

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 (patient, doctor, reports, bills)
- User interface layout (screens for reception, lab, pharmacy, admin)
- 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 unit 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, and hospital user access.
Servers or Cloud System	To host the Hospital 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>

Contents

1. DocumentRevisions.....	8
2. Approvals.....	8
3. RASCI Chart for This Document	8
Codes Used in RASCI Chart.....	9
RASCI Chart.....	9
4. Introduction.....	9
4.1. Business Goals	9
4.2. Business Objectives.....	9
4.3. Business Rules.....	10
4.4. Background.....	10
4.5. Project Objective.....	10
4.6. Project Scope	10
4.6.1. In Scope Functionality	10
4.6.2. Out Scope Functionality	10
5. Assumptions	10
6. Constraints.....	10
7. Risks.....	10
Technological Risks.....	11
Skills Risks.....	11
Political Risks.....	11
Business Risks.....	11
Requirements Risks	11
Other Risks.....	11
8. Business Process Overview	11
8.1. Legacy System (AS-IS).....	11
8.2. Proposed Recommendations (TO-BE)	11
9. Business Requirements.....	11
10. Appendices.....	12
10.1. List of Acronyms.....	12
10.2. Glossary of Terms.....	12
10.3. Related Documents	12

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 hospital 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.
- **Customer Management:** Maintain a database of customer preferences and purchase history to enable personalized promotions and loyalty programs.
- **Seamless Payment Processing:** Integrate secure and multiple payment options, ensuring smooth and reliable transactions.
- **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, 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.
- **E-commerce Platforms:** Synchronize online orders and update inventory levels in real-time.
- **Delivery Platforms:** Integrate route optimization and tracking tools for efficient deliveries.
- **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.
- **Order Management:** Capturing and processing customer orders from in-store and online channels.
- **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, CRM, e-commerce, and logistics platforms.

4.6.1. In Scope Functionality

- **Order Processing:**

Take and process customer orders.

Modify or cancel orders before final billing.

- **Inventory Management:**

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

Alert when stock is low.

- **Billing & Payment:**

Generate invoices/receipts.

Accept multiple payment methods (cash, card, digital wallet).

- **Customer Management:**

Store customer details and purchase history.

Track loyalty points or reward program.

- **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 home 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.
- Multi-store management (initially limited to one store).

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.
- The system will be deployed in a single-location (not multi-branch).
- 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
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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

- Capture customer orders through in-store or online channels.
- 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, CRM, e-commerce, 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]

Order Management:

Orders are recorded manually on paper or simple 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.

Billing & Payment:

Cash registers or manual invoices are used.

Payment tracking is not integrated with inventory or sales reports.

Reporting & Analytics:

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

Limited insights into sales trends, customer behavior, or inventory usage.

Customer Management:

Customer information is stored manually.

No structured data for loyalty programs or personalized offers.

8.2. Proposed Recommendations (TO-BE)

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

Order Management

- Implement a digital POS system to record and process orders efficiently.
- Reduce manual errors and speed up order processing during peak hours.
- Allow staff to modify or cancel orders before billing.

Billing & Payment

- Generate automated invoices and receipts.
- Integrate multiple secure payment methods (cash, card, digital wallet).
- Link payments directly to sales records and inventory updates.

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.

Customer Management

- Store customer profiles, preferences, and purchase history.
- Implement loyalty programs and personalized offers.
- Enable easy access to customer data for marketing or promotions.

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, including online ordering or multi-store operations.
- 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 customer orders quickly.	Order Processing	Order	High
BR002	Orders should be processed accurately to minimize errors.	Order Processing	Order	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 invoices automatically for each order.	Billing	Billing And Payment	High
BR006	The system shall support multiple payment methods including cash, card, and digital wallets.	Payment	Billing And Payment	High

BR007	Sales records shall update automatically in inventory and reporting modules.	Billing And Payment	Billing And Payment	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 store.

Order Management - Process of recording, modifying, and fulfilling customer orders.

Billing - Generating invoices and processing payments for orders.

Customer - Information stored about a customer including contact details, preferences, and purchase history.

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.

