**Assignment 1**

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

**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.

**Business Goal:**

1. **Streamlined Inventory Management:** Ensure real-time monitoring of inventory levels across all warehouses and plants to reduce spoilage 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.

**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.

**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 (eg. bulk orders) must be flagged for immediate action.
5. Warehouse reordering thresholds should trigger automated purchase orders.

**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-Scope:**

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

**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 (eg. traffic, weather) is available via API’s.

**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.

**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.

**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.

**Business Requirements:**

1. **Inventory Management Module:**

* Real-time inventory tracking across locations.
* Expiry-date monitoring and alerts for perishable items.

1. **Order Management Module:**

* Automated order allocation based on location and inventory.
* Bulk order prioritization.

1. **Delivery Optimization Module:**

* Integration with GPS and real-time data for route planning.
* Dynamic rerouting in case of delays.

1. **Reporting Module:**

* Insights into inventory levels, order trends, and delivery performance.

**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 (API’s, 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
* **Developers:** 3
* **QA Engineers:** 2
* **Business Analyst:** 1
* **Support Team:** 2

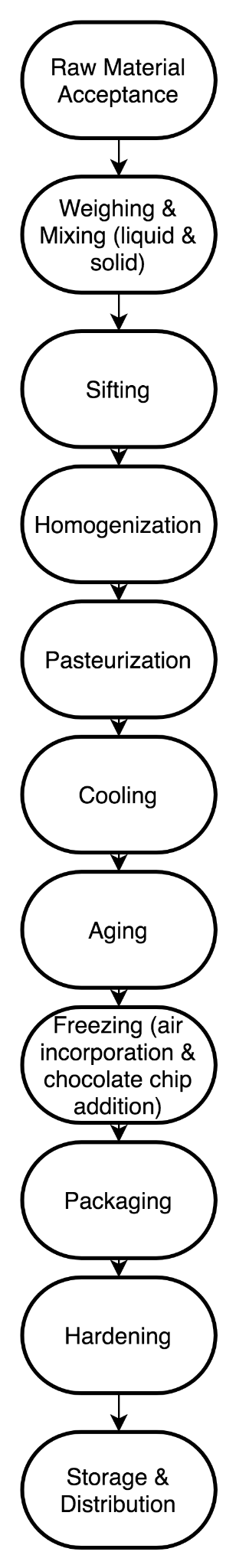
**Appendices:**

1. Glossary of Terms
2. Abbreviations Used

**Related Documents:**

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

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

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**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 Sneha Bhanji, and I am delighted to introduce myself as the Business Analyst assigned to collaborate with you and your team on this exciting project.

Understanding the challenges and opportunities within the manufacturing and logistics sectors, particularly in delivering exceptional customer service, is a domain I am passionate about. With your vision of managing inventory and ensuring the quickest delivery of your ice-cream and milk products, my role will be to work closely with you to transform these goals into robust, tailor made software solutions.

To begin, I aim to thoroughly understand your current processes, challenges, and aspirations. Together, we will explore your operational workflows, identify key requirements, and map out a strategic plan that aligns with your business objectives. Your insights will be invaluable in ensuring the solution we design is practical, scalable, and optimized for your unique needs.

I look forward to discussing your expectations and gathering inputs from your team during our initial meetings. In meantime, please feel free to share any documents, current processes, or initial thoughts that could help us hit the ground running.

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,

Sneha Bhanji

Business Analyst

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

**Business Requirement Document (BRD)**

**Project Name:** Ticketing System

**Prepared By:** Sneha Bhanji

**Date:** 6th 2025

**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** |
| --- | --- | --- |
| 08/03/2025 | 1 | Initial draft of Requirement Gathering |
| 10/03/2025 | 2 | Made changes in the requirement gathering |
| 15/03/2025 | 3 | Updated RACI |
| 17/03/2025 | 4 | Changed the use case diagram |
| 22/032025 | 5 | Updated RTM |

**2. Approval:**

| **Role** | **Name** | **Title** | **Signature** | **Date** |
| --- | --- | --- | --- | --- |
| Project Sponsor | Kalpana Kale, Sandeep Kumar | Requirements | Kalpana Kale, Sandeep Kumar | 05/03/2025 |
|
| Business Owner | Sneha Bhanji | Requirements | Sneha Bhanji | 05/03/2025 |
| Project Manager | Parth Desai | BRD | Parth Desai | 05/03/2025 |
| System Architect | Manoj Verma | Architecture | Manoj Verma | 05/03/2025 |
| Development Lead | Kashi Tayde | Requirement | Kashi Tayde | 05/03/2025 |
| User Experience Lead | Pooja Nagul | Design | Pooja Nagul | 05/03/2025 |
| Quality Lead | Payal Tiwari | Quality | Payal Tiwari | 05/03/2025 |
| Content Lead | Dilip Kumar | Content | Dilip Kumar | 05/03/2025 |

**3. RACI:**

| **Name** | **Position** | **R** | **A** | **S** | **C** | **I** |
| --- | --- | --- | --- | --- | --- | --- |
| **Aditya Jha** | **Hiring Manager** |  |  |  | Yes |  |
| **Aradhana Sunny** | **Recruiter** |  |  |  | Yes |  |
| **Kalpana Kale, Sandee P Kumar** | **Project Sponsor** | Yes |  |  | Yes | Yes |
| **Piyush Jha** | **Business Owner** | Yes | Yes |  | Yes | Yes |

**Introduction:**

**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 Decision**

Generate actionable insights through reporting and analytics to identify patterns, improve service quality, and optimize resources.

**Business Objective:**

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.

**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.

**Background:**

* The company’s current ticketing system is inefficient, causing slow response times, missed SLA’s, and manual processing. To address these issues, the company will implement a new Ticketing System that automates ticket management, tracks SLA's, 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.

**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-Scope:**

* Integration with third-party tools (to be planned in future phases).
* Hardware procurement and setup.

**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.

**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 (eg. GDPR).

**Risk:**

**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.

**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.

**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 (eg. user stories and prototypes) to refine the system according to actual needs.

**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 (eg. reduced response time, SLA compliance). Regularly assess the system post-implementation and adjust processes as needed based on feedback and performance metrics.

**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 assignments.
* **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.

1. **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 (eg. 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.

**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 & 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 & 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 (eg., 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 (eg., GDPR) and ensure secure handling of sensitive customer data.

**Appendices**

**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)

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 .

1. **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.

1. **Knowledge Base**

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

1. **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.

1. **Ticket Lifestyle**

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

1. **Escalation**

The process of transforming 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.

1. **Agent**

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

1. **Customer Feedback**

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

1. **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.

1. **Multi-channel Support**

The ability for customers to submit tickets through various communication channels, such as email, web forms, live chat , or social media.

1. **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.

1. **Ticket Status**

The current status of a ticket, indicating its progress in the resolution process (eg., New, In Progress, Awaiting Customer Response, Resolved, Closed).

1. **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.

1. **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.

**Related Documents**

* Business Case Document
* Business Requirement Document

**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.

1. **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 analyze 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.

1. **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.

1. **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 version).

**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 (eg., SMTP) and SMS gateways (eg., Twilio) for sending ticket status notifications.

1. **Hardware Interfaces**

**User device**

* Users and agents require devices like desktops, laptops, tables, 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 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 Dashboards | 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 | Admin 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 Configuration | The system shall allow admins to configure Service Level Agreements (SLAs) for ticket resolution. | Medium |
| 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 tickets 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 Ticket | The system shall achieve 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 (eg., 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 |
| FR-040 | Accessibility Compliance | The system shall comply with accessibility standards like WCAG 2.1 for users with disabilities. | High |

**Non-Functional Requirement**

| **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. |
| NFR014 | Localization | The system shall support localization for at least 5 languages, including English, Spanish, French, German, and Chinese. |
| NFR015 | Data Retention | Closed tickets and related data shall be retained for a minimum of 5 years. |
| NFR016 | Integration | The system shall integrate with third-party tools such as Slack, Microsoft Teams, and email systems. |
| NFR017 | Fault Tolerance | The system shall automatically recover from a single point of failure within 30 seconds. |
| NFR018 | Auditability | All user and system actions shall be auditable for compliance and troubleshooting purposes. |
| NFR019 | Cost Efficiency | The system shall operate within an annual maintenance budget of $50,000. |
| NFR020 | API Response Time | The system's APIs shall respond to requests within 500 milliseconds under normal load. |

**Use Case Specifications**

| **Use Case ID** | UC001 |
| --- | --- |
| **Use Case Name** | Raise a New Ticket |
| **Actor** | End User/System |
| **Description** | A user creates a ticket to report an issue, provide details, and request assistance. |
| **Pre-condition** | Users must have an active account. |
| **Post-condition** | Ticket is logged in the system and assigned a unique ID.  Notification is sent to the user. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the ticketing system.  User navigates to the “Raise a Ticket” section.  User selects the issue type.  User provides a detailed description of the issue.  User attaches files, if necessary.  User sets the ticket priority.  User submits the ticket.  System generates a unique ticket ID and confirms submission. |
| **Alternative Flow** | User saves the ticket as a draft instead of submitting it.  System stores the ticket as a draft for later editing. |
| **Exceptions** | Required fields are incomplete:   1. System highlights missing fields and prevents submission.   File exceeds the allowed size limit:   1. System displays an error and prevents file upload. |
| **Frequency of Use** | High |
| **Assumptions** | Users know how to navigate the ticketing system interface. |

| **Use Case ID** | UC002 |
| --- | --- |
| **Use Case Name** | View Ticket Details |
| **Actor** | End-User/System |
| **Description** | A user views the details of a previously submitted ticket. |
| **Pre-condition** | User must have access rights to the ticket. |
| **Post-condition** | Ticket details are displayed to the user. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to “My Tickets”.  User selects a ticket to view.  System displays ticket details: ID, issue type, description, status, and history. |
| **Alternative Flow** | If ticket is closed:   1. System displays resolution details. |
| **Exceptions** | Ticket is not accessible:   1. System displays “Ticket not found” error. |
| **Frequency of Use** | High |
| **Assumptions** | Systems database is up-to-date. |

| **Use Case ID** | UC003 |
| --- | --- |
| **Use Case Name** | Edit Draft Ticket |
| **Actor** | End-User/System |
| **Description** | User updates the details of a saved draft ticket. |
| **Pre-condition** | A draft ticket must exist in the system. |
| **Post-condition** | Draft is updated, or ticket is submitted. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to the “My Drafts” section.  User selects a draft ticket.  User updates fields and saves changes or submits the ticket. |
| **Alternative Flow** | If the user decides not to submit the ticket:   1. User saves changes and exits without submitting. |
| **Exceptions** | Draft is not found:   1. System displays “Draft not found” error. |
| **Frequency of Use** | Low |
| **Assumptions** | User has edit rights for the draft. |

| **Use Case ID** | UC004 |
| --- | --- |
| **Use Case Name** | Delete Draft Ticket |
| **Actor** | End-User/System |
| **Description** | User deletes a saved draft ticket they no longer wish to submit. |
| **Pre-condition** | Draft tickets exist in the system. |
| **Post-condition** | Draft is removed from the system. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to the “My Drafts” section.  User selects a draft ticket.  User chooses the “Delete” option.  System confirms deletion. |
| **Alternative Flow** | If the user cancels the deletion:   1. Draft remains in the system. |
| **Exceptions** | Draft not found:   1. System displays “Draft not found” error. |
| **Frequency of Use** | Low |
| **Assumptions** | Users have the right to delete drafts. |

| **Use Case ID** | UC005 |
| --- | --- |
| **Use Case Name** | Submit Feedback for a Resolved Ticket |
| **Actor** | End-User/System |
| **Description** | A user provides feedback on the resolution of a ticket. |
| **Pre-condition** | Tickets must have a “Resolved” status. |
| **Post-condition** | Feedback is successfully recorded in the system. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to “Resolved Tickets”.  Use selects a ticket.  System displays the resolution details.  Users submit feedback, including ratings and optional comments.  System saves the feedback and updates the ticket record. |
| **Alternative Flow** | User opts to skip providing feedback. |
| **Exceptions** | Feedback submission fails due to system error.   1. System notifies the user and prompts them to retry later. |
| **Frequency of Use** | Medium |
| **Assumptions** | User understands how to provide feedback. |

| **Use Case ID** | UC006 |
| --- | --- |
| **Use Case Name** | Reopen a Closed Ticket |
| **Actor** | End-User/Support Team,System |
| **Description** | Users can reopen a ticket if the issue persists after it was marked resolved |
| **Pre-condition** | Tickets must have a “Closed” status. |
| **Post-condition** | Ticket status changes to “Reopened”.  Notification is sent to the support team. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to “”Closed Tickets”.  User selects a ticket and clicks “Reopen”.  System changes the ticket status to “Reopened” and notifies the support team. |
| **Alternative Flow** | User provides additional information while reopening the ticket. |
| **Exceptions** | Reopening is not allowed due to policy:   1. System displays a message stating, “Reopening is not permitted for this ticket”. |
| **Frequency of Use** | Medium |
| **Assumptions** | Users understand when reopening a ticket is appropriate. |

| **Use Case ID** | UC007 |
| --- | --- |
| **Use Case Name** | Attach Files to a Ticket |
| **Actor** | End-User/System |
| **Description** | Users can upload files to provide additional context for a ticket. |
| **Pre-condition** | Tickets must be in draft or active status. |
| **Post-condition** | File is successfully attached to the ticket. |
| **Normal Flow of events/Basic Flow/Happy Path** | User navigates to the ticket submission or update page.  User clicks “Attach File”.  User selects a file from their device.  System uploads and attaches the file to the ticket. |
| **Alternative Flow** | Users remove the attachment before submitting the ticket. |
| **Exceptions** | File exceeds size limit:   1. System displays an error message and cancels the upload. |
| **Frequency of Use** | Low |
| **Assumptions** | User has the required file ready to upload. |

| **Use Case ID** | UC008 |
| --- | --- |
| **Use Case Name** | Set Priority for a Ticket |
| **Actor** | End-User/System |
| **Description** | Users set the priority level for a ticket during submission. |
| **Pre-condition** | Users must be submitting a new ticket. |
| **Post-condition** | Tickets are created with a defined priority level. |
| **Normal Flow of events/Basic Flow/Happy Path** | User selects the priority level (Low, Medium, High) from a dropdown menu.  System associates the priority with the ticket. |
| **Alternative Flow** | Priority is automatically assigned based on issue type. |
| **Exceptions** | Priority selection is missing:   1. System prompts the user to select a priority before proceeding. |
| **Frequency of Use** | Medium |
| **Assumptions** | Users understand the importance of priority levels. |

