

A company is having manufacturing plants and warehouses in various parts of the country. They manufacture ice-cream and milk products. They want to build software to achieve two goals.

Manage the inventory

Quickest delivery to the customers

Assignment 1:

1. Please make a BRD which can be presented to the client along with complete development and resource plan.
2. Prepare process flow diagram using your imagination.

Assignment 1

Development Plan

The development plan outlines the phases, tasks, deliverables, and timelines for building the Inventory and Delivery Management System.

Enterprise Analysis: Gap Analysis, Risk analysis, Business case, Business process model, Feasibility study

Requirement Gathering

- Identify stakeholders using RACI MATRIX
- Meet the stakeholders.
- Understand current problems and how each department works.
- Gather requirements using Brainstorming, Interviews, Questionnaires, Observation, Document Analysis, Prototyping
- Timeline : 2 weeks

Requirement Analysis

- Analyze the collected information.
- Document functional and non-functional requirements (Data security, User role management, System performance).
- Prioritize features using MoSCoW technique.
- Create BRD, FRD, SRS, RTM.

- Develop high-level system architecture.
- Design database schema for inventory, orders, and deliveries
- Finalize scope and get approval.
- Timeline : 2 weeks

Design:

- Work with technical team to design:
- Database structure
- User interface layout
- Prepare RTM,End User manual
- Create Use Case Diagrams,Sequence Diagram,Data Flow Diagrams,Mockups,Wireframes
- Timeline : 4 weeks

Coding:

- Clarify doubts of team
- Communicate requirements using UML diagrams
- Implement modules for inventory, order, and delivery management.
- Build automated alerts and notifications.
- Develop reporting and analytics dashboards.
- Implement role-based access control.
- Update RTM,End User manuals
- Timeline : 3 Months

Testing:

- Prepare Test cases
- Conduct testing for each module.
- Perform system integration testing.
- User Acceptance Testing (UAT) with key stakeholders.
- Fix defects and optimize performance.
- Update RTM,End User manual
- Timeline: 2 Months

Deployment and Implementation:

- Forward RTM,End User manual to client
- Conduct training sessions for users
- Assist deployment and implemenetation

- Set up monitoring and support mechanisms.
- Timeline : 4 weeks

Resource Plan

Resources Required for Inventory and Delivery Management System Project

Human Resources (10 People)

| Role | Responsibility |
|-----------------------------------|--|
| Business Analyst | Gathers requirements, creates documentation, and connects users with developers. |
| Project Manager | Plans the project, manages timeline, budget, and team coordination. |
| Developers | Build the IADMS modules. |
| UI/UX Designers, DB Arch, NW Arch | Design user-friendly screens for staff. |
| Testers (QA) | Test the system for errors and verify that it meets all requirements. |

Time Resources

Time allotted for this project is 8 months

| Activity | Estimated Timeframe |
|-----------------------|---------------------|
| Requirement Gathering | 4 weeks |
| Design & Planning | 4 weeks |

| | |
|-------------------------|----------|
| Development | 3 Months |
| Testing | 2 Months |
| Training and deployment | 4 weeks |

Technical Resources

| Resource | Purpose |
|--------------------------|---|
| Laptops/Desktops | For development, testing |
| Servers or Cloud System | To host the Inventory Management System securely. |
| Database Software | To store inventory records, billing, and reports (e.g., MySQL, SQL Server). |
| Development and BA Tools | For coding and BA |
| Testing Tools | For checking system quality |
| Backup Tools | For saving inventory and delivery data securely in case of failure. |

Financial Resources

The budget allotted for this project is 15000000

| Purpose | Cost Area | Cost |
|---------------------------|-------------------------------------|----------|
| Software Development Cost | Developers, licensing tools, salary | 10000000 |

| | | |
|---------------------------|------------------------------------|---------|
| Hardware & Infrastructure | Servers, computers | 2500000 |
| Training, test | Manuals, trainers, tools, database | 1000000 |
| Maintenance & Upgrades | Bug fixes and improvements | 1500000 |



admin

<INVENTORY AND DELIVERY MANAGEMENT SYSTEM>

<IADMSID1286>

<V1.0>

<MONISHA MOUDIVENDER>

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1.DOCUMENT REVISION

| Date | Version Number | Document Changes |
|------------|----------------|--|
| 1/12/2024 | 0.1 | Initial Draft |
| 14/12/2024 | 0.2 | Updates following informal review |
| 20/12/2024 | 0.3 | Updates following first informal review |
| 02/01/2025 | 0.4 | Updates following second informal review |
| 26/01/2025 | 1 | Approved |
| | | |
| | | |

2.Approvals

| Role | Name | Title | Signature | Date |
|----------------------|--------------------|----------------------|-----------|-----------|
| Project Sponsor | David George | Project Sponsor | DG | 20.1.2025 |
| Business Owner | Antony Mary Felixa | Business Owner | AM | 20.1.2025 |
| Project Manager | Kumar | Project Manager | BR | 15.1.2025 |
| System Architect | Dinesh | System Architect | FD | 13.1.2025 |
| Development Lead | Kannan | Development Lead | MM | 12.1.2025 |
| User Experience Lead | Mary | User Experience Lead | SM | 11.1.2025 |
| Quality Lead | Pragalathan | Quality Lead | PG | 10.1.2025 |
| Content Lead | Keerthi | Content Lead | KT | 10.1.2025 |

1.RACI Chart for This Document

The RACI chart identifies the persons who need to be contacted whenever changes are made to this document. RACI stands for responsible, accountable, consulted, and informed. These are the main codes that appear in a RACI chart, used here to describe the roles played by team members and stakeholders in the production of the BRD. They are adapted from charts used to assign roles and responsibilities during a project.(RACI Can be made for IT side[Project stakeholder] as mentioned above, apart from that Can also Be made for Client side[Business Stakeholder]).

The following describes the full list of codes used in the table:

Codes Used in RACI Chart

| | | |
|---|-------------|---|
| * | Authorize | Has ultimate signing authority for any changes to the document. |
| R | Responsible | Responsible for creating this document. |
| A | Accountable | Accountable for accuracy of this document (for example, the project manager) |
| S | Supports | Provides supporting services in the production of this document |
| C | Consulted | Provides input (such as an interviewee). |
| I | Informed | Must be informed of any changes. |

Raci Chart

| Name | Position | Planning | Requirement gathering | Design | Development | Testing | UAT | Deployment |
|----------------|------------------|----------|-----------------------|--------|-------------|---------|-----|------------|
| David George | Project Sponsor | I | I | I | I | I | I | I |
| Bernard Raj | Project Manager | A | C | C | I | I | A | A |
| Monisha | Business Analyst | C | R | C | C | C | R | C |
| Fredrick Davis | System Analyst | R | I | R | C | I | I | I |
| Priscilla | Developer | I | I | I | R | I | C | C |
| Priya | Tester | I | I | I | I | R | C | C |

4. Introduction

The purpose of this Business Requirements Document (BRD) is to define and capture the business needs, goals, and requirements for the development and implementation of the application. This document serves as a formal agreement between stakeholders—including business users, project sponsors, and the development team—outlining what the system must deliver to support business operations effectively.

Project Overview

Inventory & Delivery Management System for The Milkyway Ice-Cream and Milk Products company operates multiple manufacturing plants and warehouses across the region. Due to the perishable nature of dairy products, the company faces challenges in managing inventory efficiently and ensuring timely delivery to customers. Delays in stock movement or delivery not only affect customer satisfaction but also result in wastage of products. To address these challenges, the organization has initiated the development of a centralized Inventory and Delivery Management System to streamline

inventory management across manufacturing plants and warehouses. To enable the quickest delivery of products to customers.

Intended Audience

This document is intended for:

Company Management and Administrative Staff

Plant Manager, Warehouse Manager, Logistics/Delivery Team

IT Development and QA Teams

Business Analysts and Project Managers

4.1. Business Goals

Organization Goals

The high-level goals the company wants to achieve through this project:

- Centralized tracking of inventory (raw materials, semi-finished goods, finished goods).
- Optimize stock movement between manufacturing plants and warehouses.
- Reduce delivery time by integrating route optimization and real-time order tracking.
- Provide management dashboards for demand forecasting and reporting.

Organizational Need

- Real-time inventory tracking and expiry monitoring.
- Automated stock alerts to prevent shortages/wastage.
- Digital process to reduce manual errors.
- Efficient warehouse and stock movement management.
- End-to-end delivery tracking with route optimization.
- Real-time order and delivery status updates.
- Reports and forecasts for better decision-making.
- Improved customer satisfaction and service quality.

4.2. Business Objectives

The primary objective of this project is to streamline the organization's inventory and delivery operations by implementing a digital system that ensures accurate stock tracking, efficient order fulfillment, and timely deliveries. This will reduce operational errors, minimize wastage, improve customer satisfaction, and support data-driven business decisions to enhance overall profitability.

Functionalities to be Developed in the IADMS Software:

- **Inventory Management:** Track stock levels, manage product batches, and monitor expiry dates.
- **Automated Alerts:** Notify for low stock, expired items, or overstock situations.
- **Order Management:** Create, update, and track customer orders from placement to delivery.
- **Delivery Management:** Assign deliveries, optimize routes, and provide real-time status updates.
- **Reporting & Analytics:** Generate inventory, sales, and delivery performance reports; support demand forecasting.
- **User Access Control:** Role-based permissions for staff to ensure secure system access.
- **Customer Notifications:** Inform customers of order confirmation, dispatch, and delivery status.

4.3. Business Rules

Organization Policies and Procedures

1. Inventory Management Rules

Every stock entry must have a unique Batch ID and Expiry Date.

Products must be automatically flagged as "Near Expiry" 15 days before their expiry date.

System should not allow dispatch of expired products.

Minimum reorder level must be set for each product category (e.g., Milk: 200 units, Ice-Cream: 500 units).

2. **Order & Delivery Rules**

Delivery time for urban locations should not exceed 24 hours, and for rural locations 48 hours.

Delivery assignments must be auto-allocated based on nearest warehouse availability.

Each delivery must be tracked with a unique Delivery ID.

3. **User Access Rules**

Warehouse managers can update stock levels but cannot edit sales orders.

Delivery staff can update delivery status but cannot modify order details.

Only administrators can update pricing and product master data.

4. **Reporting & Compliance Rules**

Daily inventory and sales reports must be generated automatically at end of business day.

Audit logs must capture who updated/approved stock movements.

All data must be retained for a minimum of 5 years for compliance purposes.

Rules & Regulations

- All inventory entries must be accurate and updated in real-time.
- Products with expired or damaged stock must be flagged and removed immediately.
- Only authorized personnel can modify inventory and delivery records.
- Delivery assignments must follow optimized routes to ensure timely fulfillment.
- Customer orders and delivery details must comply with privacy and data protection policies.

- All financial transactions related to inventory and delivery must follow organizational accounting rules.
- Regular audits of inventory and delivery processes must be conducted to ensure compliance.
- System access and changes must comply with role-based permissions and security protocols.

4.4. Background

The Ice-Cream and Milk Products company operates multiple manufacturing plants and distribution warehouses across different regions. Being in the dairy and ice-cream sector, the company deals with perishable products that have a limited shelf life, making timely distribution and efficient inventory management critical for business success.

Problems:

Currently, the company faces challenges such as:

- Lack of real-time visibility of stock across plants and warehouses.
- Manual processes leading to errors in tracking production and dispatch.
- Delays in product deliveries, resulting in customer dissatisfaction.
- Wastage of products due to overstocking or expired goods.

Expected Benefits of Implementing the Project

- Real-time inventory tracking across all locations.
- Optimized delivery scheduling and routing to reduce delays.
- Automated alerts for low stock and expiry dates.
- Dashboards and reports for demand forecasting and decision-making.

4.5. Project Objective

Goal

- **Efficient Order Management:** Develop a system to handle customer orders quickly and accurately, reducing manual errors and wait times.
- **Inventory Tracking:** Implement real-time inventory management to track stock levels of ice cream flavors, toppings, and supplies, preventing shortages or overstocking.
- **Sales Reporting and Analytics:** Provide detailed sales reports and analytics to help store management make informed business decisions.
- **User-Friendly Interface:** Ensure the system is easy to use for store staff and supports quick training and adoption.
- **Scalability:** Design the system to support future expansion, such as adding new stores or online ordering capabilities.

High-Level Descriptions of What the Product Will Do:

The Inventory and Delivery Management System is a digital solution designed to manage and streamline the organization's stock and delivery operations. The system will track inventory in real-time, monitor product expiry, generate alerts for low stock, and ensure efficient order fulfillment. It will manage delivery assignments, optimize routes, and provide real-time updates to customers. Additionally, the system will generate reports and analytics to support decision-making, improve operational efficiency, reduce wastage, over stock and enhance overall customer satisfaction.

Alignment with Business Objectives:

The Inventory and Delivery Management System aligns directly with the organization's business objectives by:

- Ensuring accurate inventory tracking to reduce wastage and stockouts, supporting cost efficiency.
- Streamlining order and delivery processes to improve customer satisfaction and service quality.
- Providing real-time reports and analytics to enable data-driven decisions, supporting business growth.
- Enhancing operational efficiency through automation, reducing manual errors and saving time.
- Supporting scalable business operations, enabling expansion and improved market competitiveness.

Requirements for Interaction with Other Systems:

- **Point-of-Sale Systems:** The system must integrate with existing POS software to automatically update inventory levels when sales occur.
- **Accounting Systems:** Must exchange data on stock costs, sales, and delivery charges for accurate financial reporting.
- **Supplier Systems:** Should communicate purchase orders, stock replenishments, and delivery schedules with suppliers.
- **Reporting & Analytics Tools:** Provide data feeds for dashboards and management reports.

4.6. Project Scope

What we are going to develop in the current project

- **Inventory Management:** Real-time tracking of stock levels, batch numbers, and expiry dates.
- **Delivery Management:** Assigning deliveries, optimizing routes, and providing real-time status updates to customers.
- **Alerts & Notifications:** Automated alerts for low stock, expired products, and delivery updates.
- **Reporting & Analytics:** Generating inventory, sales, and delivery performance reports to support decision-making.
- **User Access Control:** Role-based permissions for secure access and operation.
- **Integration:** Interfacing with POS, accounting and logistics platforms.

4.6.1. In Scope Functionality

- **Inventory and Delivery Management:**

Track ice cream flavors, toppings, cones, and other supplies.

Alert when stock is low.

Update and track delivery status

Optimize delivery route

- **Reporting & Analytics:**

Generate sales reports (daily, weekly, monthly).

Generate inventory usage reports.

- **User Interface:**

Easy-to-use interface for store staff.

Quick access to order, inventory, and reports.

4.6.2. Out of Scope Functionality

- Online ordering and delivery management.
- Integration with external accounting or ERP systems.
- Mobile app for customers.
- Automated marketing campaigns or promotions.
- Advanced AI-based features like predictive sales analytics.

5. Assumptions

- Users will have basic computer literacy.
- Internet and system infrastructure (hardware, Wi-Fi) will be available and maintained by the company.
- All departments will cooperate in providing access to existing workflows and processes.
- The company will assign a dedicated SPOC (Single Point of Contact) from each department for requirement validation and testing.
- Users will be available for UAT (User Acceptance Testing) and training sessions before go-live.
- Historical data migration will be limited to the last 2–3 years only.
- Legal and regulatory compliance inputs will be provided by the business management.

6. Constraints

- **Budget Constraint:** Total project budget is fixed and cannot exceed predefined financial limits.