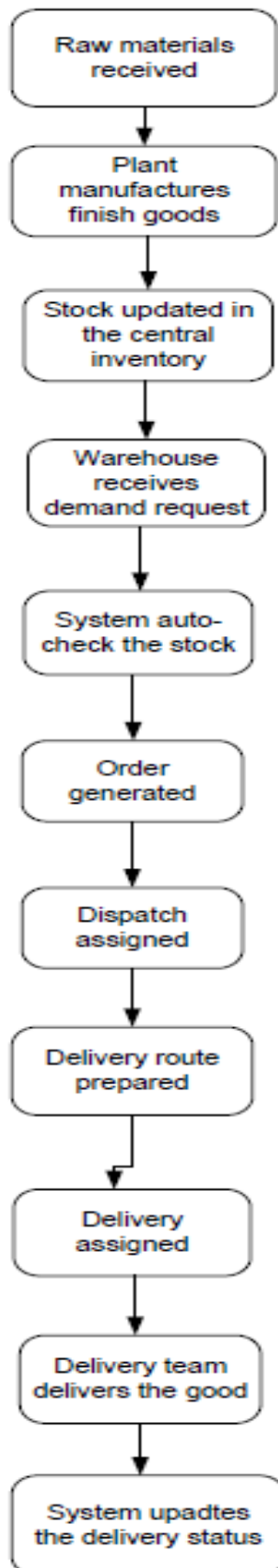
10.3. Related Documents

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

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



admin

<TICKETING SYSTEM>

<TSID1286>

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<MONISHA MOUDIVENDER>

Contents

1.	
DocumentRevisions.....	
..8	
2.	
Approvals.....	
..8	
3. RASCI Chart for This Document	
.....8	Codes Used in RASCI
Chart.....	9 RASCI
Chart.....	9
4.	
Introduction.....	
...9	
4.1. Business Goals	
.....9	
4.2. Business	
Objectives.....	9
4.3. Business	
Rules.....	10
4.4.	
Background.....	10
4.5. Project	
Objective.....	10
4.6. Project Scope	
.....10	4.6.1. In
Scope Functionality	10
4.6.2. Out Scope Functionality	
.....10	
5. Assumptions	
.....10	

6.	
Constraints.....	
...10	
7.	
Risks.....	
...10 Technological	
Risks.....	11 Skills
Risks.....	1
1 Political	
Risks.....	11
Business	
Risks.....	11
Requirements Risks	
.....	11 Other
Risks.....	1
1	
8. Business Process Overview	
.....	11 8.1. Legacy System
(AS-IS).....	11
8.2. Proposed Recommendations (TO-BE)	
.....	11
9. Business	
Requirements.....	11 10.
Appendices.....	
..12 10.1. List of	
Acronyms.....	12
10.2. Glossary of	
Terms.....	12
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.....	12

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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 Ticketing System is designed to streamline the process of booking, managing, and tracking tickets for events, travel, or support services. It will allow customers to book tickets 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 hospital operations effectively.

Project Overview

The Ticketing System project aims to design and implement a centralized, user-friendly digital platform for booking and managing tickets. This solution will automate the traditional ticketing process, reduce manual errors, and enhance customer satisfaction through real-time availability, secure transactions, and instant confirmation.

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 ticket management, 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

Finance team, Support team, Customer

4.1. Business Goals

Enhance Customer Experience: Provide a seamless, convenient, and reliable platform for ticket booking, payment, and order management.

Increase Sales & Revenue: Streamline the ticketing process to attract more customers and maximize ticket sales.

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

Ensure Real-Time Accuracy: Maintain accurate, up-to-date information on ticket 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, book, and manage tickets online.

Automate Ticketing Processes: Reduce manual interventions in booking, cancellations, and refunds.

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

Maintain Real-Time Ticket Availability: Prevent overbooking and keep stock/inventory up-to-date.

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 book tickets online.

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

- **Ticket Booking & Availability:**

Tickets can only be booked if available in the system at the time of request.

Maximum number of tickets per booking is limited to per user.

Overbooking is not allowed; real-time inventory updates must be enforced.

- **Payments & Refunds:**

All online payments must be processed via secure payment gateways.

Refunds for cancelled bookings must follow the defined refund policy (full/partial/refund timeline).

Cash-on-delivery is only allowed for eligible ticket types.

- **Ticket Validity & Usage:**

Tickets are valid only for the date, time, and event specified at booking.
E-tickets must be presented for validation at the entry point.

- **Notifications & Communication:**

Booking 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 events and ticket inventory.

