

Business Requirement Document (BRD)

Project ID: Aavin-01

Version:0.1

By: Iftikhaar Ali S D

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Business Requirement Document

1. Document Revisions

Date	Version Number	Document Changes
17-11-2025	0.1	Initial Draft

2. Approvals

Role	Name	Title	Signature	Date
Project Sponsor	Dr. Nishanth Raja	CEO, XYMA Analytics	Nishanth	17-11-2025
Business Owner	Mr. Aswin Kumar	VP of Operations	Aswin	17-11-2025
Project Manager	Mr. Jamesh Babu	Project Manager	Jamesh	17-11-2025
System Architect	Ms. Saliha	Lead Architect	Saliha	17-11-2025
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User Experience Lead	Mr. Saravana Babu	Lead UX Designer	Saravana	17-11-2025
Quality Lead	Mr. Yuvanesh	QA Manager	Yuvanesh	17-11-2025
Content Lead	Mr. Sylvester	Technical Writer	Sylvester	17-11-2025

3. RACI Chart

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]).

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Supports (S)– Provides supporting services in the production of this document

Consulted (C)– Provide input (such as an interviewee)

Informed (I)– Must be informed of any changes

Name	Position	*	R	A	C	I
Ms. Tharani	Senior Java Developer		✓			
Mr. Vignesh	Java Developer		✓			
Mr. Jude	Java Developer		✓			
Mr. Ramesh	Java Developer		✓			
Mr. Karthik	Java Developer		✓			
Mr. Mukesh	Delivery Head			✓		
Mr. Naveen	Project Manger			✓		
Mr. Iftikhaar	Business Analyst			✓		
Ms. Namrita	HR Manager				✓	
Mr. Manish	Electrical Manager				✓	
Mr. Shiva	Procurement Manager				✓	
Dr. Nishanth Raja	Project Sponsor	✓				
Mr. Guru Prasath	Financial Head					✓
Mr. Aswin M	Project Coordinator					✓

4. Introduction

4.1 Business Goals

The business goal and organizational need for the company manufacturing ice-cream and milk products are:

- Optimize inventory management across all manufacturing plants and warehouses to minimize wastage, avoid stockouts, and ensure product availability for distribution.
- Enable the fastest and most efficient delivery of products to customers nationwide, enhancing customer satisfaction and retaining market competitiveness.

Organization Need

- Implement a robust software solution that can monitor inventory levels in real time, automate order fulfillment, and support route planning for quick deliveries.
- Centralize operations to allow management to oversee and control stock, logistics, and delivery performance from a unified platform.

4.2 Business Objectives

- Develop an integrated IT solution that enables management of inventory and optimizes delivery logistics for ice-cream and milk products.
- Implement mobile applications for Android and iOS to support on-the-go access and real-time updates for inventory and delivery operations.
- Centralize tracking of inventory status and order fulfillment to ensure transparency and efficiency across all manufacturing plants and warehouses.
- Enhance overall customer experience with a system that ensures the fastest possible product deliveries.

4.3 Business Rules

- Inventory records must be updated in real time after every stock movement at manufacturing plants and warehouses.
- All delivery orders should be processed on a first-come, first-served basis, except for priority orders which require expedited handling.
- Products must be stored and transported according to food safety regulations to ensure quality and compliance.
- Only authorized personnel can approve inventory adjustments and dispatches to maintain operational control.
- All deliveries must meet the company's standard operating procedures for timeliness and customer satisfaction.

4.4 Background

The company operates multiple manufacturing plants and warehouses across the country, producing ice-cream and milk products. Business growth led to challenges in tracking inventory, coordinating stock movements, and ensuring timely deliveries to customers. These issues resulted in occasional stockouts, wastage, and delays, impacting customer satisfaction and operational efficiency.

To address these challenges, the project was proposed to develop an integrated software system that would centralize inventory management and optimize delivery processes. Implementing this solution is expected to minimize losses, improve transparency, and ensure the fastest possible delivery, thereby strengthening the company's competitive position.

4.5 Project Objective

The project's overall goal is to develop a comprehensive software solution that centralizes inventory management and streamlines delivery operations for ice-cream and milk products. The system will enable real-time inventory tracking, automate order processing, and support route optimization to ensure swift deliveries.

It will align with business objectives by enhancing operational efficiency and improving customer satisfaction while allowing integration with existing logistics and ERP systems for seamless data exchange.

4.6 Project Scope

The project scope for this initiative includes developing a centralized software solution to efficiently manage inventory and optimize delivery operations across all manufacturing plants and warehouses. The software will facilitate real-time inventory tracking, automated order processing, and delivery route planning to ensure the fastest possible product delivery to customers. Mobile applications for staff and integration with existing logistics or ERP systems are included in scope, while unrelated financial management, advanced analytics, and hardware procurement are excluded.

4.6.1. In Scope Functionality

- Real-time inventory management across all manufacturing plants and warehouses.
- Automated order processing and tracking.
- Delivery route optimization for quickest customer delivery.
- Mobile applications for Android and iOS for staff use.
- Integration with existing logistics and ERP systems.

4.6.2. Out Scope Functionality

- Financial management features unrelated to inventory and delivery tracking.
- Marketing automation tools and customer relationship management modules.
- Advanced analytics beyond basic inventory and delivery reporting.
- Hardware procurement and installation for warehousing and distribution.

5. Assumptions

- All manufacturing plants and warehouses have the required infrastructure to support the new software system.
- Staff will receive adequate training to use the new inventory and delivery management applications.
- Integration with existing logistics and ERP systems is technically feasible and can be completed within the project timeline.
- Internet connectivity is reliable at all operational locations for real-time data updates and mobile app usage.
- Necessary regulatory and data security requirements will be identified and adhered to during development.

6. Constraints

- **Budget and Timeline:** Project must be delivered within the allocated budget and 12-month timeline.
- **Technology Stack:** Development is restricted to approved programming languages and database technologies.
- **Data Security Compliance:** Platform must meet all relevant data privacy and security standards.
- **Resource Availability:** Dependent on key personnel from the project team and company departments.

- **No Legacy Integration:** Initial release excludes direct integration with existing legacy systems; data migration as a one-time process.
- **Infrastructure Limitations:** Performance depends on existing network infrastructure and server capacity.
- **Scope Freeze:** Project scope will be frozen after SRS sign-off; any changes require formal approval and may impact budget or timeline.

7. Risks

There are several risks associated with the project, including potential technology integration challenges, limited resource availability, security threats to data, operational disruptions, and resistance from users to adopt new systems and processes. If not addressed, these risks could delay implementation, compromise data integrity, or reduce the effectiveness of the new solution.

Risk Strategies

- **Avoid:** Take action to eliminate the risk.
- **Mitigate:** Implement measures to reduce risk impact if it occurs.
- **Transfer:** Shift responsibility for the risk to another party.
- **Accept:** Acknowledge and accept the consequences if the risk materializes.

7.1 Technological Risks

- **Compatibility Issues:** Risk of new software not aligning with existing hardware or systems.
- **Integration Challenges:** Potential failures or delays during implementation of new technologies.
- **Support Limitations:** Chosen technologies may lack long-term vendor or community support.
- **Performance Constraints:** Network and server capacity might restrict effective deployment and scalability.
- **Security Vulnerabilities:** New technology could introduce unforeseen cybersecurity concerns.

7.2 Skills Risk

- **Recruitment Challenges:** Difficulty in sourcing staff with required technical and domain expertise.
- **Training Gaps:** Insufficient training for existing personnel may hinder system adoption and performance.
- **Resource Turnover:** Risk of key personnel leaving during the project timeline.
- **Limited Specialized Skills:** Shortage in niche skills necessary for specific project tasks.
- **Dependency on External Experts:** Over-reliance on third-party consultants or contractors if internal resources are lacking.

7.3 Political Risk

- **Regulatory Changes:** Possible impact from amendments in laws or government policies affecting operations.
- **Government Interventions:** Actions such as audits, inspections, or restrictions that disrupt project progress.
- **Trade Policies:** Effects of import/export regulations, tariffs, or customs changes impacting supply chain.
- **Political Instability:** Risks due to changes in government, civil unrest, or election cycles.
- **Local Governance Issues:** Challenges from state or municipal authorities, permits, or local opposition.

7.4 Business Risk

- **Financial Loss:** Impact on investments and sunk costs if the project is canceled.
- **Operational Disruption:** Continuation of inefficiencies and manual processes in the absence of a new system.
- **Competitive Disadvantage:** Loss of market share to competitors who adopt advanced solutions.
- **Customer Impact:** Reduced satisfaction due to ongoing issues in inventory management and delayed deliveries.
- **Resource Wastage:** Unused efforts and resources allocated to preliminary project activities.

7.5 Requirements Risk

- **Incomplete Requirements Gathering:** Some requirements may not have been fully captured during stakeholder interviews.
- **Ambiguous Specifications:** Risk that certain requirements are not described with sufficient clarity or detail.
- **Misunderstood Business Needs:** Possible misalignment between documented requirements and actual business objectives.
- **Changing Requirements:** Requirements may shift during development, causing gaps in initial documentation.
- **Unverified Assumptions:** Risks from relying on unstated or untested assumptions about system needs.

7.6 Other Risks

- **Environmental Risks:** Disruption due to natural disasters or extreme weather conditions.
- **Supply Chain Risks:** Delays or failures from third-party suppliers or logistics partners.
- **Legal Risks:** Potential lawsuits, contractual disputes, or issues with regulatory compliance.
- **Reputational Risks:** Negative media coverage or customer feedback affecting company image.
- **Social Risks:** Community opposition or workforce unrest impacting project progress.

8. Business Process Overview

The process begins with inventory receiving and updates at manufacturing plants and warehouses. Orders are placed by customers through designated channels and are processed for stock availability and dispatch. The system then optimizes delivery routes, allocates transport, and tracks deliveries until completion, ensuring rapid and efficient fulfillment at each phase.