| **Use Case ID** | UC009 |
| --- | --- |
| **Use Case Name** | Receive Confirmation for Ticket Submission. |
| **Actor** | System/End-User |
| **Description** | Users receive a confirmation notification after submitting a ticket. |
| **Pre-condition** | Ticket submission process is completed successfully. |
| **Post-condition** | User is notified of ticket submission. |
| **Normal Flow of events/Basic Flow/Happy Path** | User submits a ticket..  System generates a unique ticket ID.  System sends a confirmation email to the user. |
| **Alternative Flow** | Confirmation is sent via SMS instead of email. |
| **Exceptions** | Email server is unavailable:   1. System queues the email for later delivery. |
| **Frequency of Use** | High |
| **Assumptions** | Users' contact information is accurate. |

| **Use Case ID** | UC010 |
| --- | --- |
| **Use Case Name** | Update Ticket Status. |
| **Actor** | Support Staff/System |
| **Description** | Support staff updates the status of a ticket as it progresses through different stages (eg., Open, In Progress, Resolved). |
| **Pre-condition** | Tickets must exist in the system.  Support staff must have appropriate permissions. |
| **Post-condition** | Ticket status is updated and logged in the history. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support staff logs into the system.  Support staff navigate to the assigned ticket list.  Support staff selects a ticket and clicks “Update Status”.  Support staff chooses the new status from the dropdown menu.  System updates the status and logs the action in the ticket history. |
| **Alternative Flow** | Support staff adds comments while updating the status:   1. System logs the comments along with the status change. |
| **Exceptions** | Attempt to update status fails due to a system error:   1. System displays an error message and prevents the update. |
| **Frequency of Use** | High |
| **Assumptions** | Support staff is trained on status workflows. |

| **Use Case ID** | UC011 |
| --- | --- |
| **Use Case Name** | Assign a Ticket to s Support Team |
| **Actor** | Support Manager/System |
| **Description** | The system or a support manager assigns a ticket to the appropriate support team for resolution. |
| **Pre-condition** | Tickets must exist in the system. |
| **Post-condition** | Ticket is assigned to a support team.  Notification is sent to the team. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support manager logs into the system.  Manager navigates to unassigned tickets.  Manager selects a ticket and clicks “Assign”.  Manager selects the appropriate support team from a dropdown menu.  System assigns the ticket to the selected team and notifies them. |
| **Alternative Flow** | Tickets are automatically assigned by the system based on issue type. |
| **Exceptions** | No team is available for assignment:   1. System flags the ticket as “Unassigned” and notifies the manager. |
| **Frequency of Use** | High |
| **Assumptions** | Support teams are predefined in the system. |

| **Use Case ID** | UC012 |
| --- | --- |
| **Use Case Name** | Add Comments to a Ticket. |
| **Actor** | End-User/Support Staff/System |
| **Description** | Support staff or users can add comments to a ticket to clarify issues or provide updates. |
| **Pre-condition** | Tickets must exist in the system. |
| **Post-condition** | Comment is added to the ticket. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system and navigates to a ticket.  User clicks “Add Comment”.  User enters a comment in the text box.  System saves the comment and adds it to the ticket history. |
| **Alternative Flow** | User attaches a file along with the comment. |
| **Exceptions** | System fails to save the comment due to a network error:   1. Users are prompted to retry. |
| **Frequency of Use** | Low |
| **Assumptions** | Users have permissions to add comments. |

| **Use Case ID** | UC013 |
| --- | --- |
| **Use Case Name** | Escalate a Ticket |
| **Actor** | End-User,Support Staff,Manager,System |
| **Description** | Support staff or users escalate a ticket when the resolution is delayed or inadequate. |
| **Pre-condition** | Tickets must have an “Active” status. |
| **Post-condition** | Ticket is marked as “Escalated”. |
| **Normal Flow of events/Basic Flow/Happy Path** | User navigates to the ticket and selects “Escalate”.  User provides a reason for escalation.  System flags the ticket as “Escalated” and notifies the manager. |
| **Alternative Flow** | Escalation is automatically triggered if SLA is breached. |
| **Exceptions** | Escalation fails due to missing manager assignment:   1. System notifies the user of the error. |
| **Frequency of Use** | High |
| **Assumptions** | Users understand escalation policies. |

| **Use Case ID** | UC014 |
| --- | --- |
| **Use Case Name** | Generate Reports on Ticket Status. |
| **Actor** | Manager, System |
| **Description** | Managers generate reports to analyze ticket statuses, including open, closed, and escalated tickets. |
| **Pre-condition** | Manager must have reporting permissions. |
| **Post-condition** | Report is generated and available for viewing or download. |
| **Normal Flow of events/Basic Flow/Happy Path** | Manager logs into the system.  Manager navigates to the “Reports” section.  Manager selects a report type and timeframe.  System generates the report and displays it. |
| **Alternative Flow** | Report is downward as a file instead of being displayed. |
| **Exceptions** | Report generation fails due to missing data:   1. System displays an error message. |
| **Frequency of Use** | High |
| **Assumptions** | Required data exists in the system. |

| **Use Case ID** | UC015 |
| --- | --- |
| **Use Case Name** | Assign a Ticket to a Specific Support Agent |
| **Actor** | Support Manager, Support Agent, System |
| **Description** | Support managers assign tickets to specific agents based on their expertise and workload. |
| **Pre-condition** | Tickets exist in the system.  Managers and agents must have valid system accounts. |
| **Post-condition** | Ticket is assigned to the specified agent, and the agent is notified. |
| **Normal Flow of events/Basic Flow/Happy Path** | Manager logs into the system.  Manager navigates to unassigned tickets or reassigns an existing ticket.  Manager selects a ticket and clicks “Assign to Agent”.  Manager selects an agent from a dropdown list.  System assigns the ticket to the selected agent and notifies them. |
| **Alternative Flow** | Manager uses an auto-suggest feature to filter agents by expertise or workload. |
| **Exceptions** | Selected agent is unavailable:   1. System notifies the manager to select another agent. |
| **Frequency of Use** | Medium |
| **Assumptions** | Manager is aware of agent availability and skills. |

| **Use Case ID** | UC016 |
| --- | --- |
| **Use Case Name** | Send Automated Ticket Reminders. |
| **Actor** | System, Support Staff, Managers. |
| **Description** | The system sends automated reminders for unresolved tickets approaching their SLA deadlines. |
| **Pre-condition** | Ticket SLA and reminder intervals are configured. |
| **Post-condition** | Reminder notifications are sent to relevant users. |
| **Normal Flow of events/Basic Flow/Happy Path** | System periodically checks ticket statuses.  System identifies tickets nearing their SLA deadlines.  System sends reminder notifications to assigned staff and managers. |
| **Alternative Flow** | User configures custom reminder intervals for specific tickets. |
| **Exceptions** | Notification fails to send:   1. System retries sending the notification later. |
| **Frequency of Use** | High |
| **Assumptions** | Notification systems (Email/SMS) are operational. |

| **Use Case ID** | UC017 |
| --- | --- |
| **Use Case Name** | View Ticket History |
| **Actor** | End-User,Support Staff, System. |
| **Description** | Users and support staff can view the complete history of a ticket, including status changes, comments, and updates. |
| **Pre-condition** | Tickets must exist in the system. |
| **Post-condition** | Ticket history is displayed successfully. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system and navigates to a ticket.  User clicks “View History”.  System displays a chronological list of all actions performed on the ticket. |
| **Alternative Flow** | Users filter the history by specific action types (eg., comments, status updates). |
| **Exceptions** | History data fails to load due to a server error:   1. System displays an error message and prompts the user to retry. |
| **Frequency of Use** | Low |
| **Assumptions** | Users have appropriate permission to view ticket history. |

| **Use Case ID** | UC018 |
| --- | --- |
| **Use Case Name** | Manage SLA Configurations. |
| **Actor** | Manager, System. |
| **Description** | Managers define and update Service Level Agreements (SLAs) for different ticket types. |
| **Pre-condition** | SLA module must be enabled in the system. |
| **Post-condition** | SLA configurations are updated successfully. |
| **Normal Flow of events/Basic Flow/Happy Path** | Manager logs into the system.  Manager navigates to the SLA configuration section.  Manager selects a ticket type and modifies the SLA settings (eg., response time, resolution time).  System saves the updated SLA configuration. |
| **Alternative Flow** | Manager creates a new SLA configuration for a custom ticket type. |
| **Exceptions** | SLA update fails due to validation errors:   1. System notifies the manager of the issue. |
| **Frequency of Use** | Medium |
| **Assumptions** | Managers understand SLA policies and ticket workflows. |

| **Use Case ID** | UC019 |
| --- | --- |
| **Use Case Name** | View Dashboard Analytics. |
| **Actor** | Manager, Support Staff, System. |
| **Description** | Managers and support staff view analytics on ticket trends, resolutions, and team performance. |
| **Pre-condition** | Data must exist for the selected timeframe. |
| **Post-condition** | Dashboard is displayed with up-to-date analytics. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system and navigates to the dashboard.  System displays analytics, including charts and key performance indicators (KPIs). |
| **Alternative Flow** | User customizes the dashboard to display specific metrics. |
| **Exceptions** | Dashboard fails to load due to a system error:   1. System displays an error message and suggests retrying later. |
| **Frequency of Use** | Medium |
| **Assumptions** | Users know how to interpret the analytics provided. |

| **Use Case ID** | UC020 |
| --- | --- |
| **Use Case Name** | Close a Ticket. |
| **Actor** | Support Agent, Support Manager, System. |
| **Description** | A support agent or manager closes a ticket once the issue has been resolved and verified. |
| **Pre-condition** | Ticket status must be “Resolved” or similar. |
| **Post-condition** | Ticket is marked as “Closed” in the system.  Closure details are logged. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent or manager logs into the system.  Support agent or manager navigates to the ticket and clicks “Close Ticket”.  System prompts for confirmation of ticket closure.  Support agent or manager confirms the closure.  System updates the ticket status to “Closed” and logs the closure details. |
| **Alternative Flow** | Support agent or manager adds a resolution note before closing the ticket. |
| **Exceptions** | Ticket cannot be closed due to incomplete information or unresolved issues:   1. System displays an error message and prevents the closure. |
| **Frequency of Use** | Low |
| **Assumptions** | The ticket is fully resolved and ready for closure. |

| **Use Case ID** | UC021 |
| --- | --- |
| **Use Case Name** | Search Tickets by Criteria |
| **Actor** | End-User, Support Staff, Support Manager, System. |
| **Description** | Users search for tickets in the system using various criteria such as status, priority, date, and agent. |
| **Pre-condition** | Users must be logged in with appropriate search permissions. |
| **Post-condition** | Search results are displayed, showing relevant tickets. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to the “Search Tickets” page.  User enters search criteria (eg., ticket status, priority, assigned agent).  System displays a list of tickets that match the criteria. |
| **Alternative Flow** | Users apply multiple filters to narrow down the search results. |
| **Exceptions** | Search results fail to load to a due to a database error:   1. System displays an error message and suggests retrying. |
| **Frequency of Use** | High |
| **Assumptions** | The system has a sufficiently large and well-maintained dataset of tickets. |

| **Use Case ID** | UC022 |
| --- | --- |
| **Use Case Name** | Reopen a Closed Ticket |
| **Actor** | Support Agent, Support Manager. |
| **Description** | A support agent or manager reopens a closed ticket if the issue is not fully resolved or if new information arises. |
| **Pre-condition** | Tickets must be in “closed” status. |
| **Post-condition** | Ticket status is changed back to “Open”. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agents or managers log into the system.  Support agent or manager navigates to the closed ticket.  Support agent or manager selects “Reopen Ticket”.  System prompts for a reason to reopen the ticket.  Support agent or manager provides the reason and confirms the action.  System updates the ticket status to “Open” and logs the reason for reopening. |
| **Alternative Flow** | Support agent adds comments or updates to the ticket before reopening. |
| **Exceptions** | The ticket cannot be reopened due to restrictions (eg. closures was final):   1. System notifies the user that reopening is not allowed. |
| **Frequency of Use** | Medium |
| **Assumptions** | The issue is still unresolved or a new issue has been identified. |

| **Use Case ID** | UC023 |
| --- | --- |
| **Use Case Name** | Send Ticket Notifications. |
| **Actor** | System, End-User, Support Staff, Support Manager. |
| **Description** | The system sends notifications (eg., email, SMS) to users and support staff about ticket updates, status changes, or assigned actions. |
| **Pre-condition** | The notification system must be configured and operational. |
| **Post-condition** | Recipients receive the appropriate notifications. |
| **Normal Flow of events/Basic Flow/Happy Path** | The system detects a ticket status change, comment update, or other relevant event.  The system identifies the appropriate recipients (eg., assignee, reporter).  The system sends notifications to the recipients. |
| **Alternative Flow** | Users customize notification preferences to receive specific updates (eg., only critical updates). |
| **Exceptions** | Notification fails to send due to server error:   1. System retries sending the notification after 30 minutes. |
| **Frequency of Use** | Medium |
| **Assumptions** | Users have valid contact details (Email/SMS) configured in the system. |

| **Use Case ID** | UC024 |
| --- | --- |
| **Use Case Name** | Merge Duplicate Tickets. |
| **Actor** | Support Agent, Support Manager, System. |
| **Description** | Support agents or managers merge tickets that are identified as duplicates to prevent redundant work. |
| **Pre-condition** | Tickets to be merged must be open or unresolved. |
| **Post-condition** | Duplicate tickets are closed, and the information is merged into the primary ticket. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent or manager identifies two tickets as duplicates.  Support agent or manager selects both tickets and clicks “Merge”.  System prompts the user to confirm the merge.  Support agent or manager confirms the merge.  System merges the tickets, keeping the most relevant data and closing the duplicate ticket. |
| **Alternative Flow** | Support agent adds comments to explain the reason for the merge. |
| **Exceptions** | Tickets cannot be merged due to missing or conflicting information.:   1. System displays an error message and prevents the merge. |
| **Frequency of Use** | Low |
| **Assumptions** | The system can accurately detect duplicate tickets based on certain criteria (eg., issue type, description). |

| **Use Case ID** | UC025 |
| --- | --- |
| **Use Case Name** | Assign Priority to a Ticket. |
| **Actor** | Support agent, Support Manager, System. |
| **Description** | A support agent or manager assigns a priority level (eg., Low, Medium, High, Critical) to a ticket based on its urgency and impact. |
| **Pre-condition** | The ticket exists and is in an unresolved status. |
| **Post-condition** | Ticket priority is updated successfully. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent or manager logs into the system.  Support agent or manager navigates to a ticket.  Support agent or manager selects “Assign Priority”.  System presents priority options (eg., Low, Medium, High, Critical).  Support agent or manager selects the appropriate priority.  System updates the ticket with the selected priority and logs the change. |
| **Alternative Flow** | Support agent or manager uses an auto-suggest feature to assign priority based on predefined criteria (eg., ticket type, urgency). |
| **Exceptions** | Invalid priority selected:   1. System notifies the user and reverts to the last valid priority. |
| **Frequency of Use** | High |
| **Assumptions** | The support agent or manager has the knowledge to assess ticket priority. |

| **Use Case ID** | UC026 |
| --- | --- |
| **Use Case Name** | Send Ticket Escalation Notifications. |
| **Actor** | System, Support Agent, Support Manager |
| **Description** | The system sends automatic escalation notifications when a ticket exceeds predefined SLA limits or is not resolved within a specified time frame. |
| **Pre-condition** | SLA limits and escalation rules are configured. |
| **Post-condition** | Escalation notifications are sent. |
| **Normal Flow of events/Basic Flow/Happy Path** | The system monitors ticket progress against SLA limits.  The system identifies tickets approaching or breaching their SLA limits.  The system sends escalation notifications to the assigned support agent and manager. |
| **Alternative Flow** | User manually triggers an escalation for high-priority tickets. |
| **Exceptions** | Notification fails to send:   1. The system retries sending the notification after a set period. |
| **Frequency of Use** | Medium |
| **Assumptions** | SLA rules are well-defined and accurately configured. |

| **Use Case ID** | UC027 |
| --- | --- |
| **Use Case Name** | Attach Files to a Ticket |
| **Actor** | End-User, Support Agent, System |
| **Description** | Users can attach files (eg., screenshots, logs, documents) to a ticket to provide additional context or information for the support agent. |
| **Pre-condition** | Ticket exists and the user has proper permissions to attach files. |
| **Post-condition** | The selected files are uploaded and attached to the ticket. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system and navigates to the ticket.  User clicks on “Attach File”.  System prompts the user to browse and select a file.  User selects the file and clicks “Upload”.  The system uploads the file and associates it with the ticket. |
| **Alternative Flow** | User attaches multiple files at once. |
| **Exceptions** | File upload fails due to size limitations:   1. System notifies the user and prevents the upload. |
| **Frequency of Use** | Low |
| **Assumptions** | The system supports the file types being uploaded. |

| **Use Case ID** | UC028 |
| --- | --- |
| **Use Case Name** | Assign Ticket to a Queue. |
| **Actor** | Support Agent, Support Manager, System. |
| **Description** | Tickets are assigned to specific queues (eg., technical support, billing issues) for appropriate handling based on the issue type. |
| **Pre-condition** | Tickets must be open and ready to be assigned to a queue. |
| **Post-condition** | Ticket is assigned to the appropriate queue. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent or manager logs into the system.  Support agent or manager selects a ticket and clicks “Assign to Queue”.  System displays a list of available queues.  Support agent or manager selects the appropriate queue.  System assigns the ticket to the selected queue and notifies the relevant support team. |
| **Alternative Flow** | System automatically assigns tickets to predefined queues based on the issue type. |
| **Exceptions** | Queue is full or unavailable:   1. System alerts the user to select another queue or reassign the ticket manually. |
| **Frequency of Use** | Medium |
| **Assumptions** | Support teams are aware of which queues handle specific types of tickets. |

| **Use Case ID** | UC029 |
| --- | --- |
| **Use Case Name** | View Ticket Statistics. |
| **Actor** | Manager, Support Staff, System. |
| **Description** | Managers and support staff view statistical data related to tickets, such as the number of open tickets, average resolution time, etc. |
| **Pre-condition** | Data must exist in the system for the selected timeframe. |
| **Post-condition** | Ticket statistics are displayed successfully. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system and navigates to the “Ticket Statics” section.  System displays various statistical metrics (eg., open tickets, resolved tickets, average resolution time). |
| **Alternative Flow** | Users filter the statistics by date, ticket type, or priority. |
| **Exceptions** | Data fails to load due to an error:   1. System displays an error message and suggests retrying. |
| **Frequency of Use** | Medium |
| **Assumptions** | The system accurately tracks and processes ticket statistics. |

| **Use Case ID** | UC030 |
| --- | --- |
| **Use Case Name** | Log Ticket Comments. |
| **Actor** | Support Agent, End-User, System. |
| **Description** | Support agents and users can log comments on a ticket to communicate updates, clarifications, or additional information. |
| **Pre-condition** | Ticket exists, and the user has the necessary permissions to comment. |
| **Post-condition** | Comment is added to the ticket history. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system and navigates to a ticket.  User selects “Add Comment”.  User types the comment and clicks “Submit”.  System saves the comment and associates it with the ticket. |
| **Alternative Flow** | User attaches files to the comment before submitting. |
| **Exceptions** | Comment submission fails due to connectivity issues:   1. System displays an error message and prompts the user to retry. |
| **Frequency of Use** | Low |
| **Assumptions** | Users have the knowledge to provide relevant and useful comments. |

| **Use Case ID** | UC031 |
| --- | --- |
| **Use Case Name** | Assign Ticket to an Agent. |
| **Actor** | Support Manager, Support Agent, System. |
| **Description** | Support managers, Support Agent, System. |
| **Pre-condition** | Tickets must be unresolved and need assignment. |
| **Post-condition** | Ticket is assigned to the selected agent. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support manager or agent logs into the system.  Support manager or agent opens the ticket that needs to be assigned.  System displays available agents.  Support manager or agent selects an agent and assigns the ticket.  System updates the ticket with the new assigned agent and sends a notification to the agent. |
| **Alternative Flow** | System automatically assigns the ticket to the most available agent based on workload. |
| **Exceptions** | No agents are available for assignment:   1. System notifies the user and suggests retrying later. |
| **Frequency of Use** | Low |
| **Assumptions** | Agents are available for assignment and have the necessary skills to resolve the issue. |

| **Use Case ID** | UC032 |
| --- | --- |
| **Use Case Name** | View Ticket History. |
| **Actor** | End-User, Support Agent, Support Manager, System. |
| **Description** | Users can view the history of a ticket, including comments, status changes, and assigned agents. |
| **Pre-condition** | Tickets must exist in the system. |
| **Post-condition** | History information is displayed to the user. |
| **Normal Flow of events/Basic Flow/Happy Path** | Users logs into the system.  User navigates to a ticket and clicks on “View History”.  System displays a detailed timeline of the ticket, including status updates, comments, and assignments. |
| **Alternative Flow** | Users filter the history by date or event type (eg., only status changes or only comments). |
| **Exceptions** | History data is not available:   1. System displays an error message indicating that no history is available for the selected ticket. |
| **Frequency of Use** | Medium. |
| **Assumptions** | The system maintains an accurate record of ticket history. |

