Mock- 4
Assignment -1

1. Please make a BRD which can be presented to the client along with complete development and resource plan.

1. Executive Summary

This document outlines the requirements for developing software for XYZ, a manufacturer of ice-cream and milk products with a network of manufacturing plants and warehouses across the country. The proposed system will focus on two primary objectives: effective inventory management and enabling the quickest delivery to customers. By achieving these goals, the company aims to enhance operational efficiency, minimize waste, and improve customer satisfaction.

2. Business Goals

1.Streamlined Inventory Management: Ensure real-time monitoring of inventory levels across all warehouses and plants to reduce spoilage and optimize stock levels.
2.Enhanced Delivery Efficiency: Implement a system to identify the fastest delivery routes and automate order allocation based on proximity and inventory availability.
3.Improved Customer Satisfaction: Minimize order fulfillment time and ensure product freshness at delivery.

3. Business Objectives

1.Develop a centralized system to track and manage inventory across all locations.
2.Automate order processing, allocation, and dispatch based on inventory and location proximity.
3.Integrate delivery route optimization with real-time traffic and weather data.
4.Reduce inventory wastage by implementing an expiry-date tracking mechanism.
5.Enable reporting and analytics for better decision-making and demand forecasting.

4. Business Rules

1.Inventory must be updated in real-time upon receipt, dispatch, or adjustment.
2.Orders should only be fulfilled if the inventory is available and meets the required shelf-life criteria.
3.Delivery routes must prioritize freshness while minimizing transportation costs.
4.Customer priority orders (e.g., bulk orders) must be flagged for immediate action.
5.Warehouse reordering thresholds should trigger automated purchase orders.

5. Scope of the System

In-Scope:

- Inventory tracking at manufacturing plants and warehouses.
- Order management and allocation.
- Delivery route optimization.
- Analytics and reporting dashboards.

Out-of-Scope:

- Manufacturing process management.
- Customer relationship management (CRM).

6. Assumptions

1. All warehouses and plants have internet connectivity for real-time updates.
2. Delivery vehicles are GPS-enabled to support route optimization.
3. Data from external sources (e.g., traffic, weather) is available via APIs.

7. Constraints

1. Budget limitations may restrict the scope of features.
2. Integration with legacy systems may pose technical challenges.
3. Project timelines must align with the company's peak season schedules.

8. Risk Analysis

Technical Risks:

- Integration issues with existing systems.
- System scalability with increasing business demand.

Political Risks:

- Resistance from employees due to new processes and technology.
- Potential vendor lock-in with third-party tools.

Requirement Risks:

- Incomplete or evolving requirements from stakeholders.

Business Risks:

- Downtime during system rollout.
- Customer dissatisfaction due to transition delays.

9. Business Process Overview

AS-IS:

- Inventory is managed manually or using isolated systems.
- Order allocation is manually determined, leading to inefficiencies.
- Delivery routes are planned based on experience, not optimized.

TO-BE:

- A centralized system enables automated inventory management.
- Orders are allocated and dispatched through an intelligent algorithm.
- Delivery routes are optimized dynamically for speed and cost.

10. Business Requirements

1. **Inventory Management Module:**
   Real-time inventory tracking across locations.
   Expiry-date monitoring and alerts for perishable items.
2. **Order Management Module:**
   Automated order allocation based on location and inventory.
   Bulk order prioritization.

3. **Delivery Optimization Module:**
   Integration with GPS and real-time data for route planning.
   Dynamic rerouting in case of delays.
4. **Reporting Module:**
   Insights into inventory levels, order trends, and delivery performance.

11. Development and Resource Plan Development Plan:

1. Phase 1: Requirement gathering, stakeholder workshops, and system design (4 weeks).
2. Phase 2: Development of core modules (Inventory, Order, Delivery) (12 weeks).
3. Phase 3: Integration with external systems (APIs, GPS) and legacy systems (6 weeks).
4. Phase 4: Testing and quality assurance (4 weeks).
5. Phase 5: Deployment, training, and support (4 weeks).

Resource Plan:

- Project Manager: 1 FTE
- Developers: 3 FTE (Backend, Frontend, Integration specialists)
- QA Engineers: 2 FTE
- Business Analyst: 1 FTE
- Support Team: 2 FTE