8.1 Legacy System (AS-IS)

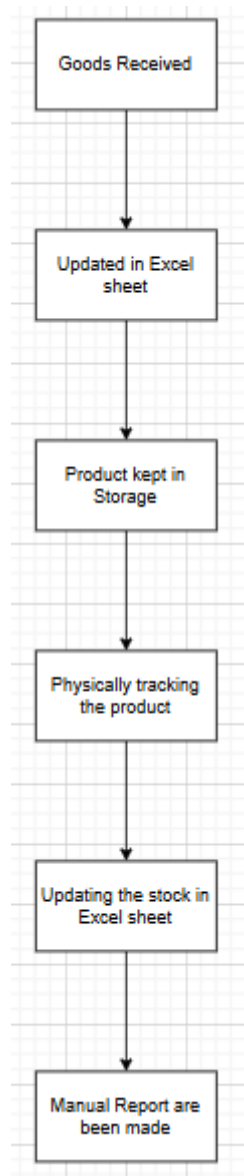
Inventory Management

1. **Inventory Receiving:** Goods are received from production units and checked for quality and quantity.
2. **Stock Entry:** Items are manually recorded in inventory logs or spreadsheets; data is split across multiple files.
3. **Stock Storage:** Products are physically stored in designated warehouse areas, according to type or demand.
4. **Inventory Tracking:** Periodic physical stock checks are conducted and records are adjusted.
5. **Order Allocation:** Warehouse managers find stock for incoming customer or dispatch orders.
6. **Stock Updates:** Inventory logs are updated after dispatching products.
7. **Audit & Reporting:** Reports are prepared manually for stock levels, shortages, and wastage.

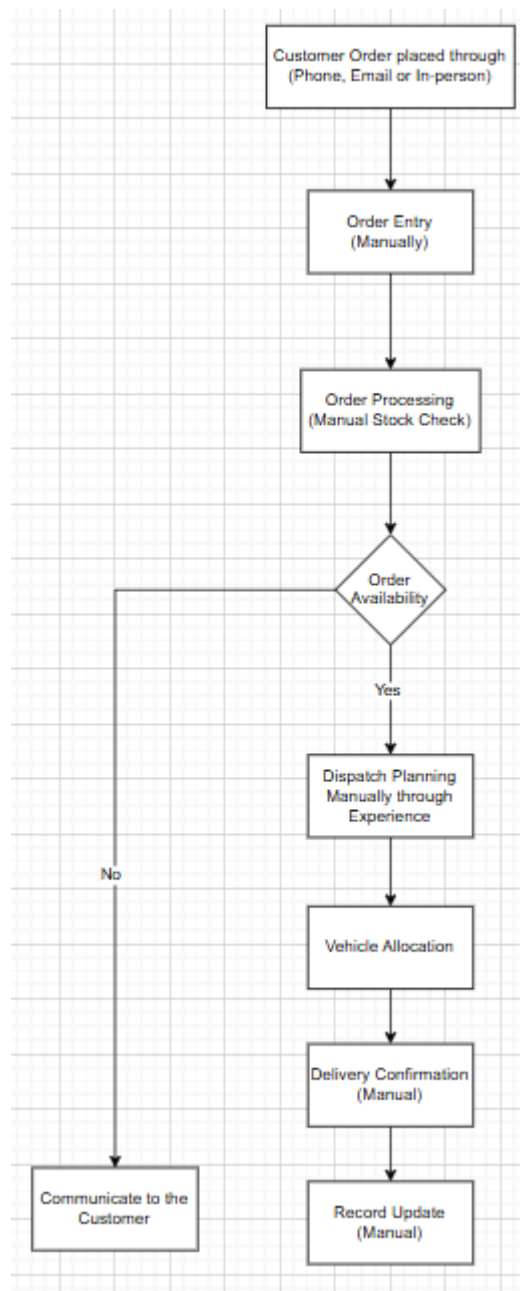
Quickest Delivery to Customers

1. **Order Placement:** Customers place orders through phone, email, or in-person.
2. **Order Entry:** Staff manually logs orders into spreadsheets or ledgers.
3. **Order Processing:** Available stock is checked against order, adjustments made if out of stock.
4. **Dispatch Planning:** Delivery routes are decided manually (using maps or past experience).
5. **Vehicle Allocation:** Vehicles are assigned for deliveries based on availability.
6. **Dispatch Execution:** Products are handed over to drivers for delivery.
7. **Delivery Confirmation:** Staff confirm deliveries with customers via phone, email, or delivery slips.
8. **Record Update:** Delivery status manually updated in spreadsheets or separate files.

Inventory Management



Quickest Delivery to Customers



8.2 Proposed Recommendations (TO-BE)

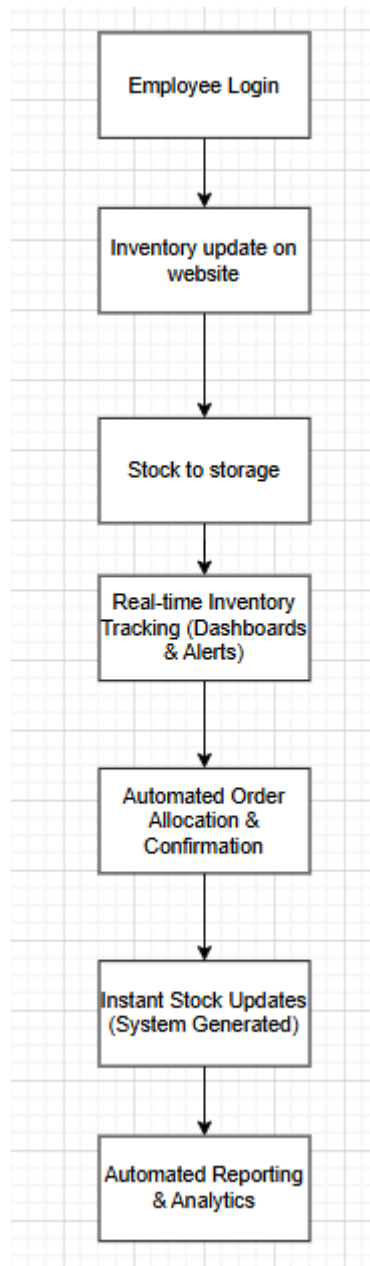
Inventory Management

1. **Start:** Inventory receipts are recorded automatically at each plant or warehouse using digital scanners or connected sensors.
2. **Login:** Warehouse staff and managers log into the integrated inventory platform via web or mobile.
3. **Navigate:** Users access a centralized “Inventory Management” dashboard that displays real-time stock status and pending actions.
4. **Automated Stock Entry:** New items and adjustments are updated instantly within the system, eliminating manual data entry.
5. **Automated Alerts:** Low stock, expiry, or stock movement triggers real-time alerts and notifications for managers.
6. **Dashboards:** Managers view reports, audit trails, and analytics for decision making through interactive dashboards.
7. **Automated Order Allocation:** System smartly recommends optimal allocation for incoming orders based on inventory data.

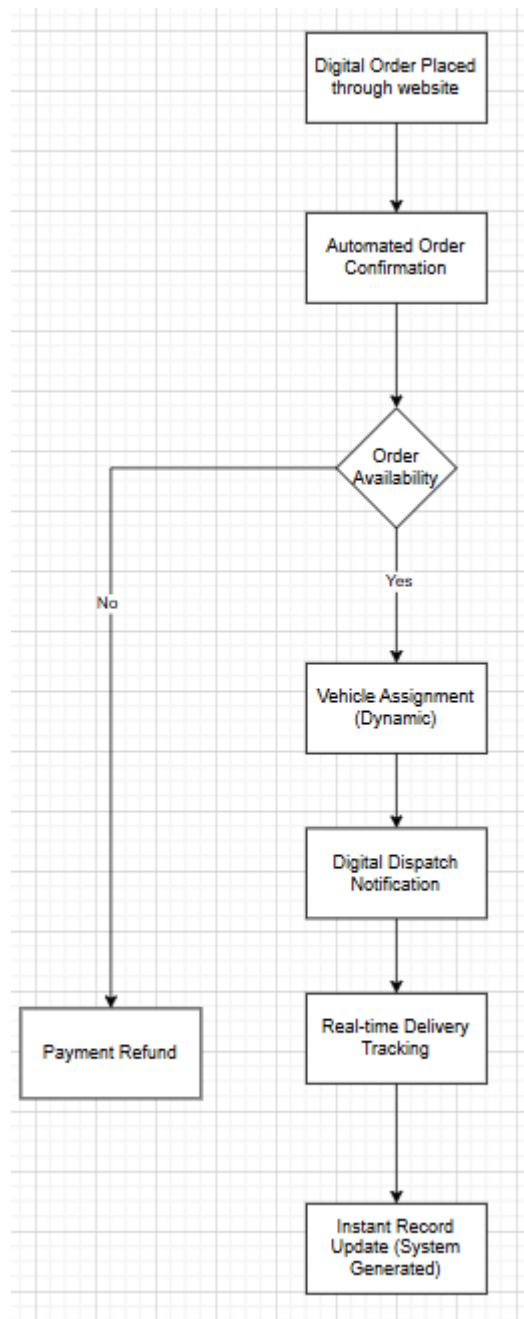
Quickest Delivery to Customers

1. **Order Placement:** Customers place orders directly through digital channels (web, app).
2. **Automated Order Confirmation:** System validates stock availability and confirms order in real time.
3. **Smart Dispatch Planning:** Algorithms auto-select fastest delivery routes and allocate delivery vehicles based on availability and proximity.
4. **Automated Driver Notification:** Delivery staff receive instant digital dispatch instructions and route details via mobile app.
5. **Real-Time Tracking:** Both customers and staff can monitor delivery status and ETA via the platform.
6. **Digital Delivery Confirmation:** Customers receive notifications/confirmation and can provide feedback directly in the system.
7. **Automated Records Update:** Inventory and delivery statuses update instantly once the delivery is completed.

Inventory Management



Quickest Delivery to Customers



9. Business Requirements

1. Real-time inventory tracking across all warehouses and plants.
2. Centralized inventory database to consolidate records.
3. Automated stock level alerts and reorder notifications.
4. Barcode/RFID scan support for goods receipt and dispatch.
5. Digital product categorization and item sorting.
6. Batch/lot/serial tracking for traceability and compliance.
7. Automated stock out and excess inventory reports.
8. Integration with order management and e-commerce platforms.
9. Automated order allocation based on available stock.
10. Real-time demand forecasting using sales and trend data.
11. Smart storage allocation within warehouses.
12. Cycle and physical inventory count modules.
13. Mobile application support for warehouse staff.
14. Digital dashboards for inventory, delivery status, and KPIs.
15. Customizable business reports and analytics.
16. Automated delivery route planning and vehicle assignment.
17. Integration with third-party carriers and logistics APIs.
18. Live order status and delivery tracking for customers.
19. Instant digital customer notifications and confirmations.
20. Supplier and vendor management modules.
21. Purchase order automation on low stock.
22. Multi-warehouse and multi-location support.
23. Consolidated picking, packing, and shipping workflow.
24. Document and audit trail for all inventory movements.
25. Bulk order processing and batch shipment features.
26. Returns and refunds management integration.
27. Role-based access control for security and data integrity.
28. Data backup and recovery capabilities.
29. Scheduled and ad-hoc inventory audits.

30. Regulatory compliance for food safety and quality standards.

10. Appendices

10.1 List of Acronyms

Acronym	Full Form
ERP	Enterprise Resource Planning
WMS	Warehouse Management System
CRM	Customer Relationship Management
KPI	Key Performance Indicator
API	Application Programming Interface
SKU	Stock Keeping Unit
RFID	Radio Frequency Identification
DMS	Delivery Management System
BOM	Bill of Materials
SOP	Standard Operating Procedure
TMS	Transportation Management System
ETA	Estimated Time of Arrival
ASN	Advanced Shipping Notice
UI	User Interface
UX	User Experience
QA	Quality Assurance
RMA	Return Merchandise Authorization
FIFO	First In First Out
LIFO	Last In First Out
PO	Purchase Order
GRN	Goods Receipt Note
SO	Sales Order
SLA	Service Level Agreement
SSO	Single Sign-On
IoT	Internet of Things
AI	Artificial Intelligence
OTP	One Time Password
PDF	Portable Document Format
CSV	Comma-Separated Values
SMS	Short Message Service
MMS	Multimedia Messaging Service
BI	Business Intelligence

10.2 Glossary of Terms

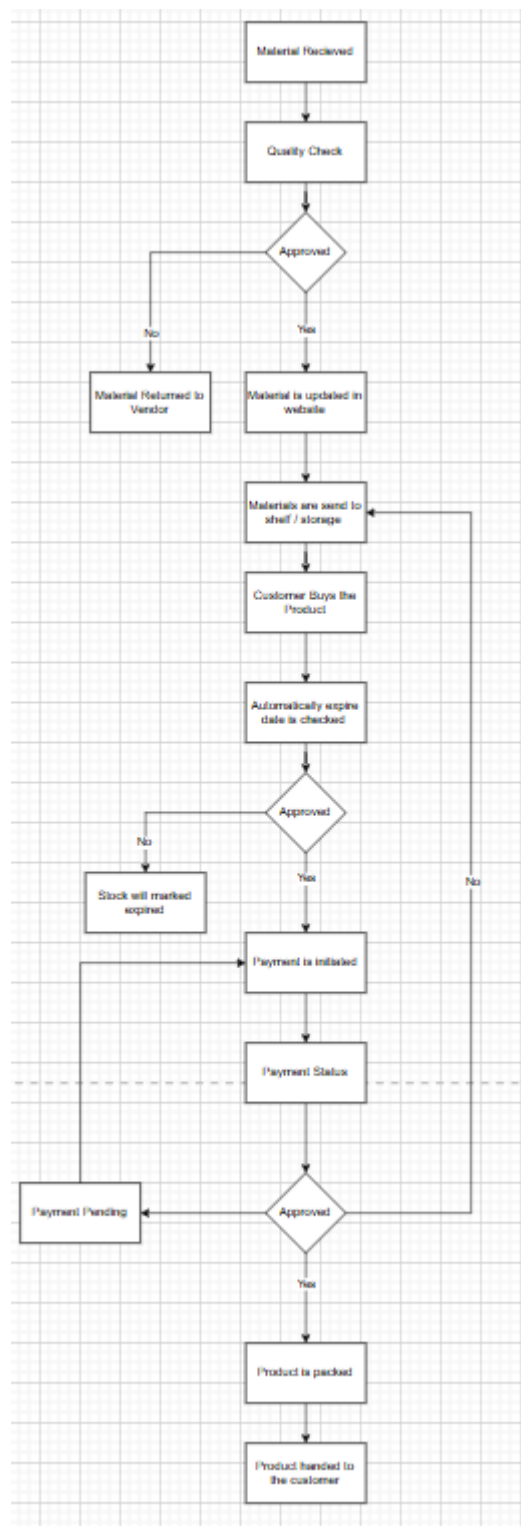
Term	Definition
Inventory	The goods and materials held by a business for resale or use in production.
SKU (Stock Keeping Unit)	Unique identifier for each distinct item in inventory.
WMS (Warehouse Management System)	Software for managing inventory storage, movement, and tracking within warehouses.
ERP (Enterprise Resource Planning)	Integrated suite of applications for managing all core business processes.
Batch/Lot	Grouping of inventory items for tracking and traceability purposes.
Cycle Count	Regular counting of a subset of inventory to ensure accuracy over time.
Order Fulfillment	The process of receiving, processing, and delivering customer orders.
Dispatch	Assignment and sending out goods for delivery to customers.
Reorder Point	Inventory level at which a new order is triggered to replenish stock.
Backorder	Order placed for out-of-stock items to be fulfilled when available.
Real-time Tracking	Continuous monitoring of inventory status or delivery location.
Barcode	Machine-readable code used for item identification and tracking.
RFID (Radio Frequency Identification)	Wireless system for identifying and tracking inventory using radio waves.
Lead Time	Duration between placing an order and receiving goods.
Stockout	Situation where inventory is depleted and cannot fulfill orders.
Picking	Selecting items from inventory to fulfill orders.
Packing	Preparing order items for shipment.
Shipping Integration	Linking inventory or order system to carriers for streamlined delivery.
Audit Trail	Detailed history of inventory and order transactions for review and compliance.
PO (Purchase Order)	Document issued to suppliers authorizing purchase of goods.
GRN (Goods Receipt Note)	Official record of goods received.
ASN (Advanced Shipping Notice)	Notification of pending deliveries from suppliers.
Vendor Management	Process of handling supplier relationships and contracts.
SLA (Service Level Agreement)	Contract specifying expected performance standards for delivery/operations.
Return Management	Handling of returned goods and refunds.
BI (Business Intelligence)	Technology-driven process for analyzing and reporting business data.
Mobile Application	Software for mobile devices used to access inventory or delivery systems.
Real-time Analytics	Instant data analysis for decision-making and status updates.
Integration	Connecting disparate software systems to share data.
FIFO (First In First Out)	Inventory method ensuring oldest stock is used first.
LIFO (Last In First Out)	Inventory method using newest stock first.

10.3 Related Documents

The following documents are related to and support the Business Requirements Document (BRD) for the integrated inventory and delivery management project. They provide essential detail and context for project planning, execution, and management:

- **Project Charter:** The official document that authorizes the project, outlining objectives, scope, stakeholders, and authority.
- **Software Requirement Specification (SRS):** Detailed specifications of functional and non-functional requirements, with criteria for performance, security, and usability.
- **AS-IS and TO-BE Process Flow Diagrams:** Visual diagrams of existing manual workflows and proposed automated workflows in the new system.
- **Use Case Specifications:** Scenario-driven descriptions of user actions, pre-conditions, main flows, and alternative flows for system interaction.
- **Requirements Traceability Matrix (RTM):** Matrix to track each requirement's coverage from definition through development and testing.
- **Project Plan:** Comprehensive plan with schedule, milestones, resource allocation, and dependencies.
- **Risk Register:** Document logging identified risks, their likelihood and impact, and planned mitigation strategies.
- **Data Migration Plan:** Strategy for extracting, cleaning, and importing legacy data into the new platform.
- **Test Plan:** Outline of test scope, approaches, schedules, resources, and test activities including unit, integration, and user acceptance testing.

Process Flow Diagram



Introduction Letter

Subject: Beginning Our Requirement Gathering Process – Introduction

Dear Aswin Kumar,

Greetings from XYMA Analytics!!!

My name is **Iftikhaar Ali S D**, and I would like to formally introduce myself as the **Business Analyst** assigned to work with you and your team for this project. I will be your primary point of contact for understanding the business requirements, gathering detailed inputs, and ensuring that our project objectives are aligned with your expectations.

As we begin the **business understanding phase**, my focus will be to collaborate closely with your stakeholders, clarify processes, identify challenges, and translate your business needs into clear and structured requirements for our technical and development teams.

I look forward to working with you and your team and ensuring a smooth and efficient start to the project. Please feel free to reach out to me anytime for queries, clarifications, or discussions.

Thank you, and I am excited to begin this journey with you.

Warm regards,

Iftikhaar Ali S D

Business Analyst

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Business Requirement Document (BRD)

Project ID: Shop-Up-01

Version:0.1

By: Iftikhaar Ali S D

Business Requirement Document

1. Document Revisions

Date	Version Number	Document Changes
18-11-2025	0.1	Initial Draft

2. Approvals

Role	Name	Title	Signature	Date
Project Sponsor	Mr. Dastagir	CEO, Shop-Up	Dastagir	18-11-2025
Business Owner	Mr. Shaul	Operations Head	Shaul	18-11-2025
Project Manager	Mrs. Roshanara	Sales Head	Roshan	18-11-2025
Procurement Manager	Ms. Nirmal	Procurement Manager	Nirmal	18-11-2025
Development Lead	Mr. Jeeva	Development Lead	Jeeva	18-11-2025
User Experience Lead	Mr. Naresh	UX/UI Lead	Naresh	18-11-2025
Quality Lead	Mr. Muthu	Quality Assurance Lead	Muthu	18-11-2025
Content Lead	Mr. Vignesh	Content Manager	Vignesh	18-11-2025

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Consulted (C)– Provide input (such as an interviewee)

Informed (I)– Must be informed of any changes

Name	Position	*	R	A	C	I
Ms. Priya Sharma	Senior Java Developer		✓			
Mr. Arun Mehta	Java Developer		✓			
Mr. Kavita Joshi	Java Developer		✓			
Mr. Ramesh	Java Developer		✓			
Mr. Sandeep Rao	Java Developer		✓			
Mr. Neha Singh	Delivery Head			✓		
Mr. Nidheesh	Project Manger			✓		
Mr. Iftikhaar	Business Analyst			✓		
Ms. Manjula	HR Manager				✓	
Mr. Ravi	Electrical Manager				✓	
Mr. Godse	Procurement Manager				✓	
Dr. Dastagir	Project Sponsor	✓				
Mr. Prakash	Financial Head					✓
Mr. Noor	Project Coordinator					✓

4. Introduction

4.1 Business Goals

The main business goal of the Shop-Up online store project is to establish a scalable digital platform that enables streamlined product listings, efficient inventory management, and the fastest possible order fulfillment to maximize customer satisfaction and increase sales revenue.

Need:

To provide a robust, user-friendly online shopping experience that helps the organization compete effectively in the digital marketplace, meet evolving customer expectations, and grow its market presence.

4.2 Business Objective

- Seamless product catalog management and inventory tracking.
- Integrated order processing and secure payment functionalities.
- Launch of a mobile shopping app for Android and iOS platforms.
- Real-time analytics for sales and customer engagement

4.3 Business Rules

- All payments must be securely processed through approved gateways.
- Inventory records must be updated in real-time for every transaction.
- Customer data must be protected according to data privacy regulations (e.g., GDPR).
- Orders can be cancelled or returned as per the organization's return policy.
- Discounts, promotions, and loyalty points are applied based on current business campaigns.
- All product reviews are subject to moderation before visible on the storefront.
- Price changes require approval from the business owner before going live.

4.4 Background

The Shop-Up online store project was proposed to address challenges in managing product inventories and meeting growing customer demand for fast, convenient shopping experiences. Traditional sales channels showed limitations in scalability, efficiency, and customer reach. By implementing a digital platform, the organization aims to resolve these issues and deliver improved customer satisfaction, operational efficiency, and increased market competitiveness.

4.5 Project Objective

The project objective for Shop-Up is to develop a robust online store platform that automates product listing, enables secure transactions, and streamlines inventory and order management. The solution will align with business goals by increasing customer engagement, optimizing operational efficiency, and supporting scalable growth. Integration with external payment, logistics, and ERP systems will ensure seamless end-to-end business operations.

4.6 Project Scope

The scope of the Shop-Up online store project includes the design and development of a web and mobile application enabling user registration, secure shopping, product catalog management, online payments, order tracking, and inventory control. The project will also deliver an admin dashboard for operational management, integrate with trusted payment gateways and logistics providers, and feature customer support as well as analytics for business insights. Excluded from this scope are third-party marketplace integrations, advanced ERP modules, and functionalities unrelated to retail sales or inventory management.

4.6.1 In Scope Functionality

- User registration, authentication, and profile management.
- Product catalog, search, and filtering features.
- Secure online ordering and payment processing.
- Inventory management and admin dashboard.
- Integration with payment gateways and logistics providers.
- Order tracking, notification, and customer support.
- Mobile application development for Android and iOS.

4.6.2 Out Scope Functionality

- Physical store POS system integration.
- Third-party marketplace (e.g., Amazon, Flipkart) integration.
- Development of advanced CRM or ERP modules beyond order management.
- E-learning and HRMS modules not related to sales or inventory.
- Support for B2B bulk ordering or wholesaler-specific features.

5. Assumption

- The organization will provide timely access to required resources and subject matter experts.
- End users have internet access and compatible devices for web/mobile shopping.
- Third-party service providers (payments, logistics) will supply necessary APIs and support.
- Regulatory requirements and data privacy laws will be defined and followed throughout development.
- Business requirements will remain stable during the initial development phase.

6. Constraints

- The project must be delivered within a fixed timeline and allocated budget.
- Compliance with local and international data protection and payment regulations is mandatory.
- Third-party integrations and services are limited to APIs provided by approved vendors.
- All features must be optimized for both web and mobile platforms.
- Scope changes during development are restricted and require formal approval.

7. Risks

The Shop-Up online store project faces several risks that could impact its success, such as delays in third-party API integration, evolving business requirements, and potential data security vulnerabilities. Regular risk analysis throughout the project lifecycle is essential. While not every risk can be avoided, proactive planning limits the potential negative impact, whether through avoidance, mitigation, transfer, or acceptance.

Avoid

Critical risks like data breaches must be eliminated by implementing secure coding practices and robust authentication processes.

Mitigate

Risks of requirement changes or scope creep can be reduced by maintaining clear documentation and frequent stakeholder communication.

Transfer

Technology risks or payment failures may be handled through partnership agreements with trusted vendors, effectively transferring certain responsibilities.

Accept

Some uncertainties, like fluctuating market demand, may be acknowledged as inherent project risks and accepted if they arise.

7.1 Technological Risk

- **Integration Failure:** APIs from payment gateways or logistics providers may not function as expected, causing delays and added development effort.
- **Data Security Breach:** Vulnerabilities in the system could lead to unauthorized access or data leaks, impacting user trust and regulatory compliance.
- **Platform Compatibility Issues:** Application may not perform consistently across all targeted web browsers and mobile devices.
- **Performance Bottlenecks:** High user or transaction volumes might affect system speed and responsiveness, harming the customer experience.
- **Obsolescence Risk:** Rapid changes in technology could make some components outdated before or soon after deployment.

7.2 Skills Risk

- **Limited Technical Expertise:** Difficulty in recruiting developers with experience in e-commerce platforms and payment gateway integration could delay milestones.
- **Resource Availability:** Key team members, such as mobile developers or architects, may become unavailable due to conflicting priorities or attrition.
- **Training Gaps:** Staff may lack familiarity with new tools or frameworks required for rapid deployment, increasing onboarding and development time.
- **Quality Assurance Skills:** Inadequate testing or QA expertise can lead to undetected bugs and compromised platform stability.

7.3 Political Risks

- **Regulatory Changes:** Sudden changes in government e-commerce regulations or tax policies may require major system updates and impact compliance timelines.
- **Policy Uncertainty:** Shifts in trade, data localization, or digital business policies can introduce uncertainty and threaten business continuity.
- **Stakeholder Influence:** Project prioritization or funding may be affected by political leadership, organizational policies, or external political pressures.

7.4 Business Risks

- **Revenue Loss:** If the project is canceled, the business will miss expected gains from expanded online sales and market reach.
- **Competitive Disadvantage:** Failure to launch the platform may let competitors capture the digital market segment ahead of Shop-Up.
- **Customer Dissatisfaction:** Existing and potential customers may seek alternative platforms due to the lack of convenient online shopping options, reducing brand loyalty.
- **Operational Inefficiency:** Manual processes will persist, limiting the organization's ability to streamline inventory and order management.

7.5 Requirements Risks

- **Incomplete Stakeholder Input:** Business needs or priorities may be wrongly captured due to limited stakeholder engagement, leading to missing essential features.
- **Ambiguous Requirements:** Vague or unclear requirements may result in incorrect implementation, causing rework and project delays.
- **Scope Misalignment:** Misunderstood functional boundaries might lead to features outside the intended scope, increasing costs or reducing project value.

- **Integration Gaps:** Requirements for third-party services may be insufficiently detailed, risking failures in API connectivity or system compatibility.

7.6 Other Risks

- **Supply Chain Disruption:** Unexpected disruptions in suppliers or delivery partners could impact the availability of products and timely customer deliveries.
- **Natural Disaster Risk:** Events like floods or earthquakes may interrupt operations or data center activities, causing service outages.
- **Reputational Risk:** Negative publicity due to technical failures, poor customer service, or legal issues could harm brand reputation and customer loyalty.
- **Vendor Dependency:** Over-reliance on a single technology or vendor for key modules may introduce hidden vulnerabilities to service continuity.

8. Business Process Overview

The business process for the Shop-Up project begins with sellers listing products and updating inventory, followed by customers browsing the catalog, placing orders, and making secure payments. Orders are processed through the integrated admin dashboard, triggering automated inventory updates and real-time tracking until delivery completion. Customers receive notifications and can access support if needed, while business admins use analytics to monitor sales performance and operational efficiency.

8.1 Legacy System (AS-IS)

Manual Product Catalog Updates

1. **Start:** Staff identifies the need to update or add a product.
2. **Draft Record:** Product details are handwritten or entered into a spreadsheet.
3. **Distribute Info:** Spreadsheets or printed catalogs are shared by email or physical copies.
4. **Revise Catalogs:** Each change needs manual edits in multiple files.
5. **End:** Teams use different catalogs, increasing the risk of conflicting product info and stocking errors.

Inefficient Inventory Tracking

1. **Start:** Staff plans a physical stock count.
2. **Check Inventory:** Inventory is counted manually in the storage area.
3. **Log Update:** Data is recorded on paper forms or basic spreadsheets.
4. **Notify Team:** Inventory status is shared verbally or through email.
5. **End:** Delays in updating lead to out-of-stock products and inaccurate inventory.

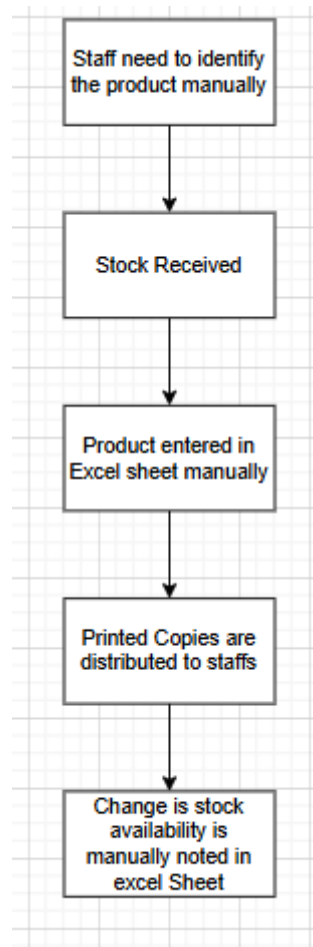
Slow Order Processing and Payment Collection

1. **Start:** Customer contacts the store to place an order.
2. **Record Order:** Staff writes down order details in a notebook or log.
3. **Check Stock:** Stock status is verified by searching through the spreadsheets.
4. **Collect Payment:** Order payment is taken in cash, cheque, or manual transfer.
5. **Arrange Delivery:** Delivery is scheduled and tracked by phone or paper.
6. **End:** Orders are confirmed, but tracking relies on manual follow-ups and records.