- **Time Constraint:** Project delivery must be completed within the agreed timeline (e.g., 8 months).
- **Resource Constraint:** Limited availability of domain experts and IT staff for feedback and testing.
- **Technical Constraint:** System must run on existing infrastructure (servers, PCs, network).
- **Scope Constraint:** Only core functions are allowed in this phase; future phases will cover enhancements.

7. Risks

In this section of the BRD, you describe risks. A risk is something that could affect the success or failure of a project. Analyze risks regularly as the project progresses. While you may not be able to avoid every risk, you can limit each risk’s impact on the project by preparing for it beforehand. For each risk, you’ll note the likelihood of its occurrence, the cost to the project if it does occur, and the strategy for handling the risk.

Strategies include the following:

Avoid: Do something to eliminate the risk.

Mitigate: Do something to reduce damage if risk materializes.

Transfer: Pass the risk up or out to another entity.

Accept: Do nothing about the risk. Accept the consequences.

Technological Risks

This subsection of “Risk Analysis” specifies new technology issues that could affect the project.

| Risk | Strategy | Mitigation Plan |
|---|----------|---|
| Unfamiliarity with IADMS software frameworks | Mitigate | Use proven technologies; involve experienced IT vendors. |
| System incompatibility with existing hardware | Mitigate | Conduct hardware assessment and recommend minimal upgrades. |

| | | |
|--------------------------------------|----------|---|
| Data loss or breach during migration | Mitigate | Backup legacy data and encrypt all data transfers. |
| System downtime during deployment | Mitigate | Plan deployment during low-traffic hours; keep rollback plan ready. |

Skills Risks

This subsection of “Risk Analysis” specifies the risk of not having staff with the required expertise for the project.

| Risk | Strategy | Mitigation Plan |
|---|----------|---|
| Lack of technical expertise in development team | Mitigate | Hire experienced developers or engage IT service providers. |
| End users not trained to use the system | Avoid | Provide user training and easy-to-use interfaces. |
| Limited availability of stakeholders for UAT | Accept | Schedule early UAT and send reminders. |

Political Risks

This subsection of “Risk Analysis” identifies political forces that could derail or affect the project.

| Risk | Strategy | Mitigation Plan |
|--|----------|--|
| Change in hospital management or leadership priorities | Accept | Maintain clear documentation and sign-off at each stage. |

| | | |
|--|----------|---|
| Resistance from staff to change current manual process | Mitigate | Conduct awareness sessions and involve users early. |
|--|----------|---|

Business Risks

This subsection of “Risk Analysis” describes the business implications if the project is canceled.

| Risk | Strategy | Mitigation Plan |
|---|----------|---|
| Project cancellation due to budget reallocation | Transfer | Keep stakeholders informed of progress and ROI projections. |
| Failure to realize business value post-deployment | Mitigate | Define clear KPIs and ensure the system aligns with business goals. |

Requirements Risks

This subsection of “Risk Analysis” describes the risk that you have not correctly described the requirements. List areas whose requirements were most likely to have been incorrectly captured.

| Risk | Strategy | Mitigation Plan |
|--|----------|--|
| Incomplete or misunderstood requirements | Mitigate | Conduct workshops, walkthroughs, and get sign-offs. |
| Changing requirements mid-project | Mitigate | Set up a Change Control Board (CCB) and formal change request process. |

| | | |
|---------------------------------|----------|---|
| Poorly defined workflow details | Mitigate | Engage domain experts for detailed process mapping. |
|---------------------------------|----------|---|

Other Risks

In this subsection of “Risk Analysis,” document any other risks not covered in the prior subsections.

| Risk | Strategy | Mitigation Plan |
|---|----------|--|
| Delays due to third-party vendor dependency | Mitigate | Define clear SLAs |
| Network or infrastructure failure | Mitigate | Work with IT to ensure reliable hardware and backup systems. |
| Lack of user adoption post-go-live | Mitigate | Provide training, feedback loops, and post-implementation support. |

8. Business Process Overview

[This describes the overall process flow from each phase]

The ice cream store’s business process revolves around order management, inventory tracking, billing, and reporting. The software system will streamline these processes to improve efficiency and accuracy.

The phase-wise breakdown of the overall process flow:

Phase 1: Inventory Management

- Receive and record raw materials and finished products.
- Track stock levels, batch numbers, and expiry dates.
- Generate automated alerts for low stock or near-expiry items.
- Update inventory in real-time as items are used or sold.

Phase 2: Order Management

- Validate order details and check product availability.
- Confirm order and schedule delivery.

Phase 3: Delivery Management

- Assign deliveries to available personnel or delivery partners.
- Optimize delivery routes for efficiency and timeliness.
- Track order status and provide real-time updates to customers.
- Handle exceptions such as delayed or failed deliveries.

Phase 4: Reporting & Analytics

- Generate reports on inventory usage, sales trends, and delivery performance.
- Provide insights to support procurement, production planning, and strategic decisions.

Phase 5: Integration with Other Systems

- Synchronize data with POS, accounting, and reporting platforms to ensure seamless operations.

8.1. Legacy System (AS-IS)

[Brief Explanation about the process in the legacy system and draw process flow diagrams]

Delivery Management:

Deliveries are recorded manually on spreadsheets.

Manual tracking leads to errors or delays during busy hours.

Inventory Management:

Stock levels are tracked manually or via basic spreadsheets.

No real-time updates; risk of stockouts or overstocking.

Reporting & Analytics:

Reports are prepared manually, often time-consuming and prone to mistakes.

Limited insights into delivery and inventory usage.

8.2. Proposed Recommendations (TO-BE)

[Describe the recommended process and how the proposed system will address the challenges in legacy system]

Delivery Management

- Implement a digital POS system to record and process delivery efficiently.
- Reduce manual errors and speed up order processing during peak hours.

Inventory Management

- Real-time tracking of stock levels for ice cream, toppings, and supplies.
- Automatic alerts for low inventory to prevent stockouts.
- Enable reporting for procurement and stock planning.

Reporting & Analytics

- Generate real-time sales, inventory, and revenue reports.
- Provide insights for decision-making and business growth.
- Track performance metrics over time for better forecasting.

System Features & Benefits

- User-friendly interface for quick adoption by staff.
- Scalable system to support future expansion
- Reduce manual effort, improve accuracy, and enhance customer experience.

9. Business Requirements

| ID | Requirement Description | Area | Use Case | Priority |
|-------|--|----------|----------|----------|
| BR001 | The system shall allow staff to record, modify, and cancel delivery quickly. | Delivery | Delivery | High |

| | | | | |
|-------|--|----------------------|----------------------|--------|
| BR002 | Delivery should be processed accurately to minimize errors. | Delivery | Delivery | High |
| BR003 | The system shall track stock levels of ice cream flavors, toppings, cones, and other supplies. | Inventory Management | Inventory Management | High |
| BR004 | The system shall generate alerts when inventory is low to prevent shortages. | Inventory Management | Inventory Management | High |
| BR005 | The system shall generate id automatically for each delivery. | Delivery | Delivery | High |
| BR006 | The system shall support multiple payment methods including cash, card, and digital wallets. | Delivery | Delivery | High |
| BR007 | Sales records shall update automatically in inventory and reporting modules. | Delivery | Delivery | High |
| BR008 | The system shall generate daily, weekly, and monthly sales and inventory reports. | Report And Analytics | Report And Analytics | Medium |

| | | | | |
|-------|---|----------------------|----------------------|--------|
| BR009 | The system shall provide insights into sales trends, top-selling products, and revenue. | Report And Analytics | Report And Analytics | Medium |
| BR010 | The system shall maintain a database of customer profiles, preferences, and purchase history. | Data Management | Data Management | Medium |
| BR011 | The system shall support loyalty programs and personalized offers based on purchase behavior. | Data Management | Data Management | Low |
| BR012 | The system shall be designed to support additional stores or online ordering in the future. | Update | Update | Low |

10. Appendices

10.1. List of Acronyms

UAT - User Acceptance Test

UI - User Interface

BRD - Business Requirement Document

SRS - Software Requirement Specification

API - Application Programming Interface

POS - Point Of Sale

10.2. Glossary of Terms

Inventory - Stock of ice cream flavors, toppings, and supplies available in the plant.

Delivery Management - Process of recording, modifying, and fulfilling delivery

ProfileReporting & Analytics - Generating reports and insights on sales, inventory, and customer behavior.

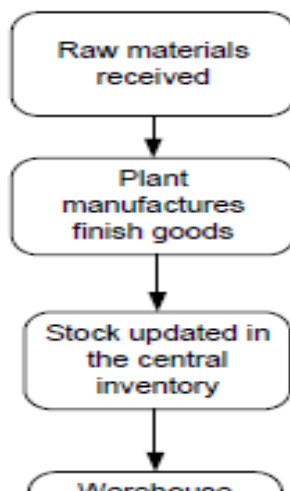
As-Is System - Current legacy system or processes in use before the new system implementation.

To-Be System - Proposed system and processes after implementation of the new software.

10.3. Related Documents

| | | |
|---|---|---|
| Business Requirements Document (BRD) requirement | - | Contains detailed business |
| Functional Specification Document (FSD) requirement | - | Details system functional |
| Use Case Documentation system | - | Describes user interactions with the |
| Test Plan and Test Cases tests | - | Defines testing strategy and individual |
| Project Plan allocation | - | Timeline, milestones, and resource |

Process Flow Diagram



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.

Assignment 2

Introduction Letter

Subject: Business Analyst Introduction for Inventory and Delivery Management System Project

Dear David George,

I am Monisha Moudivender, assigned as the Business Analyst for your project. My role is to collaborate closely with you and your team to gather requirements, understand your business needs, and ensure that the solution aligns with your goals.

I will be conducting requirement workshops, preparing documentation (BRD, SRS), and working with the development and QA teams to facilitate requirement discussions, make sure the final product meets your expectations and keep you updated on progress throughout the project lifecycle.

Please feel free to contact me for any clarifications, concerns, or discussions regarding the project scope, requirements, or priorities. I look forward to working closely with you and your team to ensure the success of this project.

Looking forward to working with you on this project.

Sincerely,
Monisha Moudivender,
Business Analyst

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



admin

<ONLINE STORE>

<OSSID1286>

<V1.0>

<MONISHA MOUDIVENDER>

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| 20/12/2024 | 0.3 | Updates following first informal review |
| 02/01/2025 | 0.4 | Updates following second informal review |
| 26/01/2025 | 1 | Approved |
| | | |
| | | |

2.Approvals

| Role | Name | Title | Signature | Date |
|----------------------|--------------------|----------------------|-----------|-----------|
| Project Sponsor | David George | Project Sponsor | DG | 20.1.2025 |
| Business Owner | Antony Mary Felixa | Business Owner | AM | 20.1.2025 |
| Project Manager | Madan | Project Manager | BR | 15.1.2025 |
| System Architect | Francis | System Architect | FD | 13.1.2025 |
| Development Lead | Prakash | Development Lead | MM | 12.1.2025 |
| User Experience Lead | Kayal | User Experience Lead | SM | 11.1.2025 |
| Quality Lead | Pragalathan | Quality Lead | PG | 10.1.2025 |
| Content Lead | Arathana | Content Lead | KT | 10.1.2025 |

1.RACI Chart for This Document

The RACI chart identifies the persons who need to be contacted whenever changes are made to this document. RACI stands for responsible, accountable, consulted, and informed. These are the main codes that appear in a RACI chart, used here to describe the roles played by team members and stakeholders in the production of the BRD. They are adapted from charts used to assign roles and responsibilities during a project.(RACI Can be made for IT side[Project stakeholder] as mentioned above, apart from that Can also Be made for Client side[Business Stakeholder]).

The following describes the full list of codes used in the table:

Codes Used in RACI Chart

| | | |
|---|-------------|---|
| * | Authorize | Has ultimate signing authority for any changes to the document. |
| R | Responsible | Responsible for creating this document. |
| A | Accountable | Accountable for accuracy of this document (for example, the project manager) |
| S | Supports | Provides supporting services in the production of this document |
| C | Consulted | Provides input (such as an interviewee). |
| I | Informed | Must be informed of any changes. |

Raci Chart

| Name | Position | Planning | Requirement gathering | Design | Development | Testing | UAT | Deployment |
|--------------|------------------|----------|-----------------------|--------|-------------|---------|-----|------------|
| David George | Project Sponsor | I | I | I | I | I | I | I |
| Madan | Project Manager | A | C | C | I | I | A | A |
| Monisha | Business Analyst | C | R | C | C | C | R | C |
| FRANCIS | System Analyst | R | I | R | C | I | I | I |
| PRAKASH | Developer | I | I | I | R | I | C | C |
| Priya | Tester | I | I | I | I | R | C | C |

4. Introduction

The Fast online store is designed to streamline the process of search, add, remove, pay, buy and receive products through application. It will allow customers to buy product online, make secure payments, and receive confirmations, while administrators can manage inventory, pricing, schedules, and reporting.

The purpose of this Business Requirements Document (BRD) is to define and capture the business needs, goals, and requirements for the development and implementation of the application. This document serves as a formal agreement between stakeholders—including business users, project sponsors, and the development team—outlining what the system must deliver to support operations effectively.

Project Overview

The Fast Online Store project aims to create a digital platform where customers can browse, purchase, and track products online. It will provide a secure and user-friendly shopping experience with features like product catalog, shopping cart, multiple payment options, and order tracking. An admin dashboard will support inventory, order, and sales

management. The system is expected to increase revenue, improve customer satisfaction, and streamline business operations.

The system will serve both customers and administrators. It will also support seamless integration with payment gateways and generate analytical reports for better decision-making.

By enabling efficient online store the project will help the organization achieve its business goals of increasing sales, reducing operational costs, and delivering superior customer experience.

Intended Audience

IT Development and QA Teams

Business Analysts and Project Managers

Project Sponsor, Business management, Administrators

Market team ,Finance team, Support team, Customer

4.1. Business Goals

Enhance Customer Experience: Provide a seamless, convenient, and reliable platform for Search, payment, and order management and user-friendly shopping platform.

Increase Sales & Revenue: Boost overall sales through digital transactions and promotions to attract more customers and maximize the sales.

Improve Operational Efficiency: Automate manual tasks, reduce errors, and optimize resource usage.

Expand Sales Channels – Reach a wider customer base through online presence.

Ensure Transparency & Trust; Offer real-time order tracking and secure payment options.

Build Competitive Advantage ; Stay ahead of competitors by offering modern e-commerce features.

Ensure Real-Time Accuracy: Maintain accurate, up-to-date information on product availability, pricing, and schedules.

Support Data-Driven Decisions: Generate reports and analytics to help management make informed business decisions.

Ensure Security & Compliance: Protect customer data and financial transactions in line with industry standards and regulations.

4.2. Business Objectives

Provide a User-Friendly Platform: Enable customers to easily search, add, and manage purchase online.

Enable Online Purchases : Allow customers to browse products, add to cart, and complete purchases online.

Provide Secure Payments Integrate multiple secure payment methods (Credit/Debit cards, UPI, Wallets, COD).

Support Order Tracking Allow customers to view real-time status of their orders.

Promote Sales and Discounts Support campaigns, coupons, and loyalty programs.

Ensure Secure Transactions: Implement secure payment gateways and protect sensitive customer data.

Support Management with Analytics: Generate reports on sales, revenue, and customer behavior for informed decision-making.

Improve Customer Communication: Send timely notifications and confirmations via email/SMS.

4.3. Business Rules

- **User Registration & Login:**

Only registered users can buy online.

Each user must have a unique email ID or mobile number.

- **Payments & Refunds:**

All online payments must be processed via secure payment gateways.
Refunds for cancelled order must follow the defined refund policy

- **Notifications & Communication:**

Order confirmations, cancellations, and updates must be sent via email and/or SMS.