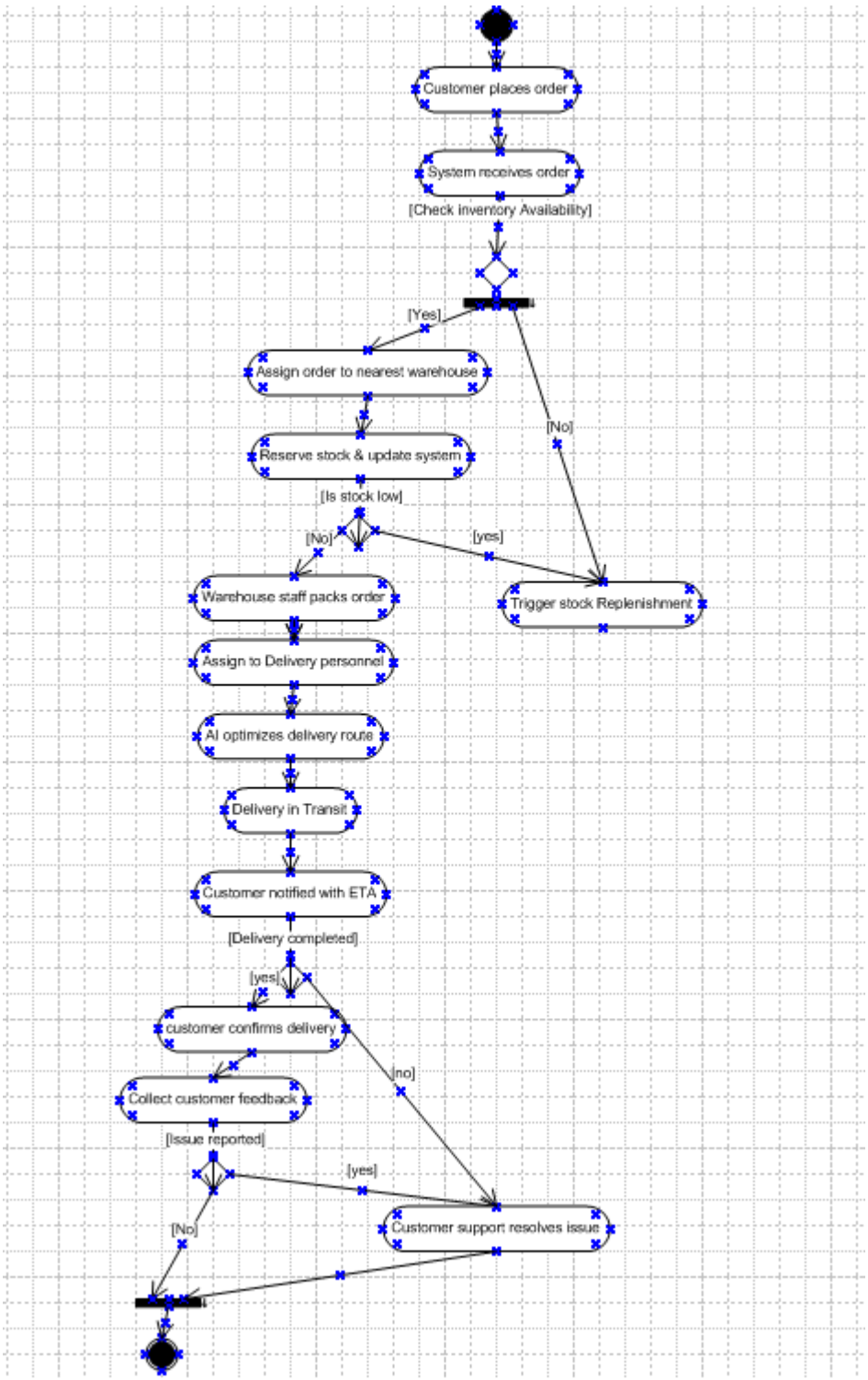
12. Appendices

1. Glossary of Terms
2. Abbreviations Used

13. Related Documents

1. Feasibility Study Report
2. Market Analysis for Inventory and Delivery Optimization Software
3. Stakeholder Require

2. Prepare process flow diagram using your imagination.



Assignment 2:

1. Write an introduction letter to a client introducing yourself as a business analyst in charge of working with the client and his team to start the business understanding process.

Subject: Introduction as Your Business Analyst Partner

Dear [Client's Name],

I hope this message finds you well. My name is K.v.charani, and I am delighted to introduce myself as the Business Analyst assigned to collaborate with you and your team on this exciting project.

I have a strong interest in comprehending the potential and difficulties found in the manufacturing and logistics industries, especially with regard to providing outstanding customer service. My job will be to work closely with you to turn your vision of inventory management and the fastest possible delivery of your milk and ice cream items into a reliable, custom software solution.

I want to start by fully comprehending your present procedures, difficulties, and goals. Together, we will examine your operational procedures, pinpoint essential needs, and create a strategic plan that complements your corporate goals. Your suggestions will be very helpful to us in making sure the solution we create is workable, expandable, and tailored to your particular requirements.

During our first sessions, I'm excited to talk about your expectations and get feedback from your staff. Please feel free to submit any documentation, ongoing procedures, or preliminary ideas that could assist us get started right away in the meantime.

Thank you for the opportunity to collaborate on this project. I am confident that, together, we will develop a solution that adds significant value to your business operations. Please let me know a convenient time for us to connect further.

Looking forward to working with you.

Warm regards,
K.V. CHARANI
Business Analyst
+91 9876543288

2. Prepare a brief BRD and SRS for a project- Ticketing system

Business Requirements Document (BRD)

Project Name: Ticketing System

Executive Summary

The objective of the Ticketing System project is to implement a comprehensive solution for managing customer support tickets effectively. The system will streamline the process of ticket creation, tracking, resolution, and closure. It will be designed to ensure seamless communication between users, support agents, and managers, improving the overall efficiency of customer support operations. Additionally, the system will include advanced features for monitoring service level agreement (SLA) compliance, enhancing reporting capabilities, and integrating with a knowledge base for faster problem resolution.

1. Document Revision

Date	Version Number	Document Changes
15-02-2025	1	Initial draft of Requirement Gathering
25-02-2025	2	Made changes in the requirement gathering
27-02-2025	3	Updated RACI
13-03-2025	4	Changed the use case diagram
21-02-2025	5	Updated RTM

2. Approval

Role	Name	Title	Signature	Date
Project Sponsor	Vijay, Kamal	Requirements	Vijay, Kamal	27-02-2025
Business Owner	K.V.charani	Requirements	K.V.charani	25-02-2025
Project manager	Shruthi	BRD	Shruthi	27-02-2025
System Architect	Deepu	Architecture	Deepu	27-02-2025
Development Lead	Radhika	Requirement	Radhika	27-02-2025
User Experience Lead	Jaya simha	Design	Jaya simha	27-02-2025
Quality Lead	Manisha	Quality	Manisha	27-02-2025
Content Lead	Dhana laxmi	Content	Dhana laxmi	27-02-2025

3. RACI

Stakeholders	Responsible	Accountable	Consulted	Informed
customers			C	I
Developers	R			
Project Manager	R	A		
Business Analyst	R			
UI/UX Designers	R			
Testers	R			

4.Introduction:

4.1 Business Goals

Streamline Issue Resolution
Enable users to easily raise and track tickets while ensuring quick and efficient resolution by support teams.
Enhance Transparency
Provide users and stakeholders with real-time updates on ticket status and resolution timelines.
Improve Accountability
Introduce clear ownership of tickets through automated assignments and escalation mechanisms.
Boost Operational Efficiency
Automate routine processes such as ticket routing and SLA monitoring to reduce manual intervention and errors.
Enable Data-Driven Decisions
Generate actionable insights through reporting and analytics to identify patterns, improve service quality, and optimize resources.