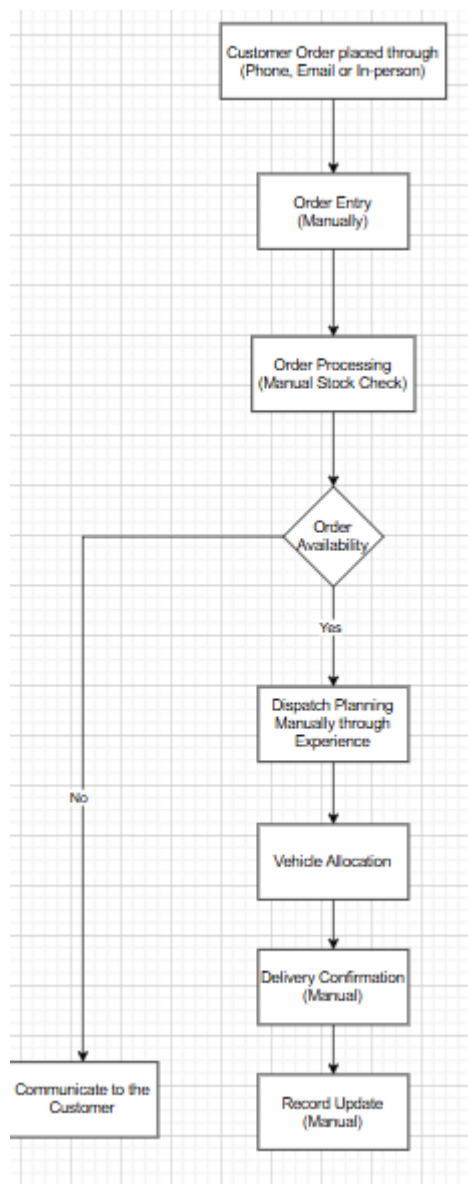
Delayed and Incomplete Business Insights

1. **Start:** End of week/month approaches, requiring business reports.
2. **Gather Data:** Sales data is collected from receipts, logs, and spreadsheets.
3. **Compile Reports:** Staff manually summarizes numbers in a separate spreadsheet.
4. **Review Insights:** Management reviews the report days or weeks after actual sales.
5. **End:** Decisions are made based on delayed or incomplete information, affecting strategy.

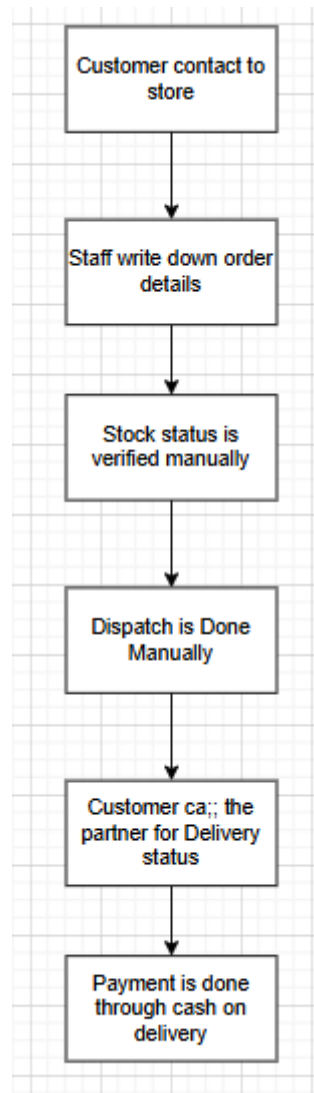
Manual Product Catalog Updates



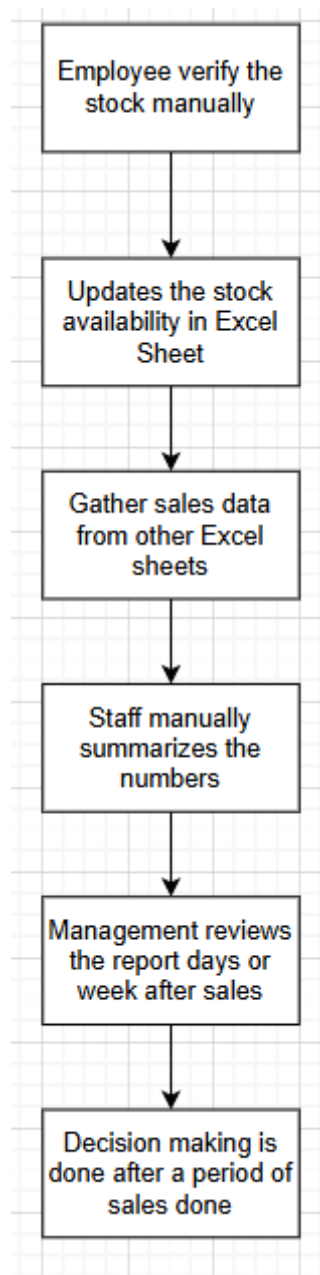
Slow Order Processing and Payment Collection



Slow Order Processing and Payment Collection



Delayed and Incomplete Business Insights



8.2 Proposed Recommendations (TO-BE)

Solution to Manual Product Catalog Updates

1. **Start:** Staff logs into the Shop-Up admin dashboard.
2. **Login:** Admin accesses the secure web/mobile system.
3. **Navigate:** They select the "Product Catalog" module.
4. **Add/Update Product:** Product details are entered or modified in real time; images and specifications are instantly uploaded.
5. **Automated Sync:** System ensures updates are live across web and mobile for all users.
6. **Approval Workflow:** Pricing or major changes trigger an automated approval workflow, notifying responsible managers.
7. **Live Publication:** Products and updates are published instantly after approval.
8. **End:** All catalog data is accurate, visible to all teams, with full version tracking.

Solution to Inefficient Inventory Tracking

1. **Start:** Staff logs into the Shop-Up inventory module.
2. **Real-Time Dashboard:** Stock counts are displayed and updated automatically as sales/orders occur.
3. **Automated Alerts:** Low stock triggers system alerts for reordering; notifications are sent to purchasing.
4. **Integration:** Inventory records sync with suppliers or warehouses for live status.
5. **End:** Accurate stock levels and reorder suggestions are immediately available, minimizing out-of-stock risks.

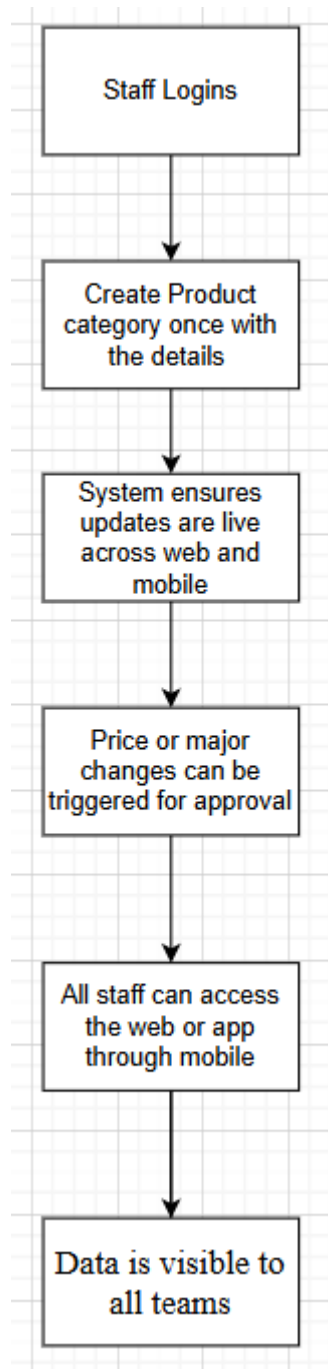
Solution to Slow Order Processing and Payment Collection

1. **Start:** Customer browses the Shop-Up app or website and adds products to cart.
2. **Login/Register:** New and existing users can register or log in easily.
3. **Checkout:** Order is digitally placed; payment is processed securely by integrated gateways.
4. **Automated Confirmation:** System sends order confirmation and expected delivery notifications.
5. **Order Tracking:** Customers and staff track order status in real time via the dashboard.
6. **End:** The entire transaction is automated, secure, and fully traceable.

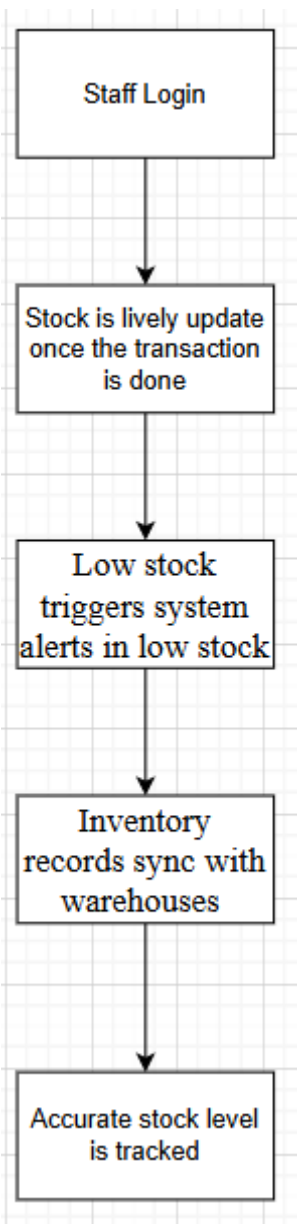
Solution to Delayed and Incomplete Business Insights

1. **Start:** Shop-Up integrates all sales and inventory data with its analytics module.
2. **Live Data Feed:** Sales, transactions, and feedback are updated automatically and visualized in dashboards.
3. **Automated Reporting:** Instant reports generate actionable insights for management daily, weekly, or monthly.
4. **Performance Tracking:** KPIs and trends are monitored and triggered for decision making.
5. **End:** Data-driven decisions are made quickly with complete, real-time information and full audit trail.

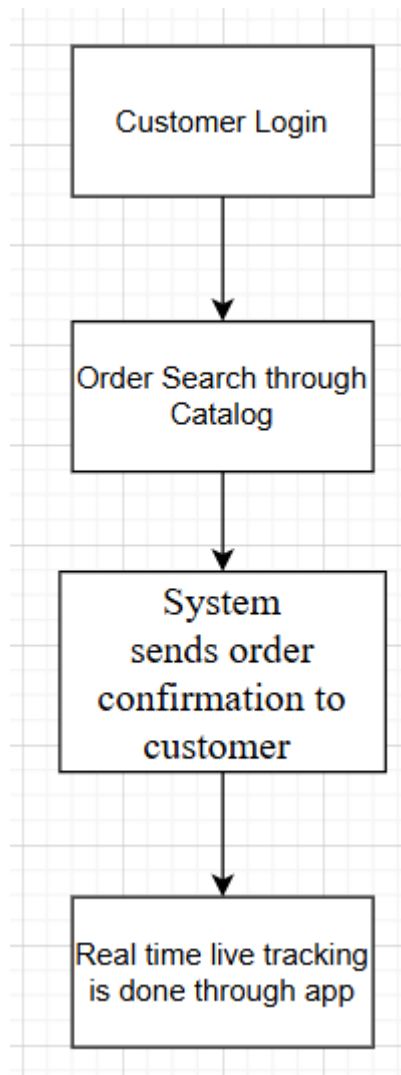
Solution to Manual Product Catalog Updates