Users must be notified if there are any changes in schedule, pricing, or availability.

- **Admin Operations:**

Admins can create, update, or cancel

Admins must follow access control rules; only authorized personnel can modify pricing or schedules.

- Payments must be processed through secure PCI-DSS compliant gateways.
- Orders cannot be placed if stock is unavailable.
- Customers can cancel orders within a predefined window (e.g., 2 hours of placing order).
- Returns are allowed only within the business-defined return policy.
- Discounts cannot be combined unless explicitly defined in the promotion rules.

4.4. Background

With increasing digital adoption, traditional retail businesses are shifting toward online platforms to enhance customer convenience, reduce operational costs, and expand global reach. This Online Store will provide customers with a seamless shopping experience and enable the business to efficiently manage inventory, sales, and customer interactions.

Problems:

Limited Sales Channels: Current business relies mostly on physical stores, restricting customer reach.

Manual Order Management: Orders are tracked manually, leading to errors and delays.

Inventory Inaccuracy: Stock levels are not updated in real-time, causing stockouts or overstock.

Customer Convenience Issues : Customers cannot browse products or place orders online.

Payment Limitations ; Lack of integrated secure digital payment options.

Tracking & Transparency Gaps ;Customers cannot easily track their orders or receive updates.

Reporting Challenges ; Sales, inventory, and customer behavior insights are limited and manually compiled

Expected Benefits of Implementing the Project

Expanded Customer Reach ;Sell products online to customers beyond physical store locations.

Enhanced Customer Experience: Real-time product availability, online booking, and instant confirmations improve satisfaction.

Operational Efficiency: Automation reduces manual work, errors, and administrative overhead.

Secure Transactions: Integrated payment gateways provide safe and flexible payment options.

Improved Communication: Automated notifications keep customers informed about Orders cancellations, and updates.

Data-Driven Decisions: Comprehensive reporting and analytics enable management to track sales, trends, and revenue.

Scalability: The system can easily handle increased business volume and expansion of events or services.

4.5. Project Objective

- **Enable Secure Transactions:** Integrate reliable payment gateways to ensure safe and convenient payments.
- **Enhance Customer Experience:** Allow users to view real-time product availability, receive confirmations, and manage orders easily.
- **Support Administrative Functions:** Enable admins to manage inventory, schedules, pricing, and reporting efficiently.
- **Generate Actionable Insights:** Provide analytics and reports to support business decisions and track performance.
- **Launch an Online Platform ;** Develop a website and/or mobile app for customers to browse and purchase products.
- **Streamline Order Management ;** Automate order processing, tracking, and notifications.
- **Enhance Inventory Control ;** Maintain real-time stock updates to prevent shortages or overstock.
- **Improve Customer Satisfaction** Ensure easy navigation, quick checkout, and timely order delivery.

4.6. Project Scope

The scope of the online store project is to develop a centralized, automated platform that allows users to search, add, buy, and manage orders online, while enabling administrators to manage inventory, schedules, pricing, and generate reports.

4.6.1. In Scope Functionality

- User registration, login, and profile management.
- Product catalog management (categories, filters, images, descriptions)
- Shopping cart and checkout process
- Payment gateway integration (credit/debit card, UPI, wallets, COD)
- Order management (confirmation, cancellation, tracking)
- Inventory management
- Admin panel for managing users, products, and orders
- Reporting (sales, revenue, stock levels)
- Secure online payment processing.
- Admin dashboard for managing tickets, schedules, pricing, and reporting.
- Notifications: Real-time updates and alerts for bookings, cancellations, and reminders.

4.6.2. Out of Scope Functionality

- Physical store operations
- Delivery logistics system (will integrate with third-party partners)
- Advanced AI-based product recommendations (future scope)
- Multi-language or multi-currency support
- Loyalty or rewards programs.

5. Assumptions

- Customers will have access to the internet and compatible devices to use the system.
- Payment methods (credit/debit cards, wallets, UPI) are valid and supported.
- Users will provide accurate personal and contact information.
- The system will be integrated with existing infrastructure such as email/SMS gateways.
- Stakeholders will provide timely feedback and approvals during the project lifecycle.

6. Constraints

- The system must comply with data protection and payment regulations
- Development and deployment must adhere to project timeline and budget limitations.
- The system must support a defined number of concurrent users initially (e.g., 5000 users).
- Third-party integrations may be limited by external API capabilities and availability.
- System features must be compatible with existing devices and browsers used by the target audience.

7. Risks

In this section of the BRD, you describe risks. A risk is something that could affect the success or failure of a project. Analyze risks regularly as the project progresses. While you may not be able to avoid every risk, you can limit each risk's impact on the project by preparing for it beforehand. For each risk, you'll note the likelihood of its occurrence, the cost to the project if it does occur, and the strategy for handling the risk.

Strategies include the following:

Avoid: Do something to eliminate the risk.

Mitigate: Do something to reduce damage if risk materializes.

Transfer: Pass the risk up or out to another entity.

Accept: Do nothing about the risk. Accept the consequences.

| Risk | Impact | Strategy |
|------------------------------|---------------------------------|---|
| Payment Failure | Transaction delays, lost sales | Mitigate – Integrate multiple secure payment gateways and retry options. |
| Out of stock | Customer dissatisfaction | Mitigate – Implement real-time inventory updates and locking mechanisms. |
| Data Security Breach | Loss of sensitive customer info | Mitigate– Use encryption, secure protocols |
| System Downtime | Service unavailability | Mitigate – Scalable infrastructure and continuous monitoring. |
| Refund/Cancellation Disputes | Customer dissatisfaction | Mitigate – Automated refund process and tracking to ensure timely resolution. |
| User Adoption Challenges | Low system usage | Accept / Mitigate – Provide user-friendly UI/UX, documentation, and support. |

8. Business Process Overview

[This describes the overall process flow from each phase]

The phase-wise breakdown of the overall process flow:

Phase 1: User Registration & Login

- Users create accounts or log in using email, mobile number, or social login.

- Profile information is captured and stored securely.
- System verifies user credentials and manages access rights.

Phase 2: Product Browsing & Search

- Customer browses product categories or searches using keywords.
- Products are displayed with images, price, description, and availability.
- Filters and sorting options allow customers to narrow choices.

Phase 3: Shopping Cart & Checkout

- Customer adds selected products to the shopping cart.
- Cart displays quantity, total price, tax, and shipping charges.
- Customer proceeds to checkout and provides shipping details.
- Customer selects payment method and confirms the order.

Phase 4: Payment Processing

- System integrates with payment gateways for online transactions.
- Payment status is verified.
- System generates order confirmation after successful payment.

Phase 5: Order Fulfillment & Tracking

- Admin reviews and processes the order.
- Inventory is updated in real-time to reflect purchased items.
- Order is shipped via courier/logistics partner.
- Customer receives notifications and can track delivery status.

Phase 6: Post-Purchase & Support

- Customer can request order cancellation, returns, or refunds according to policy.
- Customer support handles queries and resolves issues.
- System logs all transactions and updates reports for analytics.

Phase 7: Delivery & Notifications

- System sends reminders before the delivery.
- Updates are provided if there are changes to schedule, pricing, or availability.

Phase 8: Admin & Reporting

- Admins manage ticket inventory, pricing, and schedules.

- Reports on sales, revenue, bookings, and cancellations are generated.
- Analytics help management make data-driven decisions.

8.1. Legacy System (AS-IS)

[Brief Explanation about the process in the legacy system and draw process flow diagrams]

- Customers rely mainly on physical stores to browse and purchase products.
- Orders are processed manually, leading to potential errors and delays.
- Inventory tracking is manual or semi-automated, causing stockouts or overstock.
- Payments are mostly cash or limited card options at the store.
- Customers have limited visibility on order status or delivery updates.
- Reporting and sales analysis are time-consuming and error-prone.
- Notifications (booking confirmations, cancellations) are slow or inconsistent.
- Admins manage tickets, schedules, and reports manually, leading to errors.
- Reporting and analytics are limited, making decision-making challenging.

8.2. Proposed Recommendations (TO-BE)

[Describe the recommended process and how the proposed system will address the challenges in legacy system]

- Customers can browse and purchase products online via website or mobile app.
 - Orders are automatically processed with secure payment options (cards, UPI, wallets, COD).
 - Inventory is updated in real-time, ensuring accurate stock levels.
 - Customers can track order status from placement to delivery.
 - Admins can manage products, orders, promotions, and users through a centralized dashboard.
 - Automated reporting and analytics provide insights into sales, inventory, and customer behavior.
 - Overall, the process is efficient, transparent, and scalable, reducing errors and improving customer satisfaction.
-
- Secure online payment gateways integrated for safe transactions.
 - Instant notifications via email/SMS for confirmations, cancellations, or updates.
 - Reduced manual effort, faster operations, and improved customer experience.

9. Business Requirements

| ID | Requirement Description | Area | Use Case | Priority |
|-------|---|----------------------|--------------------------------|----------|
| BR001 | Allow users to register, login, and manage their profiles | User Management | User Registration/Login | High |
| BR002 | Display product name details price availability and image | Product management | Product | High |
| BR003 | System calculate total cost including tax delivery charge and discounts | Checkout | Checkout | High |
| BR004 | Enable secure online payment through multiple gateways | Payment Processing | Make Payment | High |
| BR005 | Generate delivery with unique ID or QR/Barcode after order | E-Ticket Generation | Delivery | High |
| BR006 | Send booking confirmation and ticket via email/SMS | Notifications | Receive Booking Confirmation | High |
| BR007 | Allow users to cancel bookings as per defined policy | Cancellation/Refunds | Cancel Booking | Medium |
| BR008 | Process refunds automatically and notify users | Cancellation/Refunds | Refund Processing | High |
| BR009 | Admins manage inventory, pricing, and schedules | Admin Functions | Inventory & Pricing Management | High |

| | | | | |
|-------|--|-----------------------|---------------------------------------|--------|
| BR010 | Admins generate reports on order, cancellations, and revenue | Reporting & Analytics | Sales & Revenue Reporting | Medium |
| BR011 | Notify users about order, cancellation, or schedule changes | Notifications | Alerts & Notifications | Medium |
| BR012 | Provide secure storage of customer data and payment info | Security & Compliance | Data Security & Regulatory Compliance | High |

10. Appendices

10.1. List of Acronyms

BRD – Business Requirement Document

SRS – Software Requirement Specification

UI – User Interface

DB – Database

API – Application Programming Interface

GDPR – General Data Protection Regulation

PCI-DSS – Payment Card Industry Data Security Standard

10.2. Glossary of Terms

Refund: The process of returning money to a customer after a cancellation.

Use Case: A scenario describing how a user interacts with the system to achieve a goal.

Priority: Importance level assigned to a requirement (High/Medium/Low).

10.3. Related Documents

Current Manual Ticketing Process Documentation

Organization IT Security Policy

Payment Gateway Integration Guide

GDPR & PCI-DSS Compliance Guidelines

Draft Software Requirement Specification (SRS)

Business Requirements Document (BRD)

Functional Specification Document (FSD)

Use Case Documentation

Test Plan and Test Cases

Project Plan

<<DAVID GEORGE>>

<<FAST ONLINE STORE>>

Software Requirement Specification

<<01.4.2025>>

Record of Revisions

| Version | Date of Release / Revision | Prepared / Revised By | Reviewed By | | Approved By | | Reasons for revisions |
|---------|----------------------------|-----------------------|-------------|------------|-------------|-------|--------------------------|
| | | | Name | Date | Date | Name | |
| 1.0 | 01.08.2025 | Monisha | Madan | 01.09.2025 | 01.10.2025 | David | Updated UI requirements |
| 1.1 | 02.22.2025 | Monisha | Madan | 02.25.2025 | 02.28.2025 | David | Operational Requirements |
| | | | | | | | |

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Introduction

The purpose of this document is to define the functional and non-functional requirements for the Fast online store. The system will allow customers to Search purchase, and manage products online while providing administrators with tools to manage inventory, schedules, and reports. This SRS will serve as a reference for stakeholders, developers, testers, and project managers.

1.1 Overview

The Fast online store is a web-based and mobile-responsive application designed to streamline the process of search, payment, and management for customers, while providing administrators with tools to efficiently manage ticket inventory, schedules, pricing, and reporting.

The system aims to replace the existing manual or semi-digital ticketing process by providing:

- Real-time availability product,delivery
- Secure online payment integration.
- Automated customer notifications via email/SMS.
- Self-service options for cancellations and refunds.
- Admin dashboards for monitoring sales, revenue, and customer activity.

The proposed system will improve efficiency, accuracy, and customer satisfaction, while enabling the organization to make data-driven decisions and scale operations seamlessly.

It serves as a centralized platform connecting customers, administrators, and support staff, ensuring smooth operations, transparency, and compliance with industry standards such as PCI-DSS and GDPR.

1.2 Acronyms and definitions

| Term | Description |
|------|--|
| BA | Business Analyst – Person responsible for gathering and analyzing business requirements. |

| | |
|---------|---|
| BRD | Business Requirement Document – Document capturing high-level business requirements. |
| SRS | Software Requirements Specification – Detailed document defining system requirements. |
| UI | User Interface – The visual part of the system that users interact with. |
| DB | Database – Storage system for application data. |
| API | Application Programming Interface – Set of functions for communication between software components. |
| GDPR | General Data Protection Regulation – EU data privacy and protection regulation. |
| PCI-DSS | Payment Card Industry Data Security Standard – Security standard for handling payment card information. |
| QR Code | Quick Response Code – Machine-readable code for delivery |
| SMTP | Simple Mail Transfer Protocol – Protocol used to send emails. |
| HTTPS | HyperText Transfer Protocol Secure – Protocol for secure communication over the internet. |

1.3 Operational Requirements

- The system must be available 24/7 with 99.9% uptime to support global users.
- Planned maintenance windows must be communicated to users in advance.
- The system must support automatic failover in case of server downtime.
- Daily data backups must be scheduled.
- Must comply with PCI-DSS (for payments) and GDPR (for user data).
- All transactions must be logged for audit trails.
- Role-based access control (Admin, Customer, Support Staff).
- Automatic logout after 10 minutes of inactivity.
- The system should handle at least 500 concurrent bookings without performance degradation.

- Peak season (festivals, events) should support scalable capacity up to 5000 concurrent users.
- System health (CPU, memory) must be monitored in real-time.
- Alerts must be triggered for failed transactions, server errors, or suspicious activity.
- A 24/7 support team is available to address operational issues.
- Maintenance must not exceed 2 hours per month and should be performed during off-peak hours.
- The system should allow seamless upgrades without impacting user experience.
- Operational logs must be retained for at least 90 days for compliance.
- Daily system health reports must be generated and sent to system administrators.
- Admin dashboard must provide easy monitoring of sales, and cancellations.
- Support staff must be able to quickly search and resolve customer issues.
- Must adhere to data retention policies (e.g., booking data stored for 1 year, payment data masked).
- Must comply with local tax laws for ticket sales and refunds.

