MANIRARORA Soline

UNIVERSITY OF KIGALI

DEPARTMENT:MUSANZE CAMPUS

LECTURE:BUGINGO Emmanuel

REN:2401000600

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**1. Description of the Inventory Management System (WMS)**

An **Inventory Management System (WMS)** is used to track the inventory of products, monitor stock levels, manage orders, and facilitate the efficient movement of goods in and out of a warehouse.

Key features include

**\*Product Management**: Managing product details, stock levels, and product categories.

**\*Stock Tracking**: Keeping track of stock levels, re-order points, and order statuses.

**\*Order Management**: Handling incoming and outgoing orders.

**\*Supplier and Customer Management**: Managing vendor and customer details for procurement and sales.

**\*Reports and Analytics**: Generating stock level reports, sales reports, and inventory valuation.

**2. Entity Relationship Diagram (ERD)**

**Entities:**

**\*Product**: Stores details of items in inventory.

**\*Supplier**: Stores vendor information.

**\*Customer**: Stores customer information.

**\*Order**: Represents customer orders.

|  |
| --- |
| **product** |
| **\*unit price**  **\*stock leval**  **\*product name**  **\*product id** | | |

|  |
| --- |
| **supplier** |
| **\*supplierid**  **\*product name**  **\*contactinfo** |

|  |
| --- |
| **customer** |
| **\*product department**  **\*business strategy**  **\*targeted marketing** |

|  |
| --- |
| **order** |
| **\*ordered**  **\*customerid**  **\*orderdate**  **\*shippingaddress** |

|  |
| --- |
| **location** |
| **\*locationid**  **\*location name** |

**Relationships:**

* Products are related to Categories.
* Orders have multiple Order Items.

Inventory transactions are related to Products and Locations

**5. Data Dictionary**

| **Table** | **Column Name** | | **Data Type** | | **Description** | |
| --- | --- | --- | --- | --- | --- | --- |
| **Product** | ProductID | | INT (PK) | | Unique identifier for each product. | |
|  | ProductName | | VARCHAR(255) | | Name of the product. | |
|  | CategoryID | | INT (FK) | | Reference to product category. | |
|  | UnitPrice | | DECIMAL(10, 2) | | Price per unit of the product. | |
|  | StockLevel | | INT | | Current stock level for the product. | |
| **Customer** | | | CustomerID | | INT (PK) | | Unique identifier for the customer. | |
|  | | | CustomerName | | VARCHAR(255) | | Name of the customer. | |
|  | | | ContactInfo | | TEXT | | Contact details (address, phone, email). | |