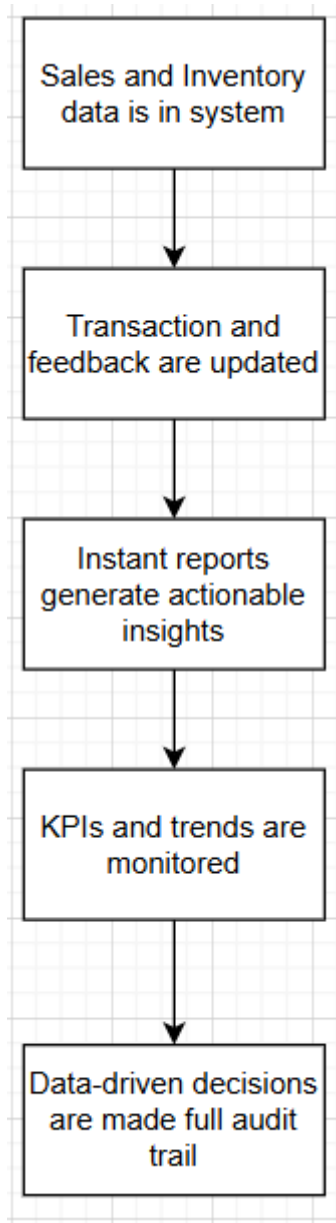
Solution to Inefficient Inventory Tracking



Solution to Slow Order Processing and Payment Collection



Solution to Delayed and Incomplete Business Insights



9. Business Requirements

1. Enable user registration via email, mobile, and social login options.
2. Authenticate users securely and allow password/self-service recovery.
3. Display intuitive product catalog with images, specifications, and prices.
4. Provide advanced product search, sorting, and filtering features.
5. Offer product wishlists and comparison capabilities.
6. Allow customers to add items to cart and save for later.
7. Support secure online payments with multiple gateways.
8. Enable guest checkout for non-registered users.
9. Calculate order total including shipping, taxes, and discounts automatically.
10. Offer promo code and loyalty/reward program functionalities.
11. Show estimated delivery date and enable order tracking post-purchase.
12. Notify users of each order status via email, SMS, and app notifications.
13. Allow users to view order history, invoices, and repeat purchases easily.
14. Enable customer ratings/reviews for products and sellers.
15. Provide FAQ/help section and live customer support integration.
16. Automate inventory update after each sale or restock.
17. Trigger low inventory warnings for timely reordering.
18. Support bulk upload/edit of product data for sellers/admin.
19. Provide multi-language and multi-currency support.
20. Admin dashboard for managing products, orders, users, and reports.
21. Grant different access levels (roles and permissions) for staff/admins.
22. Enable analytics dashboard with sales, revenue, and conversion data.
23. Integrate with third-party shipping/logistics and payment providers.
24. Ensure GDPR-compliant data privacy and security.
25. Provide responsive mobile app (Android/iOS) and mobile-friendly website.
26. Allow product sharing on social media.
27. Protect against fraudulent orders, payments, and account misuse.
28. Allow admins to set/store promotional banners and marketing content.
29. Maintain audit logs for all user/admin activities.
30. Offer a simple returns/refunds management system for users and admins.

10. Appendices

10.1 List of Acronyms

Acronym	Full Form
API	Application Programming Interface
AS-IS	The current state of a process or system
BI	Business Intelligence
CRM	Customer Relationship Management
ERP	Enterprise Resource Planning
FR	Functional Requirement
GUI	Graphical User Interface
HR	Human Resources
HRMS	Human Resource Management System
IT	Information Technology
KPI	Key Performance Indicator
NFR	Non-Functional Requirement
PO	Purchase Order
PR	Purchase Request
QA	Quality Assurance
RTM	Requirements Traceability Matrix
SLA	Service Level Agreement
SRS	Software Requirement Specification
TO-BE	The future, desired state of a process or system
UAT	User Acceptance Testing
UX	User Experience

10.2 Glossary of Terms

Term	Definition
Approval Workflow	A pre-defined, automated process ensuring requests (leave, expense, purchase) are reviewed and approved before execution.
AS-IS Process	The current, existing state of a business process prior to any improvements.
Audit Trail	A chronological, permanent record of all actions and changes in the system, ensuring security and accountability.
Dashboard	An interface providing centralized, at-a-glance access to key data and KPIs for users or objectives.
HRMS	Human Resource Management System; automates payroll, benefits, attendance, and other HR functions.
Legacy System	Manual or outdated technology/process still in use, often involving spreadsheets and physical records.
Module	A distinct software component handling specific business functions (e.g., Inventory, Sales).
Role-Based Access Control	Security method restricting system access based on job roles and responsibilities.
Scalability	The system's ability to support increasing loads or expand for more users/growth.
TO-BE Process	The desired future state of a business process after changes and improvements are implemented.
UAT	User Acceptance Testing; end-user validation of system functionality in real-world scenarios.

10.3 Related Documents

- **Project Charter:** Formal authorization of the project, defining objectives, scope, stakeholders, and management authority.
- **Software Requirement Specification (SRS):** Detailed functional and non-functional requirements derived from business needs.
- **AS-IS and TO-BE Process Flow Diagrams:** Visual workflows showing current manual processes and the target automated processes.
- **Use Case Specifications:** User journey and task descriptions, including conditions and process flows.
- **Requirements Traceability Matrix (RTM):** Tracks requirements from origination to implementation and testing.
- **Project Plan:** Schedules, milestones, resource allocations, and project dependencies.
- **Risk Register:** Identification, impact, likelihood, and mitigation strategy for all project risks.
- **Data Migration Plan:** Steps for cleaning and transferring legacy data to the new platform.
- **Test Plan:** Scope, resources, and schedule for all system testing activities, including UAT.

Client Name: Raj Private Limited

Project Name: Shop-up

Software Requirement Specification

Date: 18-11-2015

Record of Revisions

Version	Date of Release/ Revision	Prepared / Revised By	Reviewed By		Approves By		Reasons for revisions
			Name	Date	Name	Date	
1.0	20-12-2025	18-11-2025	Muthu	19-11-2025	Rakesh	20-11-2025	Initial Draft

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1. Introduction

The Shop-Up online store project aims to develop a comprehensive digital platform that enables efficient product catalog management, streamlined inventory tracking, robust order processing, and seamless payment integration for both web and mobile users. This SRS document outlines the software requirements for building the Shop-Up system, defining its scope, objectives, and stakeholder needs to guide designers, developers, and testers in delivering a scalable, user-friendly solution. The purpose of the Shop-Up platform is to overcome manual inefficiencies in traditional inventory and sales processes by automating end-to-end e-commerce operations, maximizing customer satisfaction, and supporting the organization's growth in a competitive online marketplace.

1.2 Acronyms and Definitions

Term	Description
API	Application Programming Interface; software intermediaries for communication between different systems.
AS-IS	The current state of a process or system prior to improvement.
BI	Business Intelligence; tools for data analysis and business insights.
CRM	Customer Relationship Management; software for managing customer interactions and data.
ERP	Enterprise Resource Planning; integrated system for managing core business processes.
FR	Functional Requirement; specifications defining what the system should do.
GUI	Graphical User Interface; visual elements for user interaction with the system.
HR	Human Resources; department or functions related to employee management.
HRMS	Human Resource Management System; software to automate HR processes.
IT	Information Technology; use of systems for storing, retrieving, and sending information.
KPI	Key Performance Indicator; measurable values for assessing success.
NFR	Non-Functional Requirement; conditions describing how a system operates (performance, security).
PO	Purchase Order; official order for procurement of goods/services.
QA	Quality Assurance; ensuring software quality through systematic processes.
RTM	Requirements Traceability Matrix; document mapping requirements to test cases.
SLA	Service Level Agreement; contract defining expected service standards.
SRS	Software Requirement Specification; detailed documentation of the required software features and standards.
TO-BE	The improved or desired future state of a process/system.
UAT	User Acceptance Testing; verifying software by end users before deployment.
UX	User Experience; overall experience of a person using a product/system.

1.3 Operational Requirements

The Shop-Up platform must facilitate automated product catalog management, inventory tracking, online order processing, and secure payment operations across web and mobile interfaces. All transactions, updates, and analytics should operate seamlessly and in real time to support daily business activities, customer engagement, and management oversight.

1.3.1 Software Requirements

- Web-based interface compatible with major browsers.
- Mobile applications for Android and iOS.
- Integration with payment gateways and logistics providers.
- Automated backup, reporting, and notification modules.
- Security protocols for user authentication and data protection.

1.3.2 Hardware Requirements

- Dedicated web server and database server with high availability.
- Storage capacity sufficient for transaction logs and product images.
- Network infrastructure to support multiple concurrent users.
- Redundant systems for backup and disaster recovery.

1.4 Reference

- **Business Requirements Document (BRD):** Defines the high-level business needs, objectives, and expected outcomes for the project.
- **System Design Documents:** Provide detailed architecture, integration protocols, and technical diagrams informing development and deployment.
- **Meeting Minutes and Stakeholder Interviews:** Capture decisions, clarifications, and evolving needs throughout the project lifecycle.
- **Industry Best Practices & Regulatory Standards:** Reference frameworks such as GDPR, PCI DSS, or local IT regulations for compliance.
- **Test Plans & Test Case Documentation:** Ensure requirements are verifiable and systematically validated during UAT and systems testing.

1.5 Design and Implementation Constraints

- The platform must be developed using approved technologies such as JavaScript (React for frontend), Node.js or Java (for backend), and a relational database like MySQL or PostgreSQL.
- Integration should only occur with certified third-party payment and logistics providers as per business policy.
- Developers must follow established coding standards, security protocols, and documentation guidelines throughout the project.
- The system architecture is limited by available server memory, processing speed, and network bandwidth to ensure scalability and performance under peak loads.
- Data exchanged with external systems (such as payment gateways and inventory suppliers) must use standardized formats, e.g., JSON or XML.
- All critical business logic must comply with local regulatory standards (GDPR, IT Act) and organizational audit requirements.

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

- Integration with third-party payment gateways and logistics providers depends on their API stability, availability, and update schedules.
- Timely delivery and compatibility of external commercial components or services are assumed for seamless system launch and operation.
- Regulatory changes or updates to compliance standards may require adapting system requirements after development begins.
- Performance and reliability of the hosting infrastructure are assumed to meet requirements for scalability and uptime.
- Dependencies on other projects or external vendors may impact development, testing, and deployment timelines if their schedules shift.

2.0 System overview

The Shop-Up online store system is a unified digital platform designed to automate and streamline product catalog management, inventory tracking, order processing, secure payment handling, and customer engagement across web and mobile interfaces. It supports real-time data synchronization, user interaction, back-end integrations with external payment and logistics providers, and live business reporting for management oversight, enabling efficient and scalable e-commerce operations.