1.3.1 Software Requirements

- Operating System (Server): Windows Server
- Database: MySQL, Oracle DB
- Backend Technology: Java , .NET ,Python (Django/Flask)
- Frontend Technology: HTML5,JavaScript
- Web Server: Apache Tomcat / Nginx
- Payment Gateway Integration: PayPal
- Browser Compatibility: Latest versions of Chrome, Firefox, Edge, Safari
- Mobile Compatibility: Android (v10 and above), iOS (v14 and above)

1.3.2 Hardware Requirements

- Processor: Minimum 8-Core CPU
- RAM: 32 GB (Scalable up to 64 GB)
- Storage: 1 TB SSD (RAID configuration for redundancy)
- Network: 1 Gbps Internet Connectivity
- Backup: External/Cloud Storage (minimum 5 TB for daily backups)
- Browser: Latest Chrome, Firefox, Safari
- Mobile Device (for App Users):
 - Android: Quad-Core, 3 GB RAM, 64 GB Storage

- iOS: A12 Bionic Chip or higher, 3 GB RAM

1.4 References

1. IEEE Std 830-1998, *IEEE Recommended Practice for Software Requirements Specifications*
2. Organization's IT Security Policy – Version 2.1
3. Ticketing Process Manual (Current Legacy System Documentation)
4. Payment Gateway API Documentation (Stripe, PayPal, Razorpay)
5. GDPR (General Data Protection Regulation) Compliance Guidelines
6. PCI DSS (Payment Card Industry Data Security Standard) Documentation
7. Web Content Accessibility Guidelines (WCAG 2.1)
8. Draft BRD – Ticketing System Project
9. Stakeholder Interviews & Requirement Workshop Notes
10. Organization Standard

1.5 Design and Implementation Constraints

- The system must be web-based and mobile-responsive.
- Must support cross-browser compatibility (Chrome, Firefox, Edge, Safari).
- Mobile app must be compatible with Android (v10+) and iOS (v14+).
- Database must be relational (MySQL/PostgreSQL/Oracle) for transactional integrity.
- Payment integration must be limited to Stripe and PayPal in the initial release.
- Must comply with PCI DSS for handling payments.
- Must comply with GDPR for data privacy (if customer base includes EU citizens).
- Must meet local taxation laws for ticketing transactions.
- Must comply with organization's IT security and audit policies.
- The system must support at least 10,000 concurrent users without performance degradation.
- Transaction response time should not exceed 2 seconds under normal load.
- confirmation must be completed within 5 seconds (including payment processing).
- Limited to existing IT infrastructure (on-premises servers, 1 TB SSD, 32 GB RAM).
- Budget allocation restricts the use of licensed third-party tools; open-source preferred.
- Development team size limit
- UI must adhere to WCAG 2.1 accessibility guidelines.

1.6 Assumed Factors That Could Affect the Requirements Stated In the SRS

- **User Availability for Requirement Validation**
Business users and stakeholders will be available for timely feedback and requirement validation.
- **Stable Internet Connectivity**
End users (customers, agents) will have stable internet access while booking tickets.
- **Third-Party Service Reliability**
Payment gateways (Stripe, PayPal), SMS/email providers, and external APIs will be stable and available.
- **User Load Estimates**
The estimated 10,000 concurrent users is sufficient for capacity planning.
- **Technology Stack Availability**
Approved technology stack (MySQL/PostgreSQL, REST APIs, MVC framework) will remain available and supported.
- **Budget and Resource Allocation**
Adequate funding and skilled resources (developers, testers, BA, PM) will remain allocated throughout the project.
- **End-User Device Compatibility**
Majority of customers will access the system using modern browsers and smartphones

System Overview

2.1 Current System

- Customers rely mainly on physical stores to browse and purchase products.
- Orders are processed manually, leading to potential errors and delays.
- Inventory tracking is manual or semi-automated, causing stockouts or overstock.
- Payments are mostly cash or limited card options at the store.
- Customers have limited visibility on order status or delivery updates.
- Reporting and sales analysis are time-consuming and error-prone.
- Notifications (booking confirmations, cancellations) are slow or inconsistent.
- Admins manage , schedules, and reports manually, leading to errors.
- Reporting and analytics are limited, making decision-making challenging.

2.2 Proposed System

- Customers can browse and purchase products online via website or mobile app.

- Orders are automatically processed with secure payment options (cards, UPI, wallets, COD).
- Inventory is updated in real-time, ensuring accurate stock levels.
- Customers can track order status from placement to delivery.
- Admins can manage products, orders, promotions, and users through a centralized dashboard.
- Automated reporting and analytics provide insights into sales, inventory, and customer behavior.
- Overall, the process is efficient, transparent, and scalable, reducing errors and improving customer satisfaction.
- Secure online payment gateways integrated for safe transactions.
- Instant notifications via email/SMS for confirmations, cancellations, or updates.
- Reduced manual effort, faster operations, and improved customer experience.

2.2 Benefits of the Proposed System

- **Efficiency** Reduces manual effort and booking errors.
- **Real-Time Access** Customers can check availability and book anytime, anywhere.
- **Revenue Growth** Faster, secure payments and wider payment options improve sales.
- **Transparency** Customers receive instant confirmations and receipts.
- **Customer Satisfaction** Convenient, user-friendly interface with support for refunds/cancellations.
- **Scalability** Supports high user loads and future expansion
- **Data-Driven Decisions** Management can use reports for better planning and marketing.
- **Compliance & Security** Meets PCI DSS and GDPR standards for secure transactions and data handling.

UI Requirements

3.1 Project contents

A. Customer Module

General Requirements:

- Responsive design for desktop, tablet, and mobile.

- Simple, intuitive navigation with clear categories and search options.
- Consistent branding, color scheme, and typography.
- Accessibility compliance (e.g., screen reader support, keyboard navigation).

1. Home Page

- Display featured products, categories, and promotions.
- Search bar prominently visible.

2. Product Listing Page

- Product images, name, price, ratings, availability.
- Filters (category, price, brand) and sorting options.

3. Product Detail Page

- Detailed description, images, specifications, stock status.
- “Add to Cart” and “Buy Now” buttons.

4. Shopping Cart

- List of selected products with quantity, price, and subtotal.
- Update or remove products from cart.

5. Checkout Page

- Shipping address form, payment method selection, order summary.
- Order confirmation and payment status display.

6. Order Tracking Page

- Display order status, shipment tracking details, estimated delivery date.

7. User Account

- View and update profile information, addresses, payment methods.
- View order history, returns, and cancellations.

B. Admin Module

General Requirements:

- Web-based dashboard with clear layout and easy navigation.

- Role-based access control (Admin, Support, Inventory Manager).
- Interactive charts and tables for reports.
- Consistent design and branding with the customer module.

1. Login Page

- Secure login with username/password

2. Home Page

- Summary of sales, orders, stock levels, and key metrics.
- Quick links to manage products, orders, and users.

3. Product Management

- Add, update, delete products and categories.
- Upload product images and manage stock levels.

4. Order Management

- View all orders with status, customer details, and payment info.
- Update order status (Processing, Shipped, Delivered).

5. User Management

- View and manage customer accounts.
- Assign roles and permissions.

6. Reporting & Analytics

- Generate sales, revenue, inventory, and customer behavior reports.
- Export reports in PDF/Excel format.

7. Notifications

Alert admin for low stock, pending orders, or critical issues.

4. Other Parameters

4.1 Acceptance

The client will review and accept the application on receiving the following deliverables.

1. Prototypes

- Interactive UI prototypes for Customer and Admin modules.
- Mockups of key screens: Registration/Login, Search, order & Payment, Admin Dashboard.
- Feedback from the client on design and functionality incorporated before development.

