**A company is having manufacturing plants and warehouses in various parts of the country.**

**They manufacture ice-cream and milk products. They want to build software to achieve two goals.**

**• Manage the inventory**

**• Quickest delivery to the customers**

**Assignment 1:**

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

**A:**

**Inventory & Delivery Management System**

**LMS\_COEPD\_2025**

**Version 1.0**

**Sanket Patil**

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**1. Document Revisions**

|  |  |  |
| --- | --- | --- |
| **Date** | **Version Number** | **Document Changes** |
| 05/02/20XX | 0.1 | Initial Draft |
|  |  |  |

**2. Approvals**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Name** | **Title** | **Signature** | **Date** |
| Project Sponsor | John Doe | Project Sponsor |  | MM/DD/YYYY |
| Business Owner | James Smith | Business Owner |  | MM/DD/YYYY |
| Project Manager | Alex Johnson | Project Manager |  | MM/DD/YYYY |
| System Architect | Sarah Corner | System Architect |  | MM/DD/YYYY |
| Development Lead | Mike Black | Development Lead |  | MM/DD/YYYY |
| User Experience Lead | Michael White | User Experience Lead |  | MM/DD/YYYY |
| Quality Lead | Anuj Prasad | Quality Lead |  | MM/DD/YYYY |

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**RASCI Chart**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Position** | **\*** | **R** | **A** | **S** | **C** | **I** |
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**4. Introduction**

**4.1. 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.

**4.2. 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.

**4.3. 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.

**4.4. Background**

**Project History and Initiation**

The company, established over two decades ago, has been a leading manufacturer of ice-cream and milk products in the country. With manufacturing plants and warehouses strategically located in various parts of the country, the company has experienced significant growth and expansion. Over the years, the company has developed a strong brand reputation for quality and customer satisfaction.

As the business expanded, the company faced challenges in managing its inventory and ensuring timely delivery to customers. The existing manual processes and outdated software systems proved to be inefficient in handling the increasing demand and complexity of operations. As a result, the company experienced issues such as stockouts, overstocking, delayed deliveries, and customer dissatisfaction.

In response to these challenges, the company's management decided to invest in a comprehensive software solution to streamline inventory management and optimize delivery processes. The goal is to enhance operational efficiency, improve customer satisfaction, and maintain a competitive edge in the market.

**4.5. Project Objective:**

The primary objective of this project is to develop and implement a software solution that will achieve the following goals:

1. Manage the Inventory: Implement an Inventory Management System (IMS) to track stock levels, monitor inventory movements, and generate reports for effective inventory control.

2. Quickest Delivery to Customers: Develop a delivery scheduling system to optimize delivery routes, ensure timely deliveries, and provide real-time tracking for customers.

**4.6. Project Scope**

**4.6.1. In-Scope Activities**

•Inventory tracking at manufacturing plants and warehouses.

•Order management and allocation.

•Delivery route optimization.

•Analytics and reporting dashboards.

**4.6.2. Out-of-Scope Activities**

•Manufacturing process management.

•Customer relationship management (CRM).

**5. 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.

**6. 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

**7. Risks**

**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

**8. Business Process Overview**

**Legacy System (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.

**Proposed Recommendations (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.

**9. 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

**10. Appendices**

**10.1. List of Acronyms**

|  |  |
| --- | --- |
| **Acronym** | **Description** |
| BA | Business Analyst |
| BRD | Business Requirements Document |
| CRM | Customer Relationship Management |
| DCA | Dual Clutch Automatic |
| ERP | Enterprise Resource planning |
| GDPR | General Data Protection Regulation |
| IT | Information Technology |
| KPI | Key performance Indicator |
| MFA | Multi-Factor Authentication |
| RBAC | Role-Based Access Control |
| ROI | Return on Investment |
| UAT | User Acceptance Testing |

**10.2. Glossary of Terms**

**1. Inventory Management System (IMS)** - A software application designed to track and manage stock levels, orders, sales, and deliveries of products, ensuring optimal inventory control.

