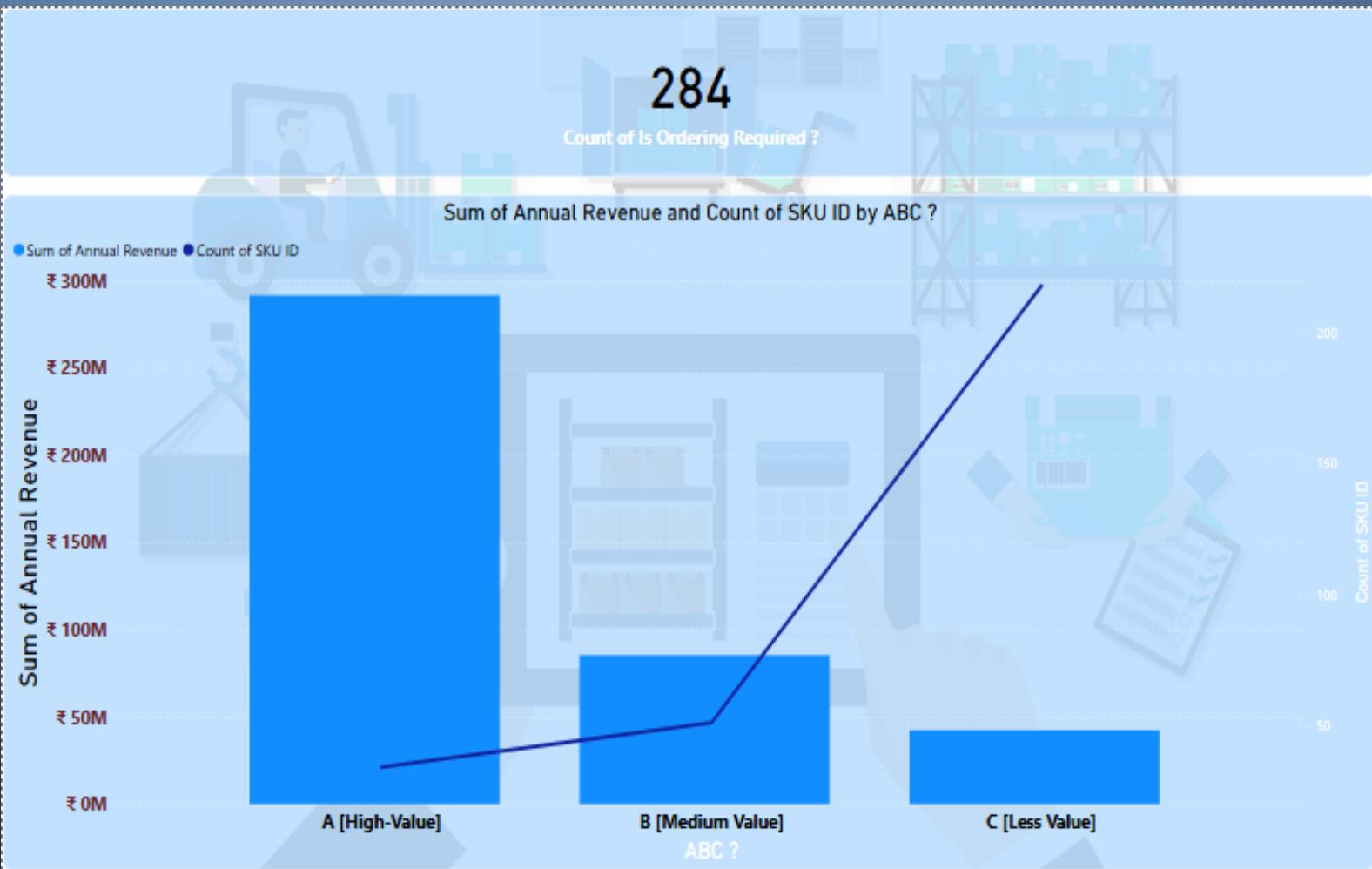
## Sum of Sales Amount by Week Date



SKU ID Current Stock Quantity Average Lead Time (days) Re-Order Point Safety Stock Stock Status

SKU ID	Current Stock Quantity	Average Lead Time (days)	Re-Order Point	Safety Stock	Stock Status
1009AA	7,210	30	67,234.29	61,908.19	Below Safety Stock
1077CA	46,516	45	3,45,540.00	2,98,434.82	Below Safety Stock
1083AA	48,210	45	2,34,366.86	1,99,250.97	Below Safety Stock

# ABC-DASHBOARD



# TOOLS & TECHNOLOGIES

- ✓ Power BI – Data visualization & interactive dashboards
- ✓ SQL – Data extraction & transformation
- ✓ Excel – Data preprocessing & analysis
- ✓ DAX – Advanced calculations for insights

# KEY DASHBOARD FEATURES

- ✓ ABC & XYZ Classification: Categorizes inventory by importance & demand
- ✓ Inventory Turnover Ratio: Analyzes stock efficiency
- ✓ Safety Stock & Reorder Levels: Prevents stockouts
- ✓ Stock Status & Forecasting: Monitors inventory & predicts future demand

# VISUALIZATIONS USED

- ✓ Stack Area Charts: Shows trends & cumulative data
- ✓ Gauges & Slicers: Dynamic filtering & metric tracking
- ✓ Line Charts: Analyzes trends in inventory turnover
- ✓ Tables & Matrices: Displays stock reports & demand insights

# DAX FORMULA FOR SALES CALCULATION

- Sales Amount = LOOKUPVALUE(Stock[Unit Price],  
Stock[SKU ID], 'Weekly Demand Sheet'[SKU ID]) \*  
'Weekly Demand Sheet'[Weeks Demand]
- ✓ Fetches the unit price from the Stock table
- ✓ Matches SKU ID with Weekly Demand Sheet
- ✓ Multiplies with weekly demand to get Sales Amount

# EXAMPLE CALCULATION

SKU ID	Unit Price	Weeks Demand	Sales Amount
101	10	5	50
102	20	3	60

# PROJECT SETUP & EXECUTION

- ✓ Clone the repository:
- `git clone https://github.com/Rahulshahu340/Inventory-Management_System.git`
- ✓ Open the Power BI file & load datasets
- ✓ Connect Excel & SQL for data retrieval
- ✓ Explore the dashboard to analyze inventory trends

# FUTURE ENHANCEMENTS

- ✓ Implement machine learning for demand forecasting
- ✓ Develop automated alerts for stock level notifications
- ✓ Enhance drill-down functionalities for deeper analysis

# CONNECT & EXPLORE THE PROJECT

- ✓ GitHub Repository: [[Click Here](#)]
- ✓ Open for feedback & contributions!
- ✓ Let's discuss data analytics & business intelligence!

# THANK YOU

LET'S CONNECT



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<https://github.com/Rahulshahu340>