| **Use Case ID** | UC033 |
| --- | --- |
| **Use Case Name** | Add Ticket Tags. |
| **Actor** | Support Agent, Support Manager, System. |
| **Description** | Users can add tags to tickets to categorize them based on issue type or other relevant attributes. |
| **Pre-condition** | The user must have the necessary permissions to add tags. |
| **Post-condition** | Tags are added to the ticket and saved in the system. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User opens a ticket and clicks on “Add Tags”.  System prompts the user to enter tags.  User enters tags and submits.  System associates the tags with the ticket and saves them. |
| **Alternative Flow** | System suggests pre-configured tags based on the tickets category. |
| **Exceptions** | Tags cannot be added due to system restrictions:   1. System displays an error message and prevents the action. |
| **Frequency of Use** | Low |
| **Assumptions** | Tags are predefined, or users can create new ones. |

| **Use Case ID** | UC034 |
| --- | --- |
| **Use Case Name** | Create a Knowledge Base Article. |
| **Actor** | Support Agent, Support Manager, System. |
| **Description** | Support agents or managers can create knowledge base articles to assist in resolving recurring issues. |
| **Pre-condition** | The user must have knowledge base creation permissions. |
| **Post-condition** | The article is added to the knowledge base and accessible to support agents. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent or manager logs into the system.  Support agent or manager navigates to the knowledge base section.  Support agent or manager clicks on “Create Article”.  System prompts the user to enter article details (eg., title, description, steps).  Support agent or manager submits the article.  System saves the article and makes it available for future reference. |
| **Alternative Flow** | User attaches relevant files or screenshots to the article. |
| **Exceptions** | Article submission fails due to missing mandatory fields:   1. System displays an error message and prevents submission. |
| **Frequency of Use** | Medium. |
| **Assumptions** | Support agents have the necessary knowledge to create useful articles. |

| **Use Case ID** | UC035 |
| --- | --- |
| **Use Case Name** | Search Knowledge Base. |
| **Actor** | End-User, Support Agent, System. |
| **Description** | Users can search for existing knowledge base articles to find solutions to recurring issues. |
| **Pre-condition** | The knowledge base must be populated with articles. |
| **Post-condition** | The user is presented with search results. |
| **Normal Flow of events/Basic Flow/Happy Path** | User logs into the system.  User navigates to the knowledge base section.  User enters a search term or topic.  System displays a list of matching articles.  User selects an article to view. |
| **Alternative Flow** | User refines the search using filters (eg., date, category). |
| **Exceptions** | No results found:   1. System displays a message indicating that no articles match the search. |
| **Frequency of Use** | Low. |
| **Assumptions** | The knowledge base is regularly updated with new articles. |

| **Use Case ID** | UC036 |
| --- | --- |
| **Use Case Name** | Monitor Ticket SLA Compliance |
| **Actor** | Support Manager, System. |
| **Description** | Managers monitor whether tickets meet their SLA targets for timely resolution. |
| **Pre-condition** | Tickets must have defined SLAs and be actively tracked. |
| **Post-condition** | SLA compliance data is displayed for review. |
| **Normal Flow of events/Basic Flow/Happy Path** | Manager logs into the system and navigates to the “SLA Compliance” dashboard.  System displays the current status of all open tickets in relation to their SLA.  Manager reviews the SLA compliance for each ticket. |
| **Alternative Flow** | Manager applies filters to view only high-priority tickets or tickets approaching SLA breaches. |
| **Exceptions** | System cannot retrieves SLA data due to an error:   1. System displays an error message and prompts the user story to retry. |
| **Frequency of Use** | Low. |
| **Assumptions** | SLAs are configured for each ticket type. |

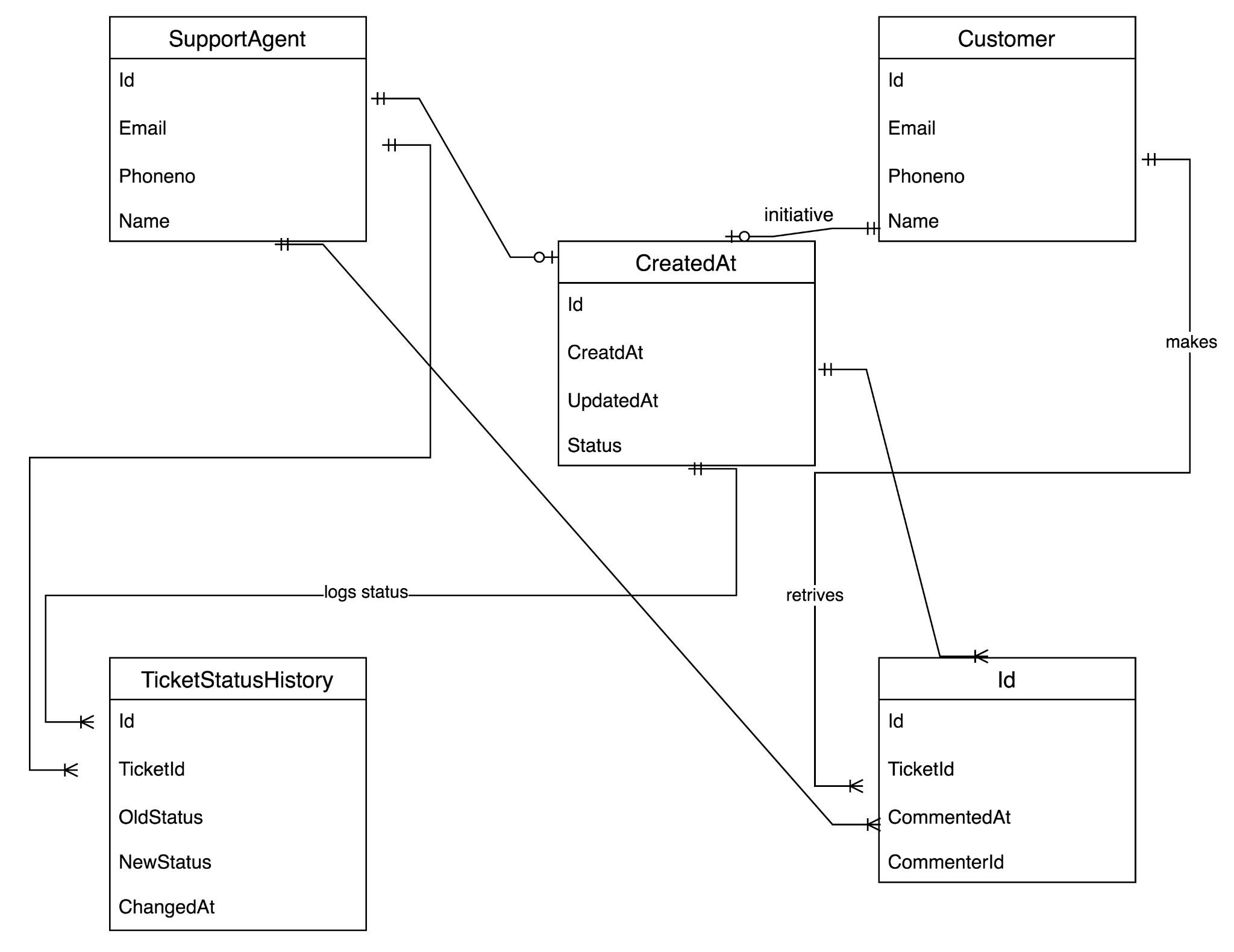
| **Use Case ID** | UC037 |
| --- | --- |
| **Use Case Name** | Create Custom Ticket Fields. |
| **Actor** | Administrator, System. |
| **Description** | Administrators can create custom fields to capture additional information when tickets are created. |
| **Pre-condition** | Administrator has necessary permissions to configure the system. |
| **Post-condition** | Custom fields are added to the ticket creation form. |
| **Normal Flow of events/Basic Flow/Happy Path** | Administrator logs into the system and navigates to the ticket configuration settings.  Administrator selects “Create Custom Field”.  System prompts the administrator to define the field type (eg., text, dropdown, date).  Administrator defines the custom field details (name, type, options).  System saves the custom field and makes it available for ticket creation. |
| **Alternative Flow** | Administrator creates multiple custom fields in a batch. |
| **Exceptions** | Invalid custom field type selected:   1. System displays an error message and prompts for valid input. |
| **Frequency of Use** | Medium. |
| **Assumptions** | Custom fields are used to gather relevant data for specific business processes. |