**2. Manufacturing Plant** - A facility where ice-cream and milk products are produced, processed, and packaged for distribution.

**3. Warehouse** - A storage facility used to house inventory of ice-cream and milk products before they are distributed to customers or retailers.

**4. Stock Level** - The quantity of products available in inventory at a given time.

**5. Real-Time Updates** - The immediate updating of information as changes occur, ensuring that the inventory data is always current.

**6. Inventory Report** - A document that provides detailed information on the stock levels, movements, and status of inventory items.

**7. Low Stock Level Alert** - An automatic notification generated by the IMS when the quantity of a product falls below a predefined threshold, prompting replenishment actions.

**8. Delivery Scheduling System** - A software module that optimizes delivery routes and schedules to ensure the quickest and most efficient delivery to customers.

**9. Route Optimization** - The process of determining the most efficient route for delivery personnel to take in order to minimize travel time and costs.

**10. Customer Order** - A request made by a customer to purchase ice-cream and milk products, which initiates the delivery process.

**11. Order Confirmation** - A notification sent to the customer to confirm that their order has been received and is being processed.

**12. Delivery Status Tracking** - A feature that allows customers to monitor the progress and status of their orders in real-time.

**13. Delivery Personnel** - Individuals responsible for transporting and delivering products to customers.

**14. Third-Party Delivery Service** - An external service provider contracted to handle the delivery of products to customers.

**15. Customer Feedback** - Information provided by customers regarding their experience with the products and delivery services, used to improve overall quality and satisfaction.

**16. Business Requirements Document (BRD)** - A formal document that outlines the business requirements, objectives, and scope of the software project, serving as a reference for stakeholders.

**17. Functional Requirement** - A specific behavior or function that the software must perform to meet the business requirements, such as inventory tracking or delivery scheduling.

**18. Stakeholder** - Any individual or group with an interest or influence in the project, including customers, employees, managers, and partners.

**19. Requirement Traceability Matrix (RTM)** - A tool used to ensure that all business requirements are addressed by corresponding functional requirements and test cases.

**20. Project Scope** - The defined boundaries and deliverables of the project, outlining what will be included and what will be excluded from the project.

**10.3. Related Documents**

1. Feasibility Study Report

2. Market Analysis for Inventory and Delivery Optimization Software

3. Stakeholder Requirements Document

**2. Prepare process flow diagram using your imagination.**

A:

A diagram of a software process

AI-generated content may be incorrect.

**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.**

A:

**Subject:** Introduction as Your Business Analyst Partner

Dear [Client's Name],

I hope this email finds you well.

My name is Sanket Patil, and I am pleased to introduce myself as the Business Analyst assigned to collaborate with you and your team on [Project Name]. It is my role to ensure a thorough understanding of your business requirements, processes, and goals to facilitate a seamless and effective project execution.

Throughout this engagement, I will be working closely with you to gather insights, analyze needs, and document requirements that align with your strategic objectives. My goal is to bridge the gap between your business vision and the technical implementation, ensuring a tailored solution that meets your expectations.

To kick off the process, I would love to schedule an initial discussion at your convenience. This will allow us to align on priorities, key stakeholders, and any immediate areas of focus.

Please let me know a suitable time that works for you, and I look forward to our collaboration.

Best regards,  
[Your Name]  
Business Analyst  
[Your Contact Information]  
[Company Name]

**2. Prepare a brief BRD and SRS for a project- Horoscope or Ticketing system or online store.**

**A:**

**Business Requirements Document (BRD) - Online Ticketing System**

**Ticketing System**

**LMS\_COEPD\_2025**

**Version 1.0**

**Sanket Patil**

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**4. Introduction**

**4.1. Business Goals**

**•Streamline Issue Resolution -** Enable users to easily raise and track tickets while ensuring quick and efficient resolutionby 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**

**Project History and Initiation**

•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. Project Objective:**

The objective of this project is to implement a new, efficient Ticketing System that addresses the current inefficiencies in the company's existing ticketing process. The new system will automate ticket management, track Service Level Agreements (SLAs), integrate a comprehensive knowledge base, and provide detailed reporting capabilities. By achieving these objectives, the project aims to streamline support processes, improve customer satisfaction, and ensure compliance with SLAs. Additionally, the project seeks to enhance overall operational efficiency, reduce costs, and provide better data insights for informed decision-making.

