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**Course:**

Database System

**Project Name:**

General Store  
Management System

# General Store Management System

## INTRODUCTION:

The General Store Management System is a web-based solution developed using MS SQL and Django, designed to streamline the functions of three core fields: Inventory Management, Counter Management and Administration. The system systematizes processes like inventory control, billing, sales reporting, and employee management, making it easier for users to effectively handle everyday tasks.

## Functional Requirements

### Counter Management View:

1. **Generate Bill Receipts:**
  - Each product type is assigned a unique product code for easy identification and access.
  - Employees can generate receipts by entering the product code and quantity.
  - Optionally, customer details (name and email) can be added to send e-receipts on the email or produce physical printed receipts.
  - Every receipt is assigned a unique receipt code.
2. **Return Products:**
  - Products can be returned by entering the product code, quantity, and the corresponding receipt code of bought products and generate its receipt(e-receipt or physical receipt).
3. **Employee Profile:**
  - Employees can view their profile, which includes:
    - **Progress:** Attendance and duty hours.
    - **Personal Information:** Full name, CNIC, phone number, email, address, . . .
    - **Additional Options:** view salary updates and Change password.

### Inventory Management View:

1. **Inventory Control:**
  - Employees can add, delete, edit, update, and search products in the inventory.
  - button to export inventory data to an Excel sheet.
2. **Employee Profile:**
  - Like the Counter Management profile, employees can view their personal details and progress, check salary updates and change passwords.

### Administration Management View:

1. **Login Options:**
  - Managers can also log in as a counter manager or inventory also.
2. **Sales Reports:**
  - Managers can view sales reports (daily, weekly, monthly, and yearly).
3. **Employee Management:**
  - Managers can view update personal information of employs and add or remove employees and manage employee details.

### **Conclusion:**

The General Store Management System is a complete solution for effectively managing store operations. By automating billing, inventory, and employee management, the system ensures smooth workflows for both employees and managers, ultimately improving store performance and customer satisfaction.

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## **DBMS ANALYSIS FOR THE GENERAL STORE MANAGEMENT SYSTEM**

### **1. DBMS Compliance with Expected Functions**

- **DBMS Used:** Microsoft SQL
- **Compliance:** The project uses Microsoft SQL as the DBMS, which supports all essential database management functions such as querying, data storage, and integrity constraints.

### **2. Type of Language Provided**

- **Primary Language:** Python
- **SQL Usage:** Django utilizes Python as the primary language and allows writing raw SQL queries in models.py using from Django. dB import connection cursor

### **3. Architecture Type**

- **MS SQL Architecture:** Client-server architecture, where the server controls the database, and clients uses it through queries.
- **Django Architecture:** Follows a three-tier architecture (Presentation, Business Logic, Data Layer), separating concerns between the user interface, application logic, and database.

### **4. Accessibility and Extensibility of the System Catalog**

- **MS SQL Access:** MS SQL allows access to the system catalog via system views, where database schema and metadata can be retrieved.
- **Export Capability:** It is possible to export the system catalog (schemas, table definitions) to another system using SQL Server Management Studio (SSMS) or scripts.

## **Summary**

The integration of Django and MS SQL creates an effective, compatible, and scalable system for the General Store Management project. This combination ensures effective data management. Furthermore, it offers straightforward accessibility to the system catalog, allowing for easy retrieval of schema and metadata, along with convenient export options. Together, these technologies enhance the overall functionality and performance of the system, enabling effective management of store operations and promoting seamless workflows for both employees and managers.