4.2 Business Objectives

1. Enhanced Customer Satisfaction: By reducing resolution time and ensuring timely support through SLA compliance.
2. Optimized Support Team Performance: By providing tools for assigning tickets to the appropriate agents, managing workloads, and tracking performance.
3. Better Decision-Making: By offering detailed reports on ticket trends, SLA performance, and agent efficiency.
4. Cost Efficiency: By automating routine support processes, reducing human error, and speeding up the resolution process, leading to a reduction in operational costs.

4.3 Business Rules

• Tickets must be assigned to agents within 15 minutes of creation.
• Tickets cannot be closed until all required information is provided, and the issue is fully resolved.

• Support agents must adhere to the SLAs defined for each ticket type.
• A ticket must be reopened if a customer reports the issue again within 30 days of closure.

4.4 Background

• The company's current ticketing system is inefficient, causing slow response times, missed SLAs, and manual processing. To address these issues, the company will implement a new Ticketing System that automates ticket management, tracks SLAs, integrates a knowledge base, and provides detailed reporting. This system will streamline support processes, improve customer satisfaction, and ensure compliance with SLAs.

• The project aims to enhance efficiency, reduce costs, and provide better data insights for decision-making. Key stakeholders include customer support, IT, and business leadership. The project will be completed in 6 months, with phased rollout and ongoing support.

4.5 Scope of the System

In-Scope:
- User portal for raising tickets.
- Admin/Support team portal for ticket management.
- Automated ticket assignment and prioritization based on predefined rules.
- SLA tracking and notification alerts for pending tickets.
- Reports and dashboards for performance analysis.

Out-of-Scope:
- Integration with third-party tools (to be planned in future phases).
- Hardware procurement and setup.

5.Assumptions

- All users will have access to a computer or mobile device with an internet connection.
- Support teams will adhere to SLA policies as defined by the organization.

6. Constraints:

- The system must be developed and implemented within a 6-month timeline.
- The system should be scalable to handle up to 10,000 tickets per day without performance degradation.
- It must comply with applicable data privacy regulations (e.g., GDPR).

7. Risk

1. Technical Risk:
• Risk: Integration and compatibility issues with existing systems (CRM, email, chat, etc.) could lead to delays or functionality problems, causing disruptions in the ticket management process.

• Mitigation: Conduct detailed technical assessments and integration testing to ensure compatibility with current systems. Allocate time for troubleshooting and ensure robust APIs for seamless data exchange.

2. Political Risk:

• Risk: Internal organizational changes, such as shifts in key personnel or management priorities, could affect the project's support or direction, causing delays or shifting project goals.

• Mitigation: Maintain regular communication with key stakeholders and senior leadership to ensure alignment. Create clear documentation to keep all parties informed, regardless of organizational changes.

3. Requirement Risk:

• Risk: The requirements for the ticketing system might not be fully understood or documented, leading to misalignment between business needs and the delivered solution.
• Mitigation: Engage stakeholders early in the project to define detailed requirements. Use iterative feedback and validation (e.g., user stories and prototypes) to refine the system according to actual needs.

4. Business Risk:

• Risk: The new ticketing system might not achieve the expected improvements in customer satisfaction or operational efficiency, leading to a lack of return on investment (ROI).
• Mitigation: Set clear, measurable business objectives before the project starts (e.g., reduced response time, SLA compliance). Regularly assess the system post- implementation and adjust processes as needed based on feedback and performance metrics.

8. Business Process Overview

1. Legacy System (AS-IS)

The current ticketing process is largely manual, involving several disconnected systems and processes that result in inefficiencies and delays. Below are the key elements of the legacy system:

• **Ticket Creation:** Customers submit support tickets via email or phone, which are manually entered into the system by agents. This often leads to errors in ticket categorization and delays in assignment.
• **Ticket Assignment:** Tickets are manually assigned to support agents based on availability or expertise. This process is time-consuming and lacks prioritization, leading to unequal workload distribution among agents.
• **SLA Management:** SLA compliance is monitored manually through spreadsheets or ad hoc tracking, which is prone to human error. Tickets often exceed SLA timelines, leading to customer dissatisfaction.

• **Resolution & Closure:** Agents resolve tickets based on available information, but often have limited access to knowledge resources, requiring them to solve recurring issues from scratch. The closure process is also manual and lacks consistency, leading to reopened tickets.

• **Reporting:** Reporting is done manually through ad hoc data collection and spreadsheets, making it difficult to track key performance metrics (KPIs) like ticket resolution time, agent performance, and SLA adherence.
• **Knowledge Sharing:** Information related to past issues and resolutions is stored across different systems, making it challenging for agents to quickly access relevant solutions.

2. Proposed Recommendations (TO-BE)

The proposed ticketing system aims to address the inefficiencies of the legacy system by automating and streamlining key processes. The following changes will improve the overall ticketing process:

• **Ticket Creation:** The new system will allow customers to create tickets through multiple channels (email, web portal, chat, etc.). The system will automatically capture key details such as issue type, urgency, and customer information, eliminating manual data entry and reducing errors.
• **Ticket Assignment:** The system will automatically categorize and prioritize tickets based on predefined rules (e.g., urgency, issue type). Tickets will be assigned to the most appropriate agent based on their expertise and availability, ensuring a more efficient workload distribution.
• **SLA Management:** The new system will include automated SLA tracking, with real- time alerts and escalations for tickets nearing or exceeding their resolution deadlines. This will help ensure that tickets are resolved on time and SLAs are met.
• **Resolution & Closure:** The system will integrate a knowledge base, allowing agents to quickly access solutions for common issues. Automated workflows will guide agents through the ticket resolution process, ensuring consistency and reducing resolution time. Tickets will be automatically closed once all resolution steps are completed, and customers are satisfied.
• **Reporting:** The system will include built-in reporting features, providing real-time dashboards and detailed reports on KPIs such as ticket volume, resolution time, agent performance, and SLA compliance. These reports will be customizable, enabling managers to monitor performance and identify areas for improvement.
• **Knowledge Sharing:** A centralized knowledge base will be integrated into the system, allowing agents to search for and contribute solutions to recurring issues. This will help reduce resolution times, improve consistency, and enable new agents to ramp up more quickly.