**4.6. Project Scope**

**4.6.1. In-Scope Activities**

•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.

**4.6.2. Out-of-Scope Activities**

•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. Risks**

**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.

**8. Business Process Overview**

**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 adhoc 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.

**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 ticke ts 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

**-DPR** - General Data Protection Regulation

**-AT** - 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)

**10.2. Glossary of Terms**

**1. Ticket** - A record of a customer's issue, question, or request that is tracked and managed through the ticketing system. Tickets are created by customers or automatically generated by the system, and they represent an individual support case to be resolved by an agent.

**2. SLA (Service Level Agreement)** - A formal agreement between the company and the customer that defines the expected timeframes for responding to and resolving tickets. SLAs outline the maximum time allowed for each stage of the ticket lifecycle.

**3. Knowledge Base** - A centralized repository of articles, solutions, FAQs, and troubleshooting guides accessible to support agents to assist in resolving tickets more efficiently.

**4. Ticket Assignment** - The process of routing a support ticket to the appropriate agent or team for resolution, based on factors such as expertise, availability, and workload.

**5. Ticket Lifecycle** - The various stages a ticket goes through from creation to closure. These stages typically include ticket creation, categorization, assignment, resolution, and closure.

**6. Escalation** - The process of transferring a ticket to a higher level of support or management when it cannot be resolved at the current level within the defined SLA or requires additional expertise.

**7. Agent** - A support team member responsible for handling and resolving customer tickets within the ticketing system.

**8. Customer Feedback** - Feedback provided by customers after the resolution of their support tickets, typically through surveys or ratings.

**9. Report/Reporting Dashboard** - A tool within the ticketing system that generates visual or written reports based on key performance metrics such as ticket volume, SLA compliance, resolution times, and agent performance.

**10. Multi-channel Support** - The ability for customers to submit tickets through various communication channels, such as email, web forms, live chat, or social media.

**11. Ticket Categorization -** The process of assigning tickets to specific categories or types, such as technical support, billing inquiries, or product issues, to streamline the resolution process.

**12. Ticket Status** - The current state of a ticket, indicating its progress in the resolution process (e.g., New, In Progress, Awaiting Customer Response, Resolved, Closed).

**13. Automated Workflow** - A set of predefined rules or processes that automatically guide tickets through their lifecycle, such as ticket assignment, escalations, and reminders for overdue tickets.

**14. Ticket Closure** - The final stage in the ticket lifecycle, where a ticket is marked as resolved and closed after the customer’s issue has been addressed and no further action is needed.

**15. User Role/Permissions** - The access level and permissions assigned to different users within the ticketing system, such as agents, managers, and administrators, to ensure appropriate access to data and functions.

**10.3. Related Documents**

-Business Case Document

-Business Requirement Document

**1. Introduction**

The purpose of this document is to provide a detailed specification of the Online Ticketing System, including its goals, objectives, and requirements. This system is designed to facilitate the process of booking and managing tickets online, providing a seamless experience for users and administrators alike.