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

4.4. Background

The organization currently manages ticket bookings manually or through separate systems, leading to errors, delays, and poor customer experience. The proposed Ticketing System will provide a centralized, automated platform for booking, payments, cancellations, and notifications, improving efficiency, accuracy, and customer satisfaction.

Problems:

Manual Processes: Ticket booking, cancellations, and inventory updates are done manually, leading to errors and inefficiencies.

Limited Customer Access: Customers cannot view real-time ticket availability or manage bookings online.

Delayed Communication: Notifications about booking confirmations, cancellations, or schedule changes are slow or inconsistent.

Payment Challenges: Lack of secure, multiple payment options causes inconvenience for users.

Reporting Gaps: Management has limited visibility into ticket sales, revenue, and trends, making data-driven decisions difficult.

Expected Benefits of Implementing the Project

Enhanced Customer Experience: Real-time ticket 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 bookings, 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 ticket volume and expansion of events or services.

4.5. Project Objective

- **Automate Key Processes:** Reduce manual interventions in booking, cancellations, and refunds to minimize errors.
- **Enable Secure Transactions:** Integrate reliable payment gateways to ensure safe and convenient payments.
- **Enhance Customer Experience:** Allow users to view real-time ticket availability, receive confirmations, and manage bookings 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.

4.6. Project Scope

The scope of the Ticketing System project is to develop a centralized, automated platform that allows users to search, book, and manage tickets online, while enabling administrators to manage inventory, schedules, pricing, and generate reports.

4.6.1. In Scope Functionality

- User registration, login, and profile management.
- Searching and booking tickets for events, travel, or services.
- Secure online payment processing.
- E-ticket generation with email/SMS confirmation.
- Ticket cancellations and automated refunds.
- 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

- Offline or manual ticket booking processes.
- Loyalty or rewards programs.
- Integration with third-party ticket resellers.
- Mobile application development

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 (Avoid / Mitigate / Transfer / Accept)
Payment Failure	Transaction delays, lost sales	Mitigate – Integrate multiple secure payment gateways and retry options.
Overbooking	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.
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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: Ticket Search & Selection

- Users search for events, travel options, or services.
- Filter options allow selection by date, location, type, or availability.
- Users view detailed information about tickets (price, availability, seating).

Phase 3: Booking & Payment

- Users select tickets and add them to their cart.
- Checkout process captures delivery details, applies any discounts, and calculates total cost.
- Payment is processed securely through integrated gateways.

Phase 4: E-Ticket Generation & Confirmation

- Upon successful payment, an electronic ticket is generated.
- Confirmation and ticket details are sent to the user via email and/or SMS.

Phase 5: Delivery & Notifications

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

Phase 6: Cancellation & Refunds

- Users can request ticket cancellations according to policy.
- Refunds are processed automatically, and the user is notified.

Phase 7: 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 have limited visibility of ticket availability and pricing.
- Payments are often manual, cash-based, or via unintegrated gateways.
- 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 search, book, and manage tickets in real-time.
- Secure online payment gateways integrated for safe transactions.
- Instant notifications via email/SMS for confirmations, cancellations, or updates.
- Admins have a dashboard to manage inventory, pricing, schedules, and reporting efficiently.
- Automated reports and analytics for tracking sales, revenue, and customer behavior.
- Reduced manual effort, faster operations, and improved customer experience.

9. Business Requirements

ID	Requirement Description	Area	Use Case	Priority
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BR001	Allow users to register, login, and manage their profiles	User Management	User Registration/Login	High
BR002	Enable users to search for tickets by date, location, or category	Ticket Booking	Search Tickets	High
BR003	Display ticket details including price, availability, and event info	Ticket Booking	View Ticket Details	High
BR004	Enable secure online payment through multiple gateways	Payment Processing	Make Payment	High
BR005	Generate e-ticket with unique ID or QR/Barcode after booking	E-Ticket Generation	E-Ticket 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 ticket inventory, pricing, and schedules	Admin Functions	Inventory & Pricing Management	High
BR010	Admins generate reports on bookings, cancellations, and revenue	Reporting & Analytics	Sales & Revenue Reporting	Medium

BR011	Notify users about booking, 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

Ticket Inventory: The available tickets for a particular event or schedule.

E-Ticket: An electronic version of a ticket generated digitally and delivered via email/SMS.

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

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

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

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

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		

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		

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		