| **Use Case ID** | UC038 |
| --- | --- |
| **Use Case Name** | Close Ticket |
| **Actor** | Support Agent, Support Manager, System. |
| **Description** | Support agents or managers can close a ticket when the issue is resolved and no further action is required. |
| **Pre-condition** | Tickets must be in a resolved status. |
| **Post-condition** | Ticket is marked as “Closed” in the system. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent or manager logs into the system.  Support agent or manager reviews the ticket details to ensure the issue is resolved.  Support agent or manager clicks “Close Ticket”.  System prompts for confirmation.  Support agent or manager confirms.  System updates the ticket status to “Closed” and notifies the user. |
| **Alternative Flow** | Ticket is closed automatically after all required fields are filled out. |
| **Exceptions** | Ticket cannot be closed due to incomplete information:   1. System alerts the user and prevents closure until all required data is provided. |
| **Frequency of Use** | Low. |
| **Assumptions** | The ticket is fully resolved and does not require additional follow-up. |

| **Use Case ID** | UC039 |
| --- | --- |
| **Use Case Name** | Reopen Ticket. |
| **Actor** | Support Agent, System. |
| **Description** | Support agents can reopen a closed or resolved ticket if the customer reports an ongoing issue. |
| **Pre-condition** | The ticket must be in a closed or resolved status. |
| **Post-condition** | Ticket is reopened and becomes active for further resolution. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support agent logs into the system and navigates to the closed ticket.  Support agent reviews the ticket details.  Support agent clicks “Reopen Ticket”.  System changes the ticket status to “Open” and notifies the assigned agent. |
| **Alternative Flow** | System automatically reopens tickets if a new comment is added within 48 hours of closure. |
| **Exceptions** | Ticket cannot be reopened due to system restrictions:   1. System displays an error message and provides options for support. |
| **Frequency of Use** | Medium. |
| **Assumptions** | The customer has reported an ongoing issue or dissatisfaction. |

| **Use Case ID** | UC040 |
| --- | --- |
| **Use Case Name** | Generate Ticket Reports. |
| **Actor** | Support Manager, System. |
| **Description** | Support managers can generate reports on ticket performance, including resolution times, SLA compliance, and ticket volumes. |
| **Pre-condition** | The system must have sufficient ticket data for reporting. |
| **Post-condition** | Report is generated and available for review or export. |
| **Normal Flow of events/Basic Flow/Happy Path** | Support manager logs into the system and navigates to the reports section.  Support manager selects the type of report (eg., resolution time, SLA compliance).  System generates the requested report and displays it.  Support manager reviews the report and exports it if necessary. |
| **Alternative Flow** | System allows filtering the data based on date ranges or other criteria. |
| **Exceptions** | Report generation fails due to system overload:   1. System notifies the user and prompts for retry. |
| **Frequency of Use** | High. |
| **Assumptions** | Reports are accurate and reflect real-time ticketing data. |

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

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

| **User Story No:** 01 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to browse products by category  So that I can quickly find items of interest. | | |
| **BV:** 500 | **CP:** 02 | |
| **Acceptance Criteria:**  - Categories are displayed on the homepage and the product listing page.  - Users can filter products within a selected category. | | |

| **User Story No:** 02 | **Tasks: 02** | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to search for products using a search bar  so that I can find specific items quickly. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - The search bar is visible and functional on the homepage.  - Search results are displayed within 2 seconds after submission. | | |

| **User Story No:** 03 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to sort products based on price or popularity  So that I can make an informed choice. | | |
| **BV:** 500 | **CP:** 02 | |
| **Acceptance Criteria:**  - Sorting options are available on product listing pages.  - Products are sorted correctly based on the selected criteria. | | |

| **User Story No:** 04 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to see detailed information about a product so that I can decide whether to buy it . | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - The product page includes images, price, description, and reviews.  - “Add to Cart” and “Buy Now” buttons are visible and functional. | | |

| **User Story No:** 05 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to leave a review for a product  So that I can share my feedback with other users. | | |
| **BV:** 200 | **CP:** 02 | |
| **Acceptance Criteria:**  - Customers can submit reviews and ratings after purchasing a product.  - Reviews are displayed on the product details page. | | |

| **User Story No:** 06 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to add products to my shopping cart  So that I can purchase multiple items at once. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Items are added to the cart with correct quantity and pricing.  - Users can view, update, or remove items from the cart. | | |

| **User Story No:** 07 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to log in securely  So that my personal information is protected. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can sign up, log in, and reset passwords securely.  - Passwords are encrypted, and two-factor authentication is available. | | |

| **User Story No:** 08 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to save items to a wishlist  So that I can purchase them later. | | |
| **BV:** 500 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can add, view, and remove items from the wishlist.  - Wishlist items persist even after logout. | | |

| **User Story No:** 09 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want a secure and easy checkout process  So that I can complete my purchase confidently. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can enter billing and shipping details securely.  - Payment is processed securely using industry standards. | | |

| **User Story No:** 10 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to choose my preferred payment method  So that I can complete my purchase conveniently. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Payment gateway supports credit card, Paypal, and digital wallets.  - Transactions are processed within 5 seconds. | | |

| **User Story No:** 11 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to compare products side-by-side  So that I can choose the best option. | | |
| **BV:** 200 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can select up to three products to compare.  - Key attributes are displayed for easy comparison. | | |

| **User Story No:** 12 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to check out as a guest  So that I can make a quick purchase without creating an account. | | |
| **BV:** 500 | **CP:** 01 | |
| **Acceptance Criteria:**  - Users can complete the checkout process without signing in.  - Guest users can track orders using email and order ID. | | |

| **User Story No:** 13 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to track my orders  So that I can know when they will arrive. | | |
| **BV:** 1000 | **CP:** 03 | |
| **Acceptance Criteria:**  - Users can view the status of their orders in real-time.  - Notifications are sent for key updates (eg., shipped, out for delivery). | | |

| **User Story No:** 14 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to see related products  So that I can discover complementary items. | | |
| **BV:** 200 | **CP:** 02 | |
| **Acceptance Criteria:**  - Related products are displayed dynamically based on user behaviour.  - Clicking on a related product redirects to its details page. | | |

| **User Story No:** 15 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to receive notifications about my order status  So that I stay informed. | | |
| **BV:** 500 | **CP:** 03 | |
| **Acceptance Criteria:**  - Notifications are sent for order confirmation, shipping, and delivery.  - Users can opt-in or opt-out of notifications. | | |

| **User Story No:** 16 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to filter my search results  So that I can refine my product search efficiently. | | |
| **BV:** 500 | **CP:** 02 | |
| **Acceptance Criteria:**  - Filters for price range, brand, and ratings are available.  - Results update dynamically based on selected filters. | | |