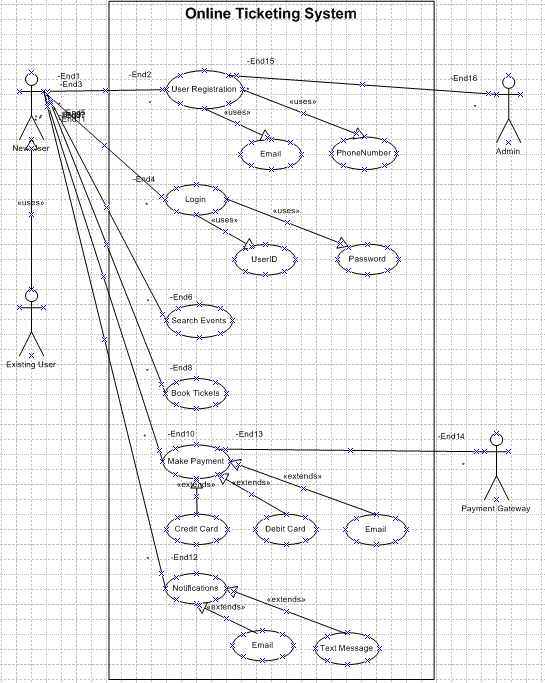
**2. Goal**

The primary goal of the Online Ticketing System is to provide a convenient and efficient platform for users to book, manage, and access tickets for various events and services. Additionally, it aims to streamline the administrative tasks associated with ticketing.

**3. Objectives**

* To create an intuitive and user-friendly interface for booking and managing tickets.
* To offer a secure and reliable platform for handling user data and transactions.
* To provide real-time updates and notifications for users.
* To facilitate easy integration with payment gateways and third-party services.
* To enable administrators to efficiently manage events, ticket sales, and user data.

**4. Use Case Diagram**

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**5. Use Case Specifications**

**5.1. Register/Login**

|  |  |
| --- | --- |
| Use Case ID | UC001 |
| Use Case Name | Register/Login |
| Created by | BA |
| Date Created | 10-02-2025 |
| Actor/s | User |
| Description | This use case allows users to register for an account or log in to an existing account |
| Pre-Condition | None |
| Post-Condition | Success: User is successfully registered or Logged in. Failure: User is not able to successfully register or Log in. |
| Normal Flow/ Happy Path | * 1. User provides registration details or login credentials.   2. System validates the information.   3. User is granted access to the system. |
| Alternative Flow | None |
| Exceptions | User can perform some actions as Guest |
| Frequency of Use | High |
| Assumptions | User has an email address. |

**5.2. Search Events**

|  |  |
| --- | --- |
| Use Case ID | UC002 |
| Use Case Name | Search Events |
| Created by | BA |
| Date Created | 10-02-2025 |
| Actor/s | User |
| Description | This use case allows users to search for available events |
| Pre-Condition | User is logged in |
| Post-Condition | Success: User is successfully presented with a list of available events. Failure: User is not presented with a list of available events. |
| Normal Flow/ Happy Path | * 1. User enters search criteria.   2. System retrieves and displays matching events. |
| Alternative Flow | None |
| Exceptions | User can perform some actions as Guest |
| Frequency of Use | High |
| Assumptions | User has an email address. |

**5.3. Book Ticket**

|  |  |
| --- | --- |
| Use Case ID | UC003 |
| Use Case Name | Book Ticket |
| Created by | BA |
| Date Created | 10-02-2025 |
| Actor/s | User |
| Description | This use case allows users to book tickets for selected events |
| Pre-Condition | User is logged in and has selected an event. |
| Post-Condition | Success: Ticket is successfully booked and confirmation is sent to the user. Failure: Ticket is not booked and confirmation is sent to the user. |
| Normal Flow/ Happy Path | * 1. User selects the number of tickets and seating preferences.   2. System checks availability and proceeds to payment. |
| Alternative Flow | None |
| Exceptions | User can perform some actions as Guest |
| Frequency of Use | High |
| Assumptions | User has an email address. |

**5.4. Make Payment**

|  |  |
| --- | --- |
| Use Case ID | UC004 |
| Use Case Name | Make Payment |
| Created by | BA |
| Date Created | 10-02-2025 |
| Actor/s | User, Payment Gateway |
| Description | This use case allows users to make payments for booked tickets. |
| Pre-Condition | User has booked a ticket. |
| Post-Condition | Success: Payment is processed, and ticket is confirmed. Failure: Payment is not processed, and ticket is not confirmed.. |
| Normal Flow/ Happy Path | * 1. User selects payment method.   2. System redirects to the payment gateway.   3. User completes the payment.   4. System confirms the payment and updates the booking status. |
| Alternative Flow | None |
| Exceptions | User can perform some actions as Guest |
| Frequency of Use | High |
| Assumptions | User has an email address. |

**5.5. Manage Events (Admin)**

|  |  |
| --- | --- |
| Use Case ID | UC005 |
| Use Case Name | Manage Events (Admin) |
| Created by | BA |
| Date Created | 10-02-2025 |
| Actor/s | Admin |
| Description | This use case allows administrators to manage events and ticket sales. |
| Pre-Condition | Administrator is logged in. |
| Post-Condition | Success: Events and ticket sales are updated. Failure: Events and ticket sales are not updated. |
| Normal Flow/ Happy Path | * 1. Administrator adds/updates/deletes event details.   2. System saves the changes and updates the event list. |
| Alternative Flow | None |
| Exceptions | User can perform some actions as Guest |
| Frequency of Use | High |
| Assumptions | User has an email address. |

**6. Functional Requirements**

* The system shall allow users to register and log in.
* The system shall enable users to search for events.
* The system shall facilitate ticket booking and seat selection.
* The system shall integrate with payment gateways for processing payments.
* The system shall send booking confirmations and notifications to users.
* The system shall allow administrators to manage events and generate reports.

**7. Non-Functional Requirements**

* **Usability**: The system should have an intuitive and user-friendly interface.
* **Security**: The system must ensure data security and privacy, including secure transactions.
* **Performance**: The system should handle multiple concurrent users without performance degradation.
* **Scalability**: The system should be scalable to accommodate future growth and increased user base.
* **Reliability**: The system should provide consistent and accurate performance with minimal downtime.

