4. Stock Maintenance system a. SRS Document:

	Stock Maintenance system.
1)	Introduction.
	1.1 Purpose
_	The purpose of the system is to automate
	und streamline inventory management for
17-11-11	stock levels in real time, and support deuse
	making for stock replanishment
	1.2 Beope.
	The system will manage mentory for a Gussiness, including adding, editing, deleting
-	and bracking stock I tems, managing supplier
	information otc. It will provide up to date
	Stock data.
	1.3. Overview
-	
-	finance system & provide a web based interface for authorized users
	interface for authorized uges
2	Veneral description
-	The system will be a centralozed solution
	Duessible by multiple departments. It will
-	and provide features for managing supplies
3	Functional requirements
1	and doll delete stock Thems
	real time shall update stock quantities or 8)
	v. Maintown history of stuck trades

Page II O x Generale automatre alerts when stock levels reach a endefred threshold 1) Interface requirements A. It will melade dash board your for mentony levels, search options & sorted tables " Proceers for getting trade reports * Integration with existing systems using RESIGNED APIS Performance orgainments * System shall support upto 5000 wistomore * A verage response time for stock queres shall be less than 3 seconds * Updation of data must be real with delay not exceeding 2 seconds 6) Design constraints + system must support multiple user roles with defferent access levels. * It should comply with company police for security & data access 7) Non functional requirements of scalability to ancrease no if users & data volume A secure authentication measures and me band * Imple and easy to narrgate we user interface and documentation 8) Poelimonary schedule & Budget Total duration: 20 weeks

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-	Budget
	software development: \$30000
	Hardware (Servers) \$15000
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179	Testing \$10000
	Management \$ 5000
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b.Advanced Class Diagram:

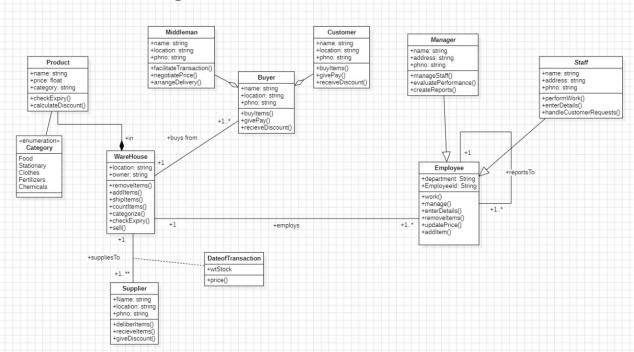


Fig 4.1:

Class diagram represents a system for managing a supply chain or retail business, showcasing the entities involved, their attributes, behaviors, and relationships. It includes classes like Product, Warehouse, Supplier, Middleman, Buyer, Customer, Employee, Manager, and Staff.

The Product class represents items categorized as Food, Stationary, Clothes, Fertilizers, or Chemicals, with methods to check expiry and calculate discounts. Products are stored and managed in the Warehouse, which handles inventory operations like adding, removing, and categorizing items. Suppliers provide products to the warehouse, while Buyers and Customers purchase them, facilitated by a Middleman who negotiates prices and arranges deliveries.

The Employee class represents workers managing warehouse or customer-related tasks, with roles divided into Staff (handling customer requests) and Managers (supervising staff and generating reports). The Date Of Transaction class records transaction details like stock and pricing.

- Warehouses being supplied by Suppliers and serving Buyers.
- Employees reporting to Managers and working within the warehouse or customer service.

This system models the complex interactions between entities in a supply chain, ensuring efficient inventory and transaction management.

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b. Advanced State Diagram:

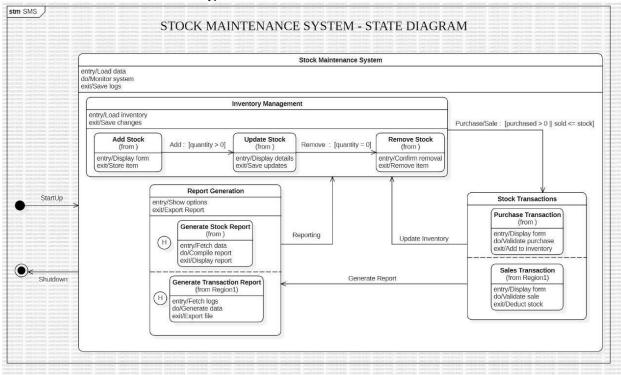
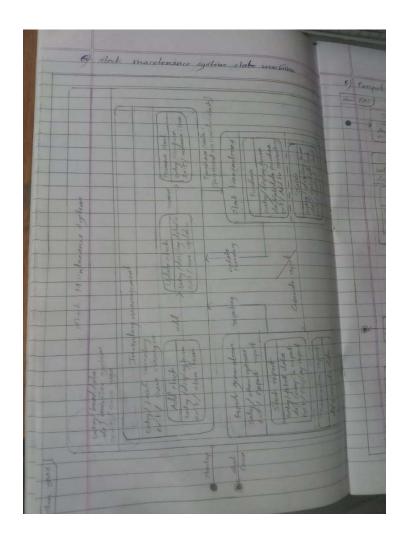


Fig 4.2:



c. Use Case Diagram:

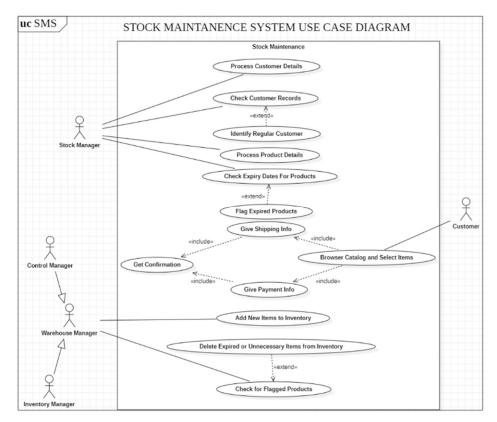


Fig 4.3:

Use case diagram represents a Stock Maintenance System, highlighting the interactions between key actors and system processes:

1. Actors:

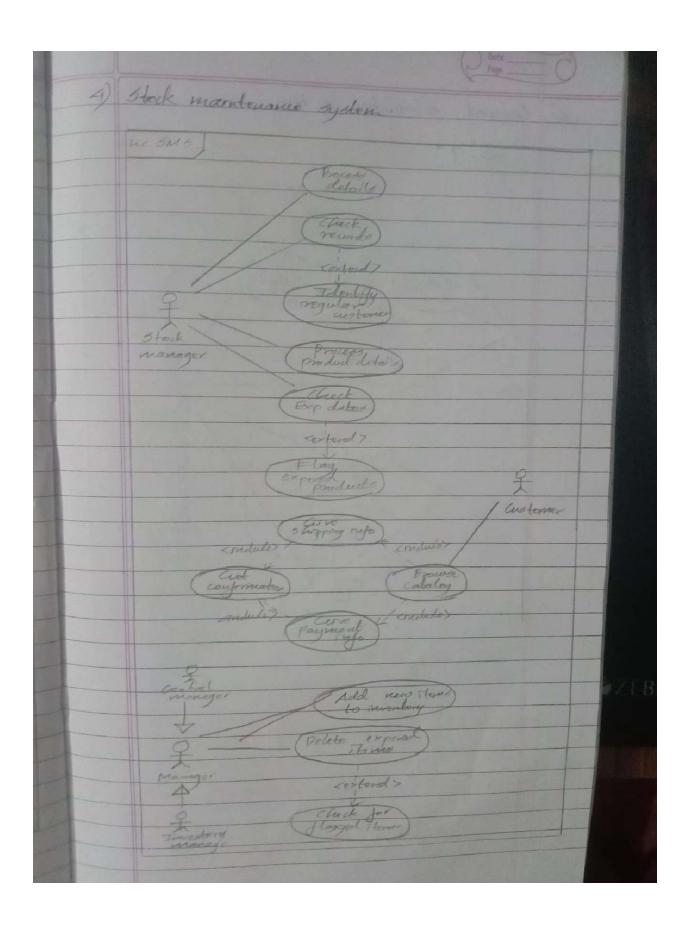
- Stock Manager: Handles customer and product details, checks expiry dates, and flags expired products.
- o Warehouse Manager: Adds new items to inventory.
- o Inventory Manager: Deletes expired or flagged items from inventory.
- Customer: Browses the catalogue, selects items, and provides payment and shipping details.

2. Key Use Cases:

- Stock Maintenance: Includes managing customer records, identifying regular customers, and processing product details.
- o Inventory Management: Adding new items and removing expired or unnecessary products.

3. Relationships:

- o Include: Mandatory actions, such as payment info during order processing.
- Extend: Optional tasks, like flagging expired products during expiry checks.



d. Sequence Diagram:

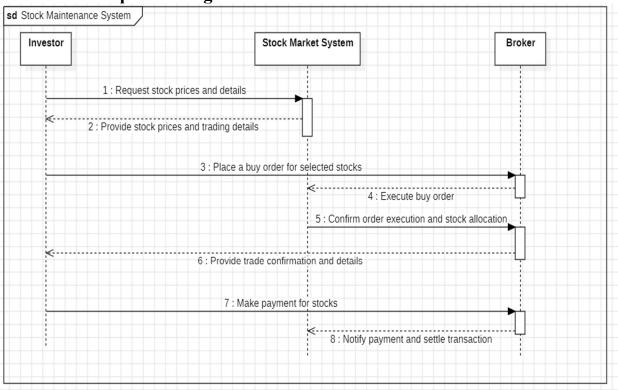
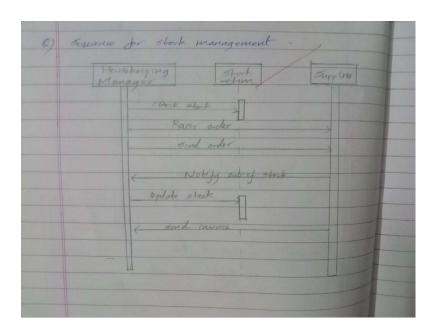


Fig 4.4:



e. Activity Diagram:

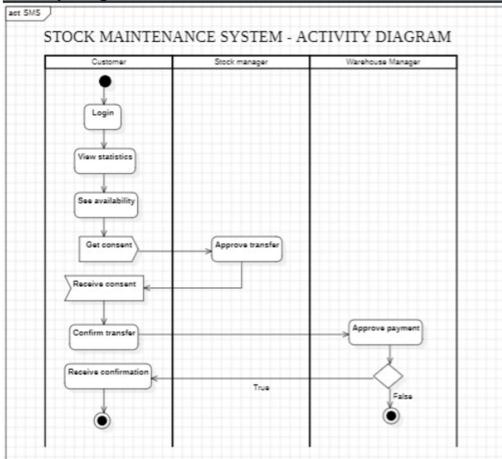


Fig 4.5:

