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**1 Business Requirements Document**

**Project Name** Ice cream and milk product Inventory and delivery management system

**Client Name**  ABC Milk Products

**Date** 24-02-2025

**Prepared by**- Satish Sargar

The objective of this project is to develop a software solution for the management of inventory and ensuring the quickest delivery to customers. The software will be used for the streamline operations, improve efficiency, and reduce delivery times, which will increase customer satisfaction and meet besiness goal.

**Business Objectives**

# Inventory Management:

1.Provide tracking of inventory levels for both ice-cream and milk products.

2.Track product demand and ensure sufficient stock at manufacturing plants and warehouses.

3.Automated trigger stocks when inventory levels fall below the stocks.

4.Support categorization of inventory for easy tracking and management like product category and packing of ice creams.

# **Quick delivery to customer**

1.Optimize delivery routes based on real-time demand, inventory, and geographic location.

2.Track orders from customers, process them, and ensure timely dispatch from the nearest warehouse or manufacturing plant.

3. Integrate with third-party logistics or in-house delivery systems for real-time tracking.

Key Feature

 **Inventory Management Feature**

1.Monitoring the stock levels across manufacturing plants and warehouses.

2.Automated notifications for low stock levels.

3.Categorized products by type, flavor, and packaging.

4.Manage and track orders from customers, ensuring accurate inventory deductions.

5.Reports on sales trends, stock turnover, and demand forecasting.

**Delivery Management Features**

1.Customer Order Processing customers via the platform.

2.Delivery Optimization for planning to ensure fastest delivery.

3.Tracking delivery from warehouse to customer.

4.Customer can get notification sms email notifications regarding order status

**Stakeholders**

1.Client management team for overall progress and approve key decisions.

2.Software development team for system design, coding, and testing.

3.Logistic team to provide input on delivery processes and route optimization.

Warehouse team to ensure proper stock management and warehouse operations.

End users provide feedback and validate the system.

**Functional Requirements**

Inventory Management System

Track inventry -The software will track stock at manufacturing plants and warehouses

Stock level - The system will notify relevant staff when stock falls below fixed level.

Categorization and labelling - Products will be categorized and labeled based on type, flavor, packaging size..

Product Expiry Management -The software will handle expiry dates for perishable products like milk.

2. Delivery System

Order Tracking- Customers will place orders, and the software will track order progress from placement to delivery.

Route Optimization -The software will use geographic information to identify the quickest delivery routes, minimizing delivery time.

Shipping tracking - Integration with third-party shipping carriers for real-time updates and delivery tracking.

Delivery confirmation updates will be sent to customers regarding delivery status.

 Analytics and Reporting

Demand Forecasting - The system will use historical data to predict future product demand.

Inventory Reports- Real-time reporting on stock levels, product turnover, and sales trends.

Performance Metrics -Track delivery performance such as on-time delivery rates, delivery delays

**# Non-Functional Requirements**

Scalability- The system must be able to handle growth in product lines, inventory levels, and customer base.

Reliability- The system must be highly available with minimal downtime, supporting 24\*7 operations.

Security- The system must protect sensitive customer and product data, with encryption and access control.

Usability- The user interface should be intuitive and easy to navigate for all user types like admin, warehouse staff, delivery personnel, customers.

 **Project Timeline**

|  |  |
| --- | --- |
| Phase | Time line |
| Requirement gathering | 2 weeks |
| System design | 4 weeks |
| Development of software | 6 week |
| Testing of software | 4 week |
| UAT | 2 week |
| Deployment  | 2 weeks |

 **Resource Plan**

|  |  |  |  |
| --- | --- | --- | --- |
| Resource type | Role | No,of resource | Details |
| Project manager | