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**DBMS Project**

**Inventory Management System**

# Problem Statement: -

The organization needs an automated Inventory Management System (IMS) to replace its error prone manual system. The IMS should streamline inventory tracking, order management, and stock level monitoring, ensuring data accuracy and security. Its implementation aims to improve operational efficiency and enhance customer satisfaction.

**Objectives: -**

1. Automate inventory tracking and management.
2. Streamline order processing and monitoring.
3. Ensure real-time stock level visibility.
4. Develop a user-friendly interface for easy access.
5. Implement robust data security measures.
6. Establish role-based access control for data protection.
7. Optimize inventory costs and minimize wastage.
8. Build a scalable system for future business expansion.

# Functional Requirements:-

1. Product categorization for easy organization.
2. Batch tracking for precise inventory monitoring.
3. Efficient management of product returns.
4. Support for multi-location inventory control.
5. Automated reordering for timely stock replenishment.
6. Workflow automation for streamlined operations.

# Functional Dependencies:-

**1) Customer table:**

ID → FIRST\_NAME, LAST\_NAME, PHONE\_NUMBER, EMPLOYEE\_ID

PHONE\_NUMBER → ID **2) Employee table:**

ID → FIRST\_NAME, LAST\_NAME, EMAIL, PHONE\_NUMBER, JOB\_ID, HIRED\_DATE, LOCATION\_ID

JOB\_ID → ID LOCATION\_ID → ID **3) Job table:**

ID → JOB\_TITLE, SALARY **4) Location table:**

ID → PROVINCE, CITY, STREET **5) Category table:**

ID → NAME, DESCRIPTION, MANAGER\_ID

MANAGER\_ID → ID **6) Product table:**

ID → NAME, DESCRIPTION, QTY\_STOCK, PRICE, CATEGORY\_ID

CATEGORY\_ID → ID **7) Users table:**

## ID → FIRST\_NAME, LAST\_NAME, USER\_NAME, PASSWORD, TYPE\_ID, LOCATION\_ID,

PHONE\_NUMBER

TYPE\_ID → ID LOCATION\_ID → ID **8) Type table:**

ID → TYPE **9) Supplier table:**

ID → COMPANY\_NAME, LOCATION\_ID, PHONE\_NUMBER

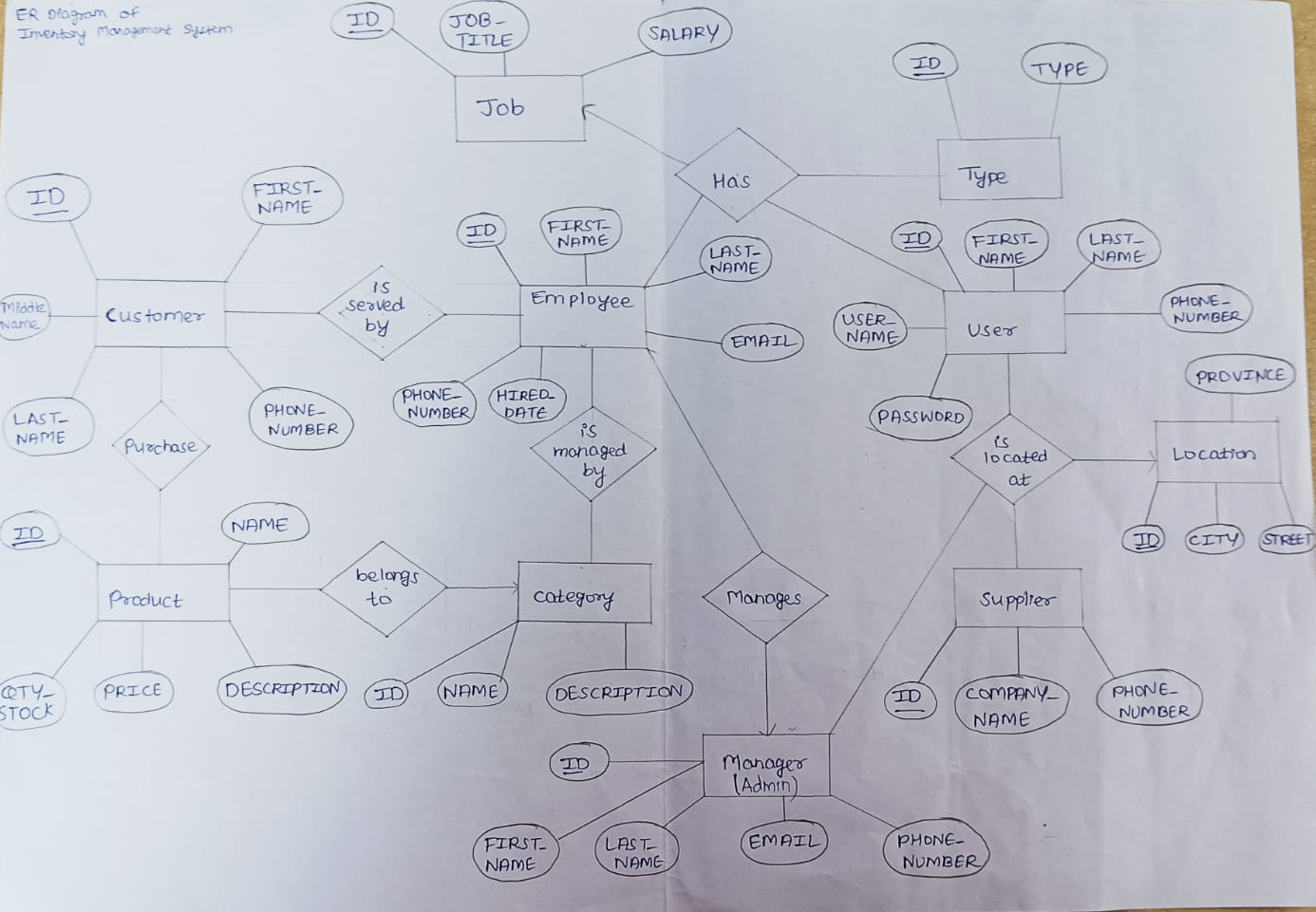
LOCATION\_ID → ID

**10) Manager table:**

## ID → FIRST\_NAME, LAST\_NAME, LOCATION\_ID, EMAIL, PHONE\_NUMBER

LOCATION\_ID → ID

**ER Diagram:**

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