**3. Make an ERD of creating a support ticket/Ticketing life cycle.**

**A:**

**A diagram of a software company

AI-generated content may be incorrect.**

**4. User story of shopping from ecommerce.**

**A:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **User Story ID** | **User Story** | **BV** | **CP** | **Acceptance Criteria** |
| US001 | As a user, I want to create an account so that I can shop online. | 9 | 3 | User should be able to register using email/phone. Verification email/SMS should be sent. |
| US002 | As a user, I want to log in using my credentials so that I can access my account. | 9 | 3 | User can log in using email/phone and password. Invalid attempts should show an error message. |
| US003 | As a user, I want to reset my password so that I can regain access to my account. | 8 | 5 | User receives a reset link via email/SMS. Password update should be successful. |
| US004 | As a user, I want to browse product categories so that I can find relevant items easily. | 9 | 4 | Categories should be listed, and clicking should show products. |
| US005 | As a user, I want to search for a product by name so that I can quickly find what I need. | 10 | 6 | Search bar should return relevant products. Auto-suggestions should appear. |
| US006 | As a user, I want to filter products based on price, brand, and rating so that I can refine my search. | 8 | 5 | Filters should be applied correctly and update the product list dynamically. |
| US007 | As a user, I want to view product details so that I can make an informed purchase decision. | 10 | 3 | Product page should display images, description, price, and reviews. |
| US008 | As a user, I want to add a product to my cart so that I can purchase it later. | 9 | 4 | Clicking "Add to Cart" should update the cart count. Product details should be stored. |
| US009 | As a user, I want to remove a product from my cart so that I can update my order. | 8 | 3 | Clicking "Remove" should delete the product from the cart. |
| US010 | As a user, I want to update the quantity of a product in my cart so that I can adjust my purchase. | 8 | 4 | Updating quantity should reflect in the total price dynamically. |
| US011 | As a user, I want to view my cart summary so that I can review my order before checkout. | 10 | 3 | Cart should display product details, quantity, and total cost. |
| US012 | As a user, I want to proceed to checkout so that I can complete my purchase. | 10 | 6 | Clicking "Checkout" should take the user to the payment and shipping page. |
| US013 | As a user, I want to enter my shipping details so that my order is delivered correctly. | 9 | 4 | Shipping form should validate address, phone, and PIN code. |
| US014 | As a user, I want to select a preferred payment method so that I can complete my purchase. | 10 | 5 | Payment options should include card, UPI, net banking, and COD. |
| US015 | As a user, I want to apply discount coupons so that I can avail offers on my order. | 8 | 6 | Valid coupons should apply discounts and reflect the final price. |
| US016 | As a user, I want to review my order summary before payment so that I can ensure everything is correct. | 10 | 4 | Order summary should display items, pricing, and delivery address. |
| US017 | As a user, I want to make a secure payment so that I can complete my order. | 10 | 7 | Payment gateway should process the transaction securely. |
| US018 | As a user, I want to receive an order confirmation email so that I have proof of my purchase. | 9 | 3 | Email should contain order details, estimated delivery date, and invoice. |
| US019 | As a user, I want to track my order status so that I know when it will be delivered. | 9 | 6 | Order tracking page should show real-time status updates. |
| US020 | As a user, I want to cancel my order before shipment so that I can change my decision. | 7 | 5 | Order should be cancellable before it is dispatched. Refund should be initiated. |
| US021 | As a user, I want to return a product so that I can get a refund if I am not satisfied. | 8 | 7 | Return request should be submitted, and refund should be processed. |
| US022 | As a user, I want to write a product review so that I can share my feedback. | 7 | 4 | User should be able to rate and write a review after purchase. |
| US023 | As a user, I want to receive notifications about sales and offers so that I don’t miss discounts. | 7 | 4 | Notifications should be enabled for registered users. |
| US024 | As a user, I want to save my favorite products to a wishlist so that I can buy them later. | 8 | 3 | Clicking "Add to Wishlist" should store the product for future viewing. |
| US025 | As a user, I want to change my profile details so that my information stays up to date. | 7 | 3 | Name, email, phone, and address should be editable. |
| US026 | As an admin, I want to add new products to the catalog so that customers have updated choices. | 9 | 5 | Admin should be able to add product details, images, and pricing. |
| US027 | As an admin, I want to manage orders so that I can process shipments efficiently. | 9 | 6 | Admin should update order status and dispatch details. |
| US028 | As an admin, I want to manage user accounts so that I can handle customer issues. | 8 | 5 | Admin should be able to deactivate or reset user accounts. |
| US029 | As an admin, I want to generate sales reports so that I can track business performance. | 9 | 7 | Reports should show order details, revenue, and trends. |
| US030 | As an admin, I want to set promotional discounts so that I can attract more buyers. | 8 | 6 | Admin should create and apply discount codes dynamically. |
| US031 | As a user, I want to chat with customer support so that I can resolve my issues quickly. | 8 | 6 | Chat should allow real-time support interactions. |
| US032 | As a user, I want to change my payment method before checkout so that I have flexibility. | 7 | 5 | Users should be able to switch payment options before confirming. |
| US033 | As a user, I want to schedule a delivery date so that I can receive my order conveniently. | 7 | 5 | Date selection should be available before order confirmation. |
| US034 | As a user, I want to get recommendations based on past purchases so that I can discover new products. | 7 | 6 | System should suggest products based on purchase history. |
| US035 | As a user, I want a guest checkout option so that I can buy without creating an account. | 8 | 5 | Guest users should be able to place orders without logging in. |
| US036 | As a user, I want to chat with customer support so that I can resolve my issues quickly. | 8 | 6 | Chat should allow real-time support interactions. |
| US037 | As a user, I want to change my payment method before checkout so that I have flexibility. | 7 | 5 | Users should be able to switch payment options before confirming. |
| US038 | As a user, I want to schedule a delivery date so that I can receive my order conveniently. | 7 | 5 | Date selection should be available before order confirmation. |
| US039 | As a user, I want to get recommendations based on past purchases so that I can discover new products. | 7 | 6 | System should suggest products based on purchase history. |
| US040 | As a user, I want a guest checkout option so that I can buy without creating an account. | 8 | 5 | Guest users should be able to place orders without logging in. |