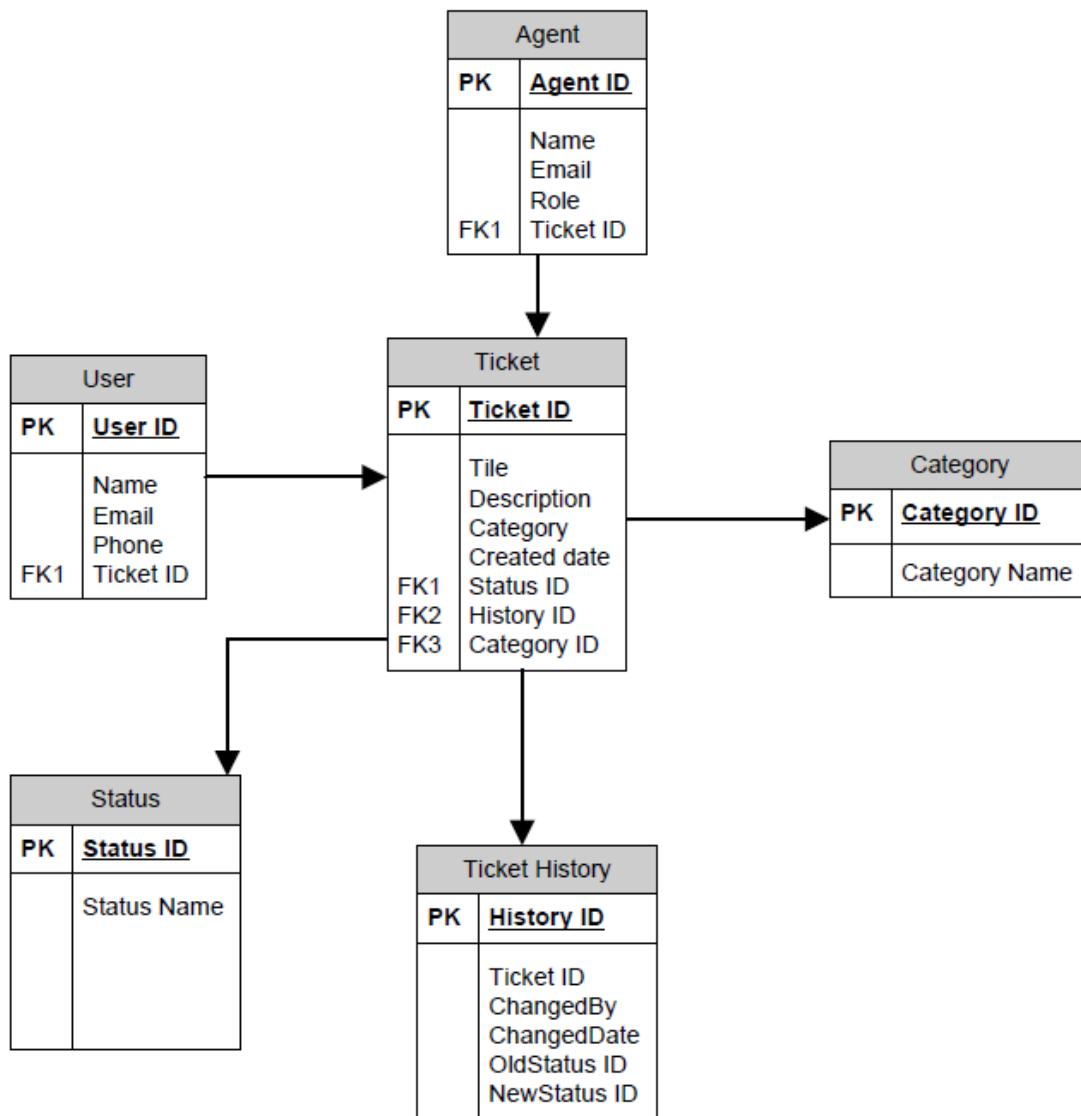
2. Application

- Fully functional online application deployed in the test/staging environment.
- Includes all features as per SRS and BRD:
- User Registration/Login
- Product Search & order
- Payment Processing
- Notifications via email/SMS
- Cancellations & Refunds
- Admin Dashboard & Reporting

3. Documentation

- Installation Guide: Steps to deploy and configure the application on the server or cloud environment.
- User Manual: Instructions for customers on how to use the system (payments, cancellations, etc.).
- Admin Manual: Instructions for administrators (inventory management, reporting, notifications).
- Technical Documentation (optional): Architecture diagram, database schema, API integration details for future maintenance.

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



4. User story of shopping from ecommerce.

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| User Story No:1 | Task:2 | Priority:HIGH |
| Value Statement: AS A CUSTOMER I WANT TO LOGIN TO MY ACCOUNT SO THAT I CAN VIEW MY PROFILE | | |
| BV:1000 | CP:2 | |
| Acceptance Criteria: Login page, User ID and password field, login option Basic Flow: Open the application Enter the credentials (User ID, Password) Click login Homepage is shown Alternative Flow: Incorrect password or user id Show error message Prompt to re-enter credentials Exceptional Flow: Showing network error Multiple incorrect credentials leads to lock the account | | |

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| User Story No:2 | Task:2 | Priority:HIGH |
| Value Statement: AS AN CUSTOMER I WANT REGISTER SO THAT I CAN LOGIN TO MY ACCOUNT | | |
| BV:1000 | CP:2 | |
| Acceptance Criteria: Registration Screen Text Boxes for User Name, Password, Nation ID, Mobile No, Email, Address, Phone Number. Click on Register Button. Send Successful Notification to the user Basic Flow: Open login page Click register Enter Name, phone number, address, email ID,and other details Create user id and password Click submit Alternative Flow: Show empty fields and prompt enter details Invalid character in fields Fill mandatory field Expectational Flow: Show User already exists | | |

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| User Story No:3 | Task:2 | Priority:HIGHEST |
| Value Statement: AS A CUSTOMER I WANT TO BROWSE AND PURCHASE PRODUCTS FROM ONLINE STORE SO THAT I CAN CONVENIENTLY SHOP AND RECEIVE PRODUCTS AT MY DOOR STEP | | |
| BV:1000 | CP:2 | |
| Acceptance Criteria: Home page, search field, show product suggestions Basic Flow: Login the application Homepage is shown Search for product Add to cart Place order Pay for the product using different payment options Order completed Track the delivery status Alternative Flow: Login shows error prompt to re enter Product may not be available but the application shows other suggestions Show error and try again if the payment details are incorrect Show try another location if the product cannot delivered to the location Show add more product to place order if the cart does not have enough items to be delivered Show try again if the tracking details are not available at the moment Exceptional Flow: Showing network error Multiple incorrect credentials leads to lock the account | | |

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| User Story No:4 | Task:3 | Priority::HIGHEST |
| Value Statement: AS A DELIVERY BOY I WANT VIEW THE ORDER SO THAT I CAN ACCEPT TO DELIVER THE ORDER | | |
| BV:1000 | | CP:2 |
| Acceptance Criteria: View Order, Display List of orders in the tabular Form Basic Flow: Open order Show the assigned order Click to view the order details Accept the order Update the order status like pickup,out for delivery Deliver the order Update order delivered Alternative Flow: Not able to accept or update the order Expectational Flow: Show no order available Show order order cancelled Unable to load order | | |

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| User Story No:5 | Task:2 | Priority:MEDIUM |
| Value Statement: AS A BUSINESS OWNER I WANT TO VIEW THE REPORT SO THAT I CAN KNOW APPLICATION PERFORMANCE | | |
| BV:100 | | CP:1 |
| Acceptance Criteria: Basic Flow: Business owner logs into the system. Navigates to the "Reports" or "Analytics" section. Selects the type of report (e.g., Sales, Orders, Revenue, Customers, Feedback). Chooses a time range (e.g., Today, This Week, Last Month, Custom Range). Clicks "Generate Report". System displays the report in graphical and tabular format (e.g., charts, KPIs, trends). User reviews the data and optionally: Downloads as PDF/Excel Shares the report Prints the report User logs out or continues working. Alternative Flow: Schedule report Filter report Exceptional Flow: No reports found Unauthorised access Show error | | |

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| User Story No:6 | Task:2 | Priority:MEDIUM |
| Value Statement: AS A DELIVERY BOY I WANT TO LOGOUT THE APPLICATION SO THAT I CAN COMPLETE THE DELIVERY JOB | | |
| BV:500 | | CP:2 |
| Acceptance Criteria: User can see a Logout button when logged in. Clicking Logout ends the session. User is redirected to the login page after logout. User cannot access dashboard after logging out (even using back button). Logout works for all user roles. A message is shown: "You have been logged out successfully." (optional) Basic Flow: Once completed and delivered order Or browse the application Click the logout Application will be closed Redirect to login page Alternative Flow: Show error Try again Exceptional Flow: Network error Logout failed | | |