9. Business Requirements

Ticket Creation and Submission
The system must allow customers to submit tickets through multiple channels, including email, web portal, and chat, ensuring seamless ticket creation across various platforms.

Automated Ticket Categorization and Prioritization
The system must automatically categorize and prioritize tickets based on predefined criteria such as issue type, urgency, and customer profile.

SLA Management and Alerts
The system must track and monitor ticket SLAs automatically, providing real-time alerts and escalation notifications for tickets approaching or breaching their SLA deadlines.

Ticket Assignment and Routing
The system must automatically assign tickets to the most appropriate agent based on factors such as expertise, workload, and availability.

Knowledge Base Integration
The system must integrate a centralized knowledge base that allows agents to access solutions for recurring issues. The knowledge base must be easily searchable and allow agents to contribute new solutions.

Ticket Resolution Workflow
The system must provide an automated workflow for ticket resolution that guides agents through the necessary steps, ensuring consistency in the resolution process.

Ticket History and Audit Trail
The system must maintain a complete history of all interactions related to each ticket, including agent notes, customer updates, and actions taken.

Reporting and Dashboards
The system must include customizable reporting features and real-time dashboards to track KPIs such as ticket volume, resolution time, SLA compliance, and agent performance.

User Roles and Permissions
The system must have configurable user roles and permissions to restrict access to sensitive data and ensure that agents and managers can only view or edit information relevant to their roles.

Multi-Language Support
The system must support multiple languages to cater to a diverse customer base, allowing customers and agents to interact in their preferred language.

Mobile Access for Support Agents
The system must provide mobile access for support agents, allowing them to view and manage tickets from anywhere.

Ticket Escalation Process
The system must include an automated ticket escalation process that triggers based on predefined conditions (e.g., unresolved ticket for a certain period or SLA breach).

Customer Feedback and Satisfaction Tracking
The system must allow customers to provide feedback on ticket resolution and agent performance, and this data must be captured and analyzed for continuous improvement.

Security and Data Privacy Compliance
The system must comply with relevant data privacy regulations (e.g., GDPR) and ensure secure handling of sensitive customer data.

10. Appendices

10.1 List of Acronyms

- AI - Artificial Intelligence
- GDPR - General Data Protection Regulation
- UAT - User Acceptance Testing
- D&I - Diversity and Inclusion
- ROI - Return on Investment
- AS-IS - Current State of the Process/System
- TO-BE - Future State of the Process/System
- KPI - Key Performance Indicator
- TAT - Turnaround Time
- SLA - Service Level Agreement
- API - Application Programming Interface
- UI - User Interface
- UX - User Experience
- BRD - Business Requirements Document
- RTM - Requirement Traceability Matrix
- DPA - Data Protection Act (often used with GDPR)

Software Requirements Specification (SRS)

1.Purpose

The purpose of the Ticketing Life Cycle System is to streamline the process of issue reporting, tracking, and resolution within an organization. It provides users with a platform to create tickets for their concerns or inquiries, assigns these tickets to appropriate agents, and ensures timely updates on their progress. The system fosters effective communication between users and support teams, enhancing customer satisfaction while improving the efficiency of ticket management processes.

2.Scope

The Ticketing Life Cycle System is designed to cater to organizations of varying sizes, supporting multiple roles such as users, agents, and administrators. Key functionalities include:

• **Ticket Creation and Management**: Users can report issues, which are categorized and prioritized for resolution.

• **Agent Assignment and Resolution:** Tickets are assigned to agents based on predefined rules and availability.
• **Role-Based Dashboards:** Users, agents, and administrators have tailored views to manage their specific tasks efficiently.
• **Tracking and Notifications:** The system keeps stakeholders informed through real-time updates and alerts.
• **Analytics and Reporting:** Administrators can analyse trends, monitor performance, and generate reports to optimize operations.

The system supports scalability, security, and compliance with industry standards, making it suitable for technical support, customer service, and other business functions requiring issue resolution.

3.Overview

The Ticketing Life Cycle System is a web-based application offering a user-friendly interface accessible across devices. It incorporates modules for:

• **User Management**: Facilitates user registration, login, and profile management.
• **Ticket Management:** Covers the full ticketing workflow, including creation, assignment, status updates, and resolution.
• **Agent Management**: Allows administrators to assign roles, monitor workloads, and evaluate agent performance.
• **Notification System:** Ensures users and agents receive timely updates about ticket status and escalations.
• **Integration and Extensibility:** The system supports integration with third-party tools like Slack or Microsoft Teams and offers APIs for additional customization.

4.Software Interfaces

Operating Systems:
The system shall be compatible with Windows, macOS, and Linux for on-premises deployments and accessible on any OS via a browser for cloud-based deployments.
Web Browsers:
Supports modern web browsers like Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari (latest versions).
Database Management System
Utilizes relational databases such as MySQL, PostgreSQL, or cloud-based alternatives like AWS RDS or Azure SQL Database.
Notification Services
Integrates with email systems (e.g., SMTP) and SMS gateways (e.g., Twilio) for sending ticket status notifications.

5.Hardware Interfaces
User devise
Users and agents require devices like desktops, laptops, tablets, or smartphones with internet connectivity to access the system.

