Power BI Project: Inventory Management

# 1. Introduction

Effective inventory management is essential for companies to maintain operational efficiency, reduce costs, and meet customer demands. This Power BI project focuses on monitoring inventory levels in real-time, identifying slow-moving items, optimizing reorder points, and minimizing carrying costs and stockouts.

# 2. Project Objectives

- Monitor inventory levels in real-time  
- Identify and analyze slow-moving inventory  
- Optimize reorder points for different items  
- Reduce carrying costs and minimize stockouts  
- Set up alerts for critical inventory thresholds

# 3. Data Sources

The following data sources were used for this project:  
- Inventory transaction logs  
- Product master data  
- Supplier lead times  
- Historical sales data  
- Warehouse location data

# 4. Power BI Implementation

The project implementation involved the following steps:

1. Data Integration: Imported and combined data from different sources using Power Query.  
2. Data Modeling: Created relationships among tables and built a data model suitable for analysis.  
3. DAX Measures: Developed DAX measures to calculate inventory turnover, aging, reorder points, and carrying costs.  
4. Dashboards: Designed interactive dashboards to visualize:  
 - Current inventory levels by product and location  
 - Slow-moving items based on historical movement  
 - Suggested reorder points and current status  
 - Trend analysis of stockouts and overstock situations

# 5. Alerts and Automation

Power BI alerts were configured to notify stakeholders when inventory levels for critical items fall below predefined thresholds. These alerts were integrated with Microsoft Teams and Outlook for real-time notifications.

# 6. Business Benefits

- Enhanced visibility into real-time inventory status  
- Improved decision-making for inventory replenishment  
- Reduced carrying costs and minimized stockouts  
- Improved customer satisfaction through better product availability  
- Streamlined inventory control processes

# 7. Conclusion

By leveraging Power BI, the company achieved greater control over its inventory management processes. Real-time monitoring, proactive alerts, and data-driven insights empowered teams to make informed decisions, leading to increased efficiency and cost savings.