2.1 Current System

The current system for the Shop-Up project relies on manual processes for product catalog management, inventory tracking, and order fulfillment. Data is stored in spreadsheets or paper records, orders are placed in person or by phone, and payments are handled offline, resulting in delays, errors, and limited real-time visibility for both business operations and customer interactions.

2.2 Proposed System

The proposed system for the Shop-Up project is a fully automated and integrated online platform that manages product catalog, inventory, orders, payments, and customer interactions via web and mobile applications. It offers real-time data synchronization, seamless payment and logistics integration, automated analytics, and a user-friendly interface to enable efficient, scalable, and error-free business operations. This transition eliminates manual processes and provides instant visibility into sales, stock, and customer activity for improved decision-making and customer satisfaction.

2.3 Benefits of the Proposed System

- Automation reduces manual errors and speeds up order processing.
- Real-time inventory updates prevent stockouts and over-selling.
- Customers and staff enjoy improved convenience through web and mobile self-service.
- Centralized data and analytics provide instant insights for better business decisions.
- Secure payments, order tracking, and notifications enhance customer trust and satisfaction.
- Scalable architecture enables future growth and integration with additional services.
- Regulatory compliance and audit trails are easier to maintain with digital processes.

3.0 UI Requirements

The UI requirements for the Shop-Up project specify that the platform must provide a clean, intuitive, and responsive interface for both web and mobile users. The design should offer easy navigation for browsing products, secure and simple checkout flows, real-time cart and inventory updates, and clear visual feedback on all user actions. Dashboards for admin and business users must present key data and controls at a glance, while all user-facing elements should support accessibility standards for inclusive usage.

3.1 Project contents

The project contents for the Shop-Up online store will include functional descriptions for every module in the system. Each module's documentation will list its primary components and their roles. For example, product management might consist of components like Product Listing (A) and Inventory Update (B); similarly, the order module could have Order Placement (A) and Payment Processing (B). This ensures clear, structured information about how each part of the system operates and integrates with others.

4.0 Other Parameters

Other parameters for the Shop-Up project include system scalability to support increased user traffic and expanding product ranges, data security measures to protect user and transaction information, compliance with relevant e-commerce regulations, and maintainability for ongoing updates and bug fixes. The system should also provide robust backup and recovery protocols, efficient resource utilization, and support for multi-language and multi-currency features, ensuring adaptability for future business growth and changing market needs.

4.1 Acceptance

The client will accept the Shop-Up application upon receiving three key deliverables: a working prototype demonstrating system functionalities, the fully developed and tested application, and thorough documentation including installation guides and user manuals. These items collectively ensure the client can review, validate, and adopt the system confidently as outlined in the acceptance criteria.

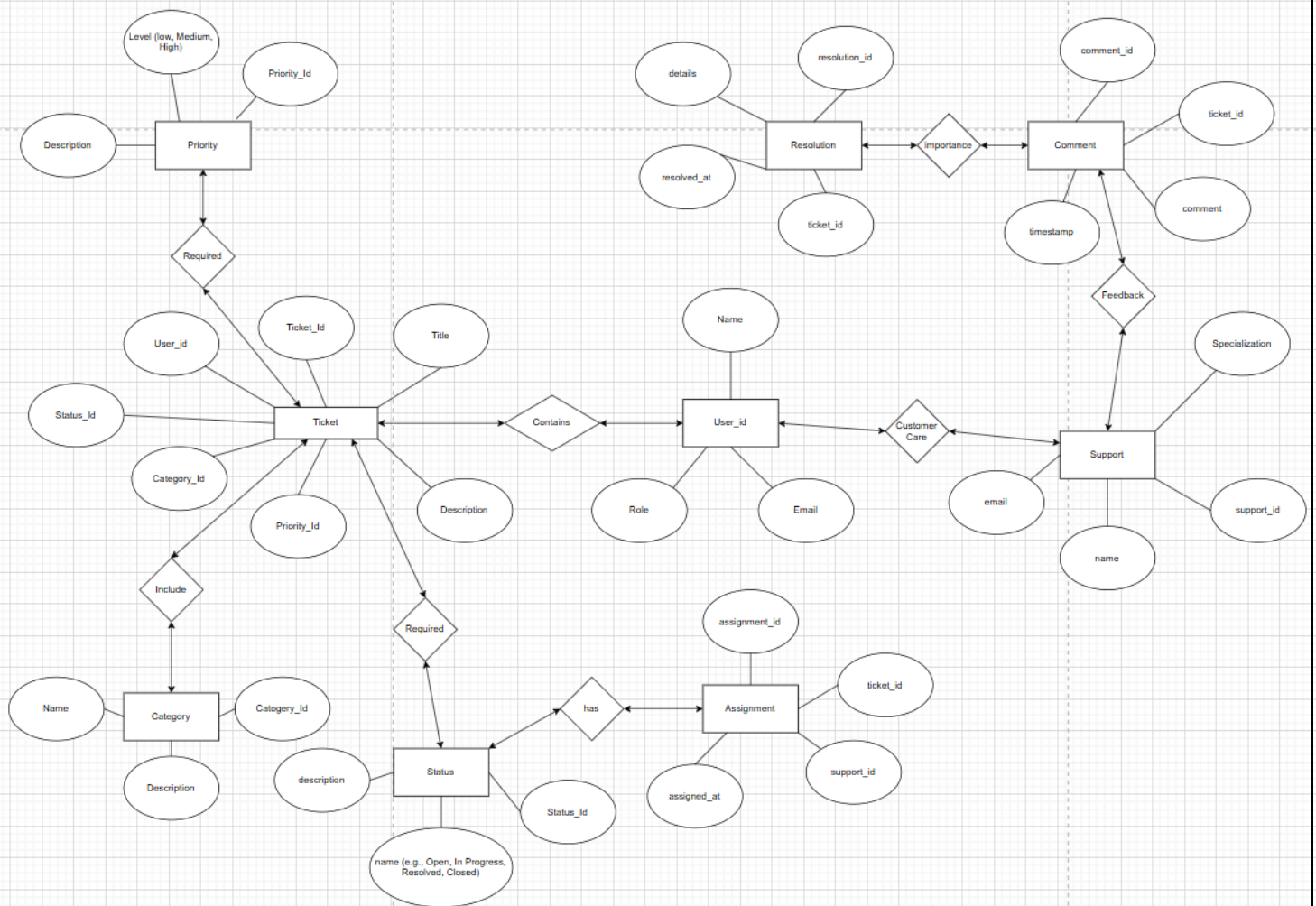
5. Functional Requirement specifications

Req ID	Req Name	Req Description	Priority
FR0001	Login	User should be able to login to the application to do inventory operations	10
FR0002	Registration	User should be able to register with email and password	9
FR0003	Logout	User should be able to logout from the application	8
FR0004	Product Catalog	User should view and browse available products	10
FR0005	Search	User should search for products by keywords	9
FR0006	Filter	User should filter products by categories, price, and rating	8
FR0007	Sort	User should sort product listings by price, popularity, rating, etc.	7
FR0008	Product Details	User should view detailed information for each product	10
FR0009	Add to Cart	User should add selected products to the shopping cart	10
FR0010	View Cart	User should view all products added to their cart	10
FR0011	Update Cart	User should change quantity or remove products from their cart	9
FR0012	Checkout	User should proceed to checkout and provide delivery information	10
FR0013	Payment	User should pay using supported payment methods	10
FR0014	Apply Coupon	User should apply discount coupons during checkout	8
FR0015	Order Confirmation	User should receive order confirmation after payment	10
FR0016	Order History	User should view past orders in their account	7
FR0017	Wishlist	User should add products to wishlist for future purchase	6
FR0018	Product Reviews	Users should submit and view product reviews	7
FR0019	Product Rating	Users should rate products after purchase	6
FR0020	Inventory Management	Admin should update, add, or remove products and stock levels	10
FR0021	Shipping Calculation	System should calculate shipping cost based on delivery location	8
FR0022	Track Order	User should view shipping status and tracking for orders	9
FR0023	Cancel Order	User should cancel an order before it is shipped	7
FR0024	Refund Request	User should request a refund for eligible orders	6
FR0025	Guest Checkout	User should checkout without registration	9
FR0026	Address Management	User should add, edit, and select delivery addresses	8
FR0027	Invoice Download	User should download invoice for their orders	6
FR0028	Email Notifications	System should send notifications related to orders and account changes	9
FR0029	User Profile	User should view and edit their profile information	8
FR0030	Admin Dashboard	Admin should access dashboard for analytics and management	10

5.1 Non-Functional Requirement

Req ID	Req Name	Req Description	Priority
NFR0001	Performance	The website should load within 2 seconds for 95% of users.	10
NFR0002	Scalability	The system must handle up to 100,000 concurrent users during sales events.	10
NFR0003	Reliability	The platform must be available 99.99% of the time annually.	10
NFR0004	Security	All user data must be encrypted in transit and at rest.	10
NFR0005	Compliance	Payment processing must comply with PCI DSS standards.	10
NFR0006	Accessibility	The site should meet WCAG 2.1 AA guidelines for accessibility.	9
NFR0007	Usability	Users should be able to find products within three clicks from the homepage.	9
NFR0008	Browser Compatibility	The site must work on latest versions of Chrome, Firefox, Safari, and Edge.	8
NFR0009	Mobile Responsiveness	Every page must be fully functional and readable on mobile devices.	10
NFR0010	Maintainability	System updates should be deployable with zero downtime.	8
NFR0011	Auditability	All critical transactions should be logged and auditable by administrators.	8
NFR0012	Data Integrity	Data must be consistent between frontend and backend at all times.	10
NFR0013	Fault Tolerance	The system must recover from server failures within 30 seconds.	9
NFR0014	Backup & Recovery	Backups must run daily and recovery time should be less than one hour.	8
NFR0015	Localization	The platform must support multi-language and multi-currency.	8
NFR0016	API Rate Limiting	Limit external API calls to 1000 per minute per user.	7
NFR0017	Session Timeout	User sessions must timeout after 30 minutes of inactivity.	6
NFR0018	Privacy	User preferences and private data must not be shared without consent.	9
NFR0019	Error Handling	All errors must provide helpful feedback and never expose technical details.	8
NFR0020	Analytics	The system should allow integration of analytics tools with anonymized user data.	7
NFR0021	Legal Compliance	The system must comply with GDPR for all European users.	9
NFR0022	Help Documentation	Online help and documentation must be available and easily accessible to users.	7
NFR0023	Configuration	Administrators must be able to update system settings without developer intervention.	6
NFR0024	Resource Management	The system must optimize resource use to prevent slowdowns during heavy traffic.	8
NFR0025	Installation	Initial installation should be completed within one hour.	5
NFR0026	Decommissioning	Data and services should be properly removed when features are deprecated.	6
NFR0027	Monitoring	System health must be monitored in real time, with alerts for any critical failures.	9
NFR0028	Integration	Must integrate smoothly with third-party services such as payment gateways and shipping providers.	10
NFR0029	Password Policy	Passwords must be strong (min 8 chars, mix of types) and users must be prompted to update every 6 months.	8
NFR0030	DDOS Protection	The application must withstand common DDOS attacks and maintain performance.	10