Network Infrastructure
Requires a reliable internet connection with a minimum bandwidth of 10 Mbps for smooth access and operation.

Functional Requirement

Req ID	Requirement Name	Requirement Description	Priority
FR-001	User Registration	The system shall allow users to register by providing their name, email, and password.	High
FR-002	User Login	The system shall allow registered users to log in using their email and password.	High
FR-003	Ticket Creation	Users shall be able to create new tickets by entering a title, description, category, and priority.	High
FR-004	Ticket Assignment	The system shall automatically assign a ticket to an available agent based on the category.	High
FR-005	Ticket Status Update	Agents shall update the status of tickets to Open, In Progress, or Closed.	High
FR-006	Ticket Priority Update	The system shall allow users or agents to update the ticket's priority.	Medium
FR-007	View Ticket Details	Users and agents shall be able to view all ticket details, including status, category, and assigned agent.	High
FR-008	User Dashboard	Users shall have a dashboard displaying their open and closed tickets.	Medium
FR-009	Agent Dashboard	Agents shall have a dashboard displaying assigned tickets with filters for status and priority.	Medium
FR-010	Ticket Search	Users and agents shall be able to search for tickets using keywords or filters like status and priority.	High
FR-011	Add Ticket Comments	Users and agents shall add comments to tickets for better collaboration.	Medium
FR-012	Email Notifications	The system shall send email notifications for ticket updates, such as status changes or new comments.	Medium
FR-013	Auto-assign Ticket to Agent	The system shall use predefined rules to assign tickets automatically to agents based on their availability and category.	High
FR-014	Ticket Escalation	Tickets not resolved within a specific timeframe shall be automatically escalated to a higher authority.	Medium
FR-015	Role-Based Access Control	The system shall provide role-based access control, restricting features for users, agents, and admins.	Medium
FR-016	View Ticket History	Users and agents shall view the history of changes made to a ticket, including status and priority updates.	High
FR-017	Add Attachments to Tickets	Users and agents shall attach files to tickets for additional context or support.	Medium
FR-018	View Agent Performance	Admins shall view performance metrics for agents, such as the number of resolved tickets.	Medium
FR-019	Define Ticket Categories	Admins shall create and manage ticket categories, such as Technical or Billing.	Low
FR-020	Filter Tickets	Users and agents shall filter tickets by status, priority, or category in their dashboards.	Medium
FR-021	SLA	The system shall allow admins to configure Service Level	Medium

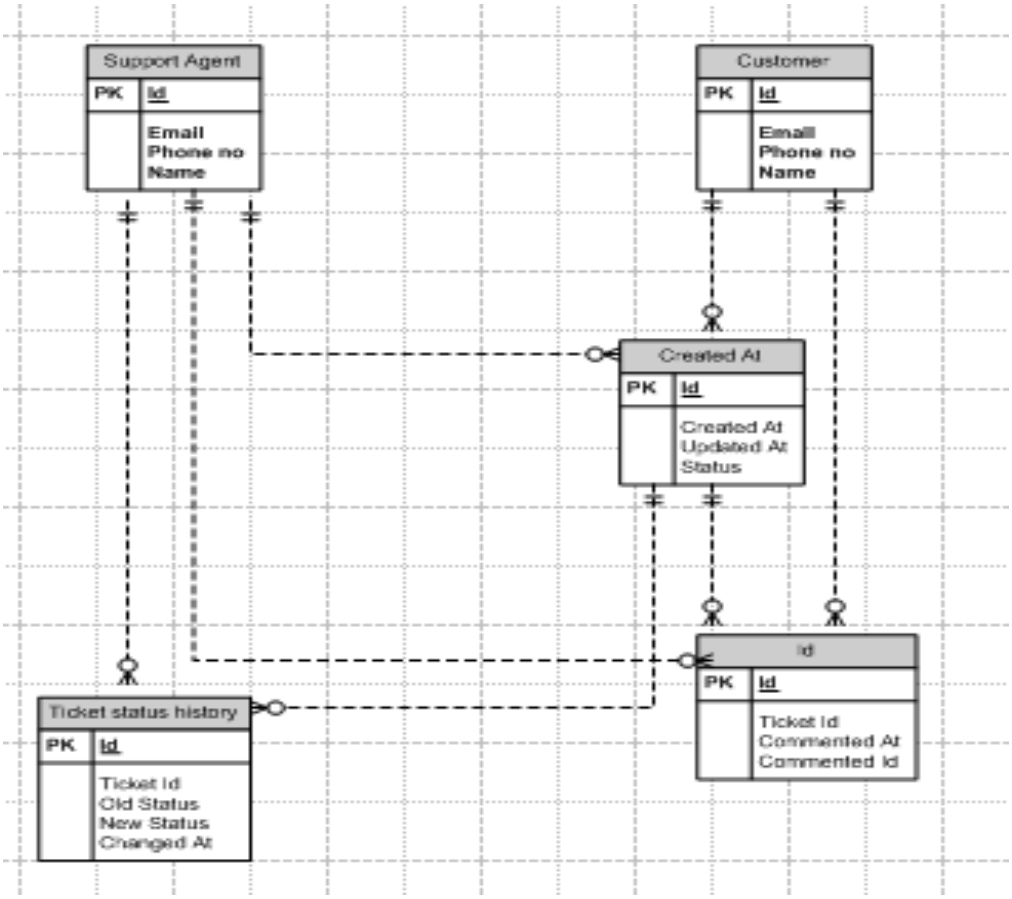
	Configuration	Agreements (SLAs) for ticket resolution.	
FR-022	Audit Trail	The system shall maintain an audit trail of all ticket updates for compliance and troubleshooting.	Medium
FR-023	Mobile-Friendly Interface	The system shall provide a mobile-friendly interface for creating and managing tickets.	High
FR-024	Priority-Based Alerts	The system shall notify agents about high-priority tickets through pop-up alerts or email.	Medium
FR-025	Auto-Status Transition	The system shall automatically transition a ticket's status to "In Progress" when an agent starts working on it.	Medium
FR-026	Mobile-Friendly Interface	The system shall provide a mobile-friendly interface for creating and managing tickets.	Medium
FR-027	Export Ticket Data	Users, agents, and admins shall export ticket data in CSV or Excel format.	Low
FR-028	Multi-Language Support	The system shall support multiple languages for users in different regions.	Low
FR-029	Customize Ticket Fields	Admins shall customize ticket fields, adding new ones if required.	Low
FR-030	Agent Reassignment	Admins shall reassign tickets from one agent to another.	Medium
FR-031	Ticket Merging	The system shall allow agents to merge duplicate tickets.	Medium
FR-032	Report Generation	Admins shall generate reports on ticket trends, resolution times, and category-wise breakdowns.	Medium
FR-033	Feedback Collection	Users shall provide feedback on ticket resolution.	Medium
FR-034	Archive Closed Tickets	The system shall archive closed tickets after a specified period.	Low
FR-035	Integration with Third-Party Tools	The system shall integrate with third-party tools like Slack or Microsoft Teams for ticket updates.	Low
FR-036	Ticket Duplication Check	The system shall check for duplicate tickets based on title and description.	Medium
FR-037	Visual Ticket Status Indicators	The system shall provide visual indicators (e.g., color codes) for ticket status and priority.	Low
FR-038	SLA Violation Alerts	The system shall alert agents and admins when a ticket is at risk of breaching SLA deadlines.	Medium
FR-039	Delete User Account	Users shall delete their accounts and associated data, adhering to data protection regulations.	Low