| **User Story No:** 17 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to view my past orders  So that I can reorder items easily. | | |
| **BV:** 200 | **CP:** 01 | |
| **Acceptance Criteria:**  - Users can view a list of their completed orders.  - Clicking on an order shows detailed information, including items and total cost. | | |

| **User Story No:** 18 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to earn rewards for my purchase  So that I feel valued. | | |
| **BV:** 500 | **CP:** 01 | |
| **Acceptance Criteria:**  - Users earn points for each purchase.  - Points can be redeemed for discounts during checkout. | | |

| **User Story No:** 19 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As a customer,  I want to apply promo codes during checkout  So that I can save money. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can enter promo codes at checkout.  - Discounts are applied correctly, and the updated total is displayed. | | |

| **User Story No:** 20 | **Tasks:** 02 | **Priority:** Low |
| --- | --- | --- |
| As a global customer,  I want to view the site in my preferred language  So that I can shop confidently. | | |
| **BV:** 100 | **CP:** 01 | |
| **Acceptance Criteria:**  - Users can select their preferred language from a dropdown menu.  - All test content updates dynamically based on the selected language. | | |

| **User Story No:** 21 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer, I want to see related items frequently purchased with the product  So that I can bundle my purchase. | | |
| **BV:** 200 | **CP:** 02 | |
| **Acceptance Criteria:**  - Frequently bought items are displayed dynamically on the product page.  - Users can add all items to the cart with one click. | | |

| **User Story No:** 22 | **Tasks:** 01 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to schedule a delivery time  So that I can receive my order at a convenient time. | | |
| **BV:** 500 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can select preferred delivery dates and time slots during checkout.  - Delivery preferences are confirmed in the order summary. | | |

| **User Story No:** 23 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to receive notifications when a product is back in stock  So that I don’t miss out. | | |
| **BV:** 1000 | **CP:** 01 | |
| **Acceptance Criteria:**  - Users can subscribe to back-in-stock alerts.  - Notifications are sent via email or SMS when the product becomes available. | | |

| **User Story No:** 24 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to update my personal information  So that my profile is accurate. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can update their name, address, and contact details.  - Changes are saved and reflected immediately. | | |

| **User Story No:** 25 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to see the shipping cost before completing my purchase  So that I know the total expense. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Shipping costs are calculated dynamically based on the delivery location.  - The total cost, including shipping, is displayed in the cart. | | |

| **User Story No:** 26 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As an international customer,  I want to see prices in my local currency  So that I can understand costs better. | | |
| **BV:** 500 | **CP:** 03 | |
| **Acceptance Criteria:**  - Users can select their preferred currency from a dropdown menu.  - Prices and totals update dynamically based on the selected currency. | | |

| **User Story No:** 27 | **Tasks:** 02 | **Priority:** Low |
| --- | --- | --- |
| As a customer,  I want to share products on social media  So that I can recommend them to others. | | |
| **BV:** 100 | **CP:** 01 | |
| **Acceptance Criteria:**  - Product pages have social media sharing buttons (eg., Facebook, Twitter, Instagram).  - Clicking a button opens a pre-filled post with the product link. | | |

| **User Story No:** 28 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to refer my friends and earn rewards  So that I feel incentivized to promote the site. | | |
| **BV:** 500 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users receive unique referral codes.  - Referrals result in discounts or rewards for both parties. | | |

| **User Story No:** 29 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want personalized recommendations  so that I can discover products I like. | | |
| **BV:** 1000 | **CP:** 01 | |
| **Acceptance Criteria:**  - Recommendations are displayed based on browsing and purchase history.  - Recommendations refresh dynamically as users interact with the site. | | |

| **User Story No:** 30 | **Tasks:** 02 | **Priority:** Low |
| --- | --- | --- |
| As a customer,  I want to read product-related guides  So that I can make informed decisions. | | |
| **BV:** 200 | **CP:** 01 | |
| **Acceptance Criteria:**  - Blogs are categorized and accessible from the homepage.  - Users can search for specific topics within the blog section. | | |

| **User Story No:** 31 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a bulk buyer,  I want to order large quantities of items easily  So that I can manage my purchase efficiently. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can specify bulk quantities for products.  - Discounts for bulk orders are applied automatically at checkout. | | |

| **User Story No:** 32 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want instant help through live chat  So that I can resolve any queries quickly. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Live chat is accessible from the footer or help section.  - Responses are sent within 30 seconds of initiating the chat. | | |

| **User Story No:** 33 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to revisit products I recently viewed  So that I can make decisions more easily. | | |
| **BV:** 500 | **CP:** 01 | |
| **Acceptance Criteria:**  - Recently viewed products are displayed dynamically on the homepage or product listing page.  Items persist for the session or up to 24 hours. | | |

| **User Story No:** 34 | **Tasks:** 02 | **Priority:** Low |
| --- | --- | --- |
| As a customer,  I want to filter for eco-friendly products  So that I can make environmentally conscious purchases. | | |
| **BV:** 200 | **CP:** 03 | |
| **Acceptance Criteria:**  - An “eco-friendly” filter is available in product search.  - Only products tagged as sustainable appear when the filter is applied. | | |

| **User Story No:** 35 | **Tasks:** 02 | **Priority:** High |
| --- | --- | --- |
| As an admin,  I want to manage product inventory efficiently  So that stock levels are accurate. | | |
| **BV:** 1000 | **CP:** 03 | |
| **Acceptance Criteria:**  - Admins can view, add, update, or remove products.  - Low-stock alerts are generated automatically. | | |

| **User Story No:** 36 | **Tasks:** 02 | **Priority:** Low |
| --- | --- | --- |
| As a customer,  I want to add gift-wrapping and a message to my order  So that I can send personalized gifts. | | |
| **BV:** 200 | **CP:** 02 | |
| **Acceptance Criteria:**  - Users can select gift wrapping during checkout.  Users can enter a personalized message up to 250 characters. | | |

| **User Story No:** 37 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to subscribe to recurring purchase  So that I don’t have to reorder frequently used items manually. | | |
| **BV:** 500 | **CP:** 01 | |
| **Acceptance Criteria:**  - Users can select subscription options (eg., weekly, monthly).  - Subscriptions can be paused, modified, or canceled at any time. | | |

| **User Story No:** 38 | **Tasks:** 02 | **Priority:** Low |
| --- | --- | --- |
| As a customer,  I want location-specific product recommendations  So that I can discover items relevant to my area. | | |
| **BV:** 200 | **CP:** 01 | |
| **Acceptance Criteria:**  - Recommendations are tailored based on the users location.  - Location data is obtained with consent and is updateable. | | |

| **User Story No:** 39 | **Tasks:** 02 | **Priority:** Medium |
| --- | --- | --- |
| As a customer,  I want to see an estimated delivery date  So that I can plan accordingly. | | |
| **BV:** 1000 | **CP:** 02 | |
| **Acceptance Criteria:**  - Delivery dates are displayed based on the shipping method and location.  - Estimates are updated dynamically for different delivery options. | | |

| **User Story No:** 40 | **Tasks:** 01 | **Priority:** High |
| --- | --- | --- |
| As a customer with accessibility needs,  I want to use an inclusive interface  So that I can shop comfortably. | | |
| **BV:** 1000 | **CP:** 01 | |
| **Acceptance Criteria:**  - Features include screen reader support, high-contrast mode, and keyboard navigation. | | |