Entity Relationship Diagram



User story of shopping from ecommerce

User Story No: 01	Tasks: Add product to cart	Priority: Medium
Value Statement: As a User, I want to add products to my shopping cart, so that I can buy multiple items in one order.		
BV: 100		CP: 10
Acceptance Criteria: • User can view cart after adding product • Added items are displayed correctly • Quantity can be updated • User can remove product from cart		

User Story No: 02	Tasks: Search products	Priority: High
Value Statement: As a User, I want to search for products by name or category, so that I can quickly find what I am looking for.		
BV: 200		CP: 20
Acceptance Criteria: • Search returns relevant products • Search works with partial keywords • Filters work with search results • No results message is shown when needed		

User Story No: 03	Tasks: Review order	Priority: Medium
Value Statement: As a User, I want to view an order summary before checkout, so that I can confirm my purchase details.		
BV: 500	CP: 3	
Acceptance Criteria: - Shows list of items and prices - Displays shipping cost - Highlights applied discount - Allows editing before confirming		

User Story No: 04	Tasks: User registration	Priority: High
Value Statement: As a User, I want to register an account, so that I can save my details for future use.		
BV: 100	CP: 5	
Acceptance Criteria: • Registration requires email and password • Email uniqueness is verified • Registration success notification • Option to login after registering		

User Story No: 05	Tasks: One-click checkout	Priority: High
Value Statement: As a User, I want a one-click checkout option, so that I can place orders quicker.		
BV:200		CP: 20
Acceptance Criteria: • Previous address and payment is reused • Place order in a single click • User receives confirmation email • Option to disable one-click checkout		

User Story No: 06	Tasks: Apply coupon	Priority: Medium
Value Statement: As a User, I want to apply discount coupons, so that I can save money on purchases.		
BV: 500		CP: 13
Acceptance Criteria: - Valid coupon code applies discount - Invalid code shows error - Discount reflected in total amount - Coupon applies to eligible items only		

User Story No: 07	Tasks: Track shipment	Priority: Medium
Value Statement: As a User, I want to track my shipment, so that I know when to expect delivery.		
BV: 100		CP: 20
Acceptance Criteria: • Tracking link is sent in confirmation mail • Shipment status updates in order history • Expected delivery date is shown • Notified when order is out for delivery		

User Story No: 08	Tasks: Product recommendations	Priority: Medium
Value Statement: As a User, I want to see product recommendations, so that I can discover relevant products.		
BV: 200		CP: 30
Acceptance Criteria: • Recommendations appear on homepage • Shown based on browsing history • Easy link to recommended product • Recommendations are updated after purchase		

User Story No: 09	Tasks: Secure payment	Priority: High
Value Statement: As a User, I want secure payment options, so that my financial data is protected.		
BV:500	CP: 200	
Acceptance Criteria: • Payment is encrypted and secure • Multiple payment methods offered • Payment confirmation provided • Failed payments handled gracefully		

User Story No: 10	Tasks: Add shipping address	Priority: High
Value Statement: As a User, I want to add/update my shipping address, so that my orders arrive at the correct location.		
BV: 100		CP: 50
Acceptance Criteria: • Users can add a new address • Edit and save address details • Address validation performed • Select address during checkout		

User Story No: 11	Tasks: Wishlist	Priority: Medium
Value Statement: As a User, I want to add items to a wishlist, so that I can save products for later.		
BV: 200		CP: 20
Acceptance Criteria: • Add product to wishlist from product page • Remove items from wishlist • Wishlist accessible from user profile • Wishlist remains after logout/login		

User Story No: 12	Tasks: Product reviews	Priority: Medium
Value Statement: As a User, I want to read and write reviews for products, so that I can make informed decisions.		
BV: 500		CP: 50
Acceptance Criteria: • Reviews shown on product page • Users can submit their own review • Review moderation for inappropriate content • Aggregate rating displayed		

User Story No: 13	Tasks: Order cancellation	Priority: High
Value Statement: As a User, I want to cancel my order within a deadline, so that I can manage mistakes or changes.		
BV: 100	CP: 50	
Acceptance Criteria: • Cancel order button on order page • Cancellation possible before shipment • Refund process initiated after cancel • User notified of successful cancellation		

User Story No: 14	Tasks: Guest checkout	Priority: High
Value Statement: As a User, I want to checkout without registration, so that I can make quick purchases.		
BV: 200	CP: 30	
Acceptance Criteria: • Guest option appear at checkout • Email required for order updates • Guest data stored temporarily • Guest can convert order to account later		

User Story No: 15	Tasks: Order history	Priority: Medium
Value Statement: As a User, I want to view my order history, so that I can track and reorder past purchases.		
BV: 500		CP: 20
Acceptance Criteria: • List of previous orders in profile • Details of each order with items and price • Reorder link available • Date-wise sorting enabled		

User Story No: 16	Tasks: Live chat support	Priority: Medium
Value Statement: As a User, I want live chat support, so that my queries are resolved quickly.		
BV: 100		CP: 20
Acceptance Criteria: • Live chat icon on every page • Chat available during business hours • Query status visible in chat window • End chat and get transcript option		

User Story No: 17	Tasks: Notify for back-in-stock	Priority: Low
Value Statement: As a User, I want to get notified when a product is back in stock, so that I can purchase desired items.		
BV: 200		CP: 10
Acceptance Criteria: • Notification signup on out-of-stock page • Email sent when product restocks • Option to unsubscribe notifications • Purchase recommendation included in notification		

User Story No: 18	Tasks: Multi-address shipping	Priority: Medium
Value Statement: As a User, I want multi-address shipping per order, so that I can send gifts to different locations.		
BV: 500		CP: 10
Acceptance Criteria: • Select different addresses for items • Shipping cost calculated per address • Order summary shows all addresses • Recipient can track their items		

User Story No: 19	Tasks: Mobile-friendly browsing	Priority: Medium
Value Statement: As a User, I want a mobile-friendly shopping experience, so that I can shop easily from my phone.		
BV: 100		CP: 20
Acceptance Criteria: • Mobile site is responsive • Easy navigation and search • Product pages load quickly • Mobile checkout is smooth		

User Story No: 20	Tasks: Filter by price and rating	Priority: Medium
Value Statement: As a User, I want to filter products by price and rating, so that I can find items that suit my budget and quality needs.		
BV: 200		CP: 20
Acceptance Criteria: • Filter options on product list page • Selected filters update product list • Multiple filters can be combined • Filters are easy to reset		

User Story No: 21	Tasks: Save payment method	Priority: Medium
Value Statement: As a user, I want to save my payment details, so that I can checkout faster in future purchases.		
BV: 100		CP: 13
Acceptance Criteria: • User can add and save payment cards • Saved card is selectable in checkout • User can remove/update saved card • Payment data stored securely		

User Story No: 21	Tasks: View product gallery	Priority: High
Value Statement: As a user, I want to view multiple images of a product, so that I can better evaluate my purchase.		
BV: 500		CP: 50
Acceptance Criteria: • Product page shows gallery of images • User can enlarge any image • Images load quickly and are high quality • Gallery works on mobile and desktop		

User Story No: 23	Tasks: Share wishlist	Priority: Low
Value Statement: As a user, I want to share my wishlist with others, so that I can get suggestions or gifts.		
BV: 500		CP: 13
Acceptance Criteria: • Share wishlist via email or link • Recipient can view shared wishlist • Sharing option available on wishlist page • Can revoke shared access anytime		

User Story No: 24	Tasks: Product availability by location	Priority: Medium
Value Statement: As a user, I want to check if a product is available in my area, so that I can order only deliverable items.		
BV: 100		CP: 20
Acceptance Criteria: • User can enter pin code to check delivery • Product page updates with availability info • Out-of-area products show non-availability message • User prompted for alternative options if unavailable		

User Story No: 25	Tasks: Rate shopping experience	Priority: Low
Value Statement: As a user, I want to rate my shopping experience, so that my feedback can improve the platform.		
BV: 200		CP: 8
Acceptance Criteria: • Rating prompt on order completion • Option for text review with rating • Platform displays overall rating trends • Admin can view and analyze ratings		

User Story No: 26	Tasks: Request invoice	Priority: Medium
Value Statement: As a user, I want to request an invoice after purchase, so that I have documentation for my records.		
BV: 500		CP: 13
Acceptance Criteria: • Invoice request option in order history • Invoice sent automatically via email • Invoice available for download • Contact support if invoice isn't received		

User Story No: 27	Tasks: Schedule delivery slot	Priority: Low
Value Statement: As a user, I want to select my preferred delivery date and time, so that my order arrives at my convenience.		
BV: 200	CP: 20	
Acceptance Criteria: • Delivery slot selection at checkout • Available slots displayed clearly • Confirmation email with chosen slot • Slot can be rescheduled before shipment		

User Story No: 28	Tasks: Subscribe for regular delivery	Priority: Medium
Value Statement: As a user, I want to subscribe for regular delivery of products, so that I never run out of essentials.		
BV: 200		CP: 50
Acceptance Criteria: • Subscription plans visible on product page • Auto-renewal and notification options • Subscription status visible in profile • Cancel or modify subscription anytime		

User Story No: 29	Tasks: Compare products	Priority: High
Value Statement: As a user, I want to compare products side-by-side, so that I can choose the best option.		
BV: 500	CP: 50	
Acceptance Criteria: • User can select products to compare • Comparison page shows detailed specs • Highlights differences visually • Option to add compared item to cart		

User Story No: 30	Tasks: Set product alerts	Priority: Low
Value Statement: As a user, I want to set alerts for price drops, so that I can buy products at the best price.		
BV: 50		CP: 13
Acceptance Criteria: • Set price drop alert on any product • Notification sent when price drops • Alerts managed from user profile • Alert can be cancelled anytime		