Non-Functional Requirements

Req ID	Requirement Name	Requirement Description
NFR001	System Availability	The system shall maintain an uptime of 99.9% to ensure uninterrupted access to users and agents.
NFR002	Performance	The system shall handle up to 1,000 concurrent users without degradation in performance.
NFR003	Scalability	The system shall scale horizontally to accommodate up to 10,000 users and 50,000 tickets per month.
NFR004	Security	The system shall comply with industry security standards, such as OWASP guidelines, to prevent unauthorized access.

NFR005	Data Encryption	All sensitive data, including passwords and ticket information, shall be encrypted at rest and in transit.
NFR006	Response Time	The system shall provide responses to user actions, such as ticket creation, within 2 seconds under normal load.
NFR007	Browser Compatibility	The system shall support all major browsers, including Chrome, Firefox, Safari, and Edge.
NFR008	Mobile Compatibility	The system shall provide a responsive design for seamless operation on mobile devices.
NFR009	Accessibility Compliance	The system shall adhere to WCAG 2.1 Level AA standards to ensure accessibility for users with disabilities.
NFR010	Maintainability	The system shall allow developers to update or extend features with minimal impact on existing functionality.
NFR011	Backup and Recovery	The system shall perform daily backups and provide data recovery within 2 hours in case of failure.
NFR012	Logging and Monitoring	The system shall log all critical events and provide real-time monitoring for troubleshooting and performance analysis.
NFR013	Usability	The system shall provide an intuitive user interface, requiring no more than 30 minutes of training for basic operations.

3. Make an ERD of creating a Ticketing life cycle.



4. User story of shopping from e commerce. (Grocery Store)

1. User Registration

User Story No: 1	Tasks: 2	Priority: HIGHEST
As a new customer I want to register using my email and phone number So that I can create an account and start shopping.		
BV: 500	CP: 01	
ACCEPTANCE CRITERIA User should be able to register using email, phone number, and password. The system should validate email and phone number. Confirmation email should be sent upon successful registration.		

2. User Login

User Story No: 2	Tasks: 1	Priority: HIGHEST
As a registered user, I want to log in using my credentials so that I can access my account and shop.		
BV: 500	CP: 02	
ACCEPTANCE CRITERIA The system should allow users to log in using email/phone number and password. Incorrect credentials should display an error message. The system should allow login via Google or social media.		

3. Password Reset

User Story No: 3	Tasks: 2	Priority: MEDIUM
As a user, I want to reset my password in case I forget it so that I can regain access to my account.		
BV: 200	CP: 03	
ACCEPTANCE CRITERIA Users should receive an email/SMS with a password reset link. The link should expire after a certain time for security reasons. Users should be able to create a new password and log in.		

4.Browse Products by Categories

User Story No: 4	Tasks: 1	Priority: HIGHEST
As a customer, I want to browse groceries by categories like fruits, vegetables, dairy, etc., so that I can easily find the products I need.		
BV: 500	CP: 05	
ACCEPTANCE CRITERIA Users should see product categories clearly displayed. Clicking a category should filter products accordingly. The system should display relevant products under each category.		

5. Search for Products

User Story No: 5	Tasks: 2	Priority: HIGHEST
As a customer, I want to search for a specific grocery item using keywords so that I can quickly find what I need.		
BV: 500	CP: 08	
ACCEPTANCE CRITERIA Users should be able to search by product name or brand. The search should return relevant results in real time. Incorrect or unavailable searches should return a friendly message.		

6. View Product Details

User Story No: 6	Tasks: 2	Priority: LOW
As a customer, I want to view detailed information about a grocery item so that I can make an informed purchase.		
BV: 100	CP: 01	
ACCEPTANCE CRITERIA The product page should display images, price, description, and reviews. Users should see stock availability. Users should be able to add items to the cart from the details page.		

7. Add Items to Cart

User Story No: 7	Tasks: 1	Priority: HIGH
As a customer, I want to add products to my shopping cart so that I can purchase them later.		
BV: 500	CP: 02	
ACCEPTANCE CRITERIA Users should be able to add multiple products. The system should update the cart dynamically. Users should see the total price in the cart.		

8. Modify Cart Items

User Story No: 8	Tasks: 2	Priority: LOW
As a customer, I want to increase, decrease, or remove items from my cart so that I can manage my purchase.		
BV: 100	CP:03	
ACCEPTANCE CRITERIA Users should be able to update quantities. Users should be able to remove items. The system should automatically update the total price.		

9. Secure Payment Gateway

User Story No: 9	Tasks: 1	Priority: HIGH
As a customer, I want to pay for my order securely so that my payment details remain safe.		
BV: 500	CP: 05	
ACCEPTANCE CRITERIA Users should be able to pay via credit/debit card, UPI, or COD. Payment transactions should be encrypted and secure. Users should receive a payment confirmation message.		

10. Apply Discount Codes

User Story No: 10	Tasks: 2	Priority: LOW
As a customer, I want to apply discount coupons to my order so that I can avail of offers.		
BV: 100	CP: 08	
ACCEPTANCE CRITERIA Users should be able to enter a promo code at checkout. The discount should reflect in the final price. Invalid or expired codes should display an error message.		

11. View Order History

User Story No: 11	Tasks: 2	Priority: MEDIUM
As a customer, I want to view my past orders so that I can track my purchases.		
BV: 200	CP:01	
ACCEPTANCE CRITERIA Users should see a list of previous orders with details. Clicking an order should show its status and details. Users should be able to reorder from past purchases.		

12. Track Order Status

User Story No: 12	Tasks: 1	Priority: HIGH
As a customer, I want to track my order status in real-time so that I know when to expect delivery.		
BV: 500	CP: 02	
ACCEPTANCE CRITERIA The system should show updates such as "Processing," "Shipped," and "Delivered." Users should receive notifications on status changes. Delivery personnel should update the status in real time.		

13. Register as a Seller

User Story No: 13	Tasks: 1	Priority: HIGH
As a vendor, I want to register and set up my store so that I can start selling groceries.		
BV: 500	CP: 03	
ACCEPTANCE CRITERIA Sellers should provide business details and verification documents. The system should approve/reject applications. Approved sellers should get access to a seller dashboard.		

14. Manage Inventory

User Story No: 14	Tasks: 2	Priority: MEDIUM
As a seller, I want to add, edit, or remove products so that I can manage my grocery listings.		
BV: 300	CP: 05	
ACCEPTANCE CRITERIA Sellers should be able to add new products with descriptions and images. Inventory should update dynamically when purchases occur. The system should notify sellers of low stock levels.		

15. Customer Support Chat

User Story No: 15	Tasks: 1	Priority: LOW
As a customer, I want to chat with customer support so that I can resolve my issues quickly.		
BV: 100	CP: 08	
ACCEPTANCE CRITERIA Users should be able to start a chat with support. The system should route queries to available agents. Users should receive a case number for reference.		

16. Leave Product Reviews

User Story No: 16	Tasks: 2	Priority: LOW
As a customer, I want to rate and review products so that I can share my experience.		
BV: 100	CP: 01	
ACCEPTANCE CRITERIA Users should be able to give star ratings and write reviews. Reviews should be visible to all customers. Users should be able to edit or delete their reviews.		

17. Cancel Order Before Shipment

User Story No: 17	Tasks: 1	Priority: HIGH
As a customer, I want to cancel my order before it is shipped so that I can get a refund.		
BV: 500	CP: 02	
ACCEPTANCE CRITERIA Users should be able to cancel orders from the order details page. The system should notify the seller and process refunds automatically. Users should receive a cancellation confirmation.		

18. Refund Processing

User Story No: 18	Tasks: 2	Priority: HIGH
As a customer, I want to receive my refund in my original payment method so that I can get my money back.		
BV: 500	CP: 03	
ACCEPTANCE CRITERIA Refunds should be credited to the original payment source. Users should get a refund status update. Refunds should be processed within a defined period.		

19. Add Products to Wishlist

User Story No: 19	Tasks: 1	Priority: HIGH
As a customer, I want to add grocery items to my wishlist so that I can purchase them later.		
BV: 500	CP: 05	
ACCEPTANCE CRITERIA Users should be able to save items to their wishlist. The wishlist should be accessible from their profile. Users should be able to move items from wishlist to cart.		

20. Real-time Delivery Tracking

User Story No: 20	Tasks: 2	Priority: HIGH
As a customer, I want to track my order delivery in real time so that I know when it will arrive.		
BV: 500	CP: 08	
ACCEPTANCE CRITERIA Users should be able to see live order tracking. The system should update the delivery status at key checkpoints. Users should receive notifications when their order is out for delivery.		

21. Push Notifications for Order Updates

User Story No: 21	Tasks: 1	Priority: HIGH
As a customer, I want to receive push notifications about my orders so that I stay informed.		
BV: 500	CP: 01	
ACCEPTANCE CRITERIA Users should receive notifications for order confirmations, shipping, and delivery. Notifications should be configurable from the settings. Users should be able to disable unwanted notifications.		

22. Multi-payment Options

User Story No: 22	Tasks: 2	Priority: MEDIUM
As a customer, I want my payment across multiple methods so that I can use different sources.		
BV: 300	CP: 02	
ACCEPTANCE CRITERIA Users should be able to use a combination of credit cards, wallets, or points. The system should correctly deduct amounts from each method. The final order should reflect the selected payment split.		

23. Real-time Stock Updates

User Story No: 23	Tasks: 1	Priority: MEDIUM
As a seller, I want to update stock levels in real time so that customers see accurate availability.		
BV: 300	CP: 03	
ACCEPTANCE CRITERIA Inventory should auto-update after each sale. Out-of-stock items should be marked accordingly. Sellers should receive alerts when stock is low.		

24. Rate Delivered Products

User Story No: 24	Tasks: 2	Priority: LOW
As a customer, I want to rate purchased grocery items so that I can share my feedback.		
BV: 100	CP: 05	
ACCEPTANCE CRITERIA Users should be able to provide a 1–5 star rating. Ratings should only be allowed for completed orders. Average ratings should be visible on product pages.		

25. Multi-language Support

User Story No: 25	Tasks: 2	Priority: LOW
As a customer, I want to browse the platform in my preferred language so that I can understand everything easily.		
BV: 100	CP:08	
ACCEPTANCE CRITERIA Users should be able to select a preferred language from settings. The system should support dynamic language translation. Important notifications should be displayed in the selected language		

26. Voice Search for Groceries

User Story No: 26	Tasks: 1	Priority: MEDIUM
As a customer, I want to search for groceries using voice commands so that I can shop hands-free.		
BV: 300	CP: 01	
ACCEPTANCE CRITERIA Users should be able to activate voice search. The system should recognize and suggest relevant products. Voice searches should display results as text for confirmation.		

27. AI Chatbot for FAQs

User Story No: 27	Tasks: 2	Priority: LOW
As a customer, I want to get answers from an AI chatbot so that I can resolve common queries quickly.		
BV: 100	CP: 02	
ACCEPTANCE CRITERIA The chatbot should provide automated responses for FAQs. Users should have the option to escalate to a human agent. The system should learn and improve responses over time.		

28. Eco-friendly Packaging Option

User Story No: 28	Tasks: 2	Priority: LOW
As a customer, I want to choose eco-friendly packaging so that I can reduce waste.		
BV: 100	CP: 03	
ACCEPTANCE CRITERIA Users should see an option to select eco-friendly packaging at checkout. The system should apply additional charges if necessary. Sellers should be notified to pack orders accordingly.		

29. Loyalty Points for Purchases

User Story No: 29	Tasks: 1	Priority: LOW
As a customer, I want to earn loyalty points on every purchase so that I can redeem them for discounts.		
BV: 100	CP: 05	
ACCEPTANCE CRITERIA Users should earn points based on the purchase amount. The system should allow redeeming points at checkout. The points balance should be visible in the user profile.		

30. Referral Program for New Users

User Story No: 30	Tasks: 2	Priority: LOW
As a customer, I want to refer friends and get rewards so that I can benefit from inviting others.		
BV: 100	CP: 08	
ACCEPTANCE CRITERIA Users should receive a unique referral link. Rewards should be given only after the referred user makes a purchase. The system should track and display referral status.		

31. Modify Cart Items

User Story No: 31	Tasks: 2	Priority: LOW
As a customer, I want to increase, decrease, or remove items from my cart so that I can manage my purchase.		
BV: 100	CP: 01	
ACCEPTANCE CRITERIA Users should be able to update quantities. Users should be able to remove items. The system should automatically update the total price.		

32. Apply Discount Codes

User Story No: 32	Tasks: 1	Priority: MEDIUM
As a customer, I want to apply discount coupons to my order so that I can avail of offers.		
BV: 300	CP: 02	
ACCEPTANCE CRITERIA Users should be able to enter a promo code at checkout. The discount should reflect in the final price. Invalid or expired codes should display an error message.		

33. View Order History

User Story No: 33	Tasks: 2	Priority: HIGH
As a customer, I want to view my past orders so that I can track my purchases.		
BV: 500	CP: 03	
ACCEPTANCE CRITERIA Users should see a list of previous orders with details. Clicking an order should show its status and details. Users should be able to reorder from past purchases.		

34. Return Defective Items

User Story No: 34	Tasks: 1	Priority: HIGH
As a customer, I want to request a return for defective or expired items so that I can get a replacement or refund.		
BV: 500	CP: 05	
ACCEPTANCE CRITERIA Users should be able to upload an image and describe the issue. The system should validate return requests based on policy. Refunds/replacements should be processed within a set time.		

35. Delivery Partner Assignment

User Story No: 35	Tasks: 2	Priority: HIGH
As a delivery partner, I want to get assigned orders in my area so that I can deliver groceries efficiently.		
BV: 500	CP: 08	
ACCEPTANCE CRITERIA The system should match delivery agents based on location. Agents should receive order details and customer addresses. The system should track agent progress and update order status.		

36. View Sales Reports

User Story No: 36	Tasks: 1	Priority: LOW
As a seller, I want to view my sales reports so that I can track my business performance.		
BV: 100	CP: 01	
ACCEPTANCE CRITERIA Sellers should see daily, weekly, and monthly reports. The system should display revenue, orders, and best-selling items. Sellers should be able to export reports as PDFs or Excel files.		

37. Detect and Prevent Fraudulent Orders

User Story No: 37	Tasks: 2	Priority: MEDIUM
As an admin, I want to detect and block fraudulent orders so that I can prevent losses.		
BV: 300	CP: 02	
ACCEPTANCE CRITERIA The system should flag suspicious orders based on fraud detection algorithms. Flagged orders should require manual review before processing. Users attempting fraud should be restricted or banned.		

38. Compare Similar Products

User Story No: 38	Tasks: 1	Priority: LOW
As a customer, I want to compare multiple products so that I can make informed purchase decisions.		
BV: 100	CP: 03	
ACCEPTANCE CRITERIA Users should be able to select multiple products to compare. The comparison should include price, rating, ingredients, and weight. Users should see a clear side-by-side view of the compared products.		

39. Multi-location Delivery Support

User Story No: 39	Tasks: 2	Priority: HIGH
As a customer, I want to order groceries to multiple addresses so that I can send groceries to family members.		
BV: 500	CP: 05	
ACCEPTANCE CRITERIA Users should be able to select different addresses for different items in a single order. The system should calculate separate delivery fees if applicable. Order tracking should be available for each delivery address.		

40. Track Delivery Agent in Real-Time

User Story No: 40	Tasks: 1	Priority: HIGH
As a customer, I want to track my delivery agent on a map so that I know exactly when my order will arrive.		
BV: 500	CP: 08	
ACCEPTANCE CRITERIA Users should see a live map with the agent's location. The estimated time of arrival (ETA) should update dynamically. Notifications should be sent when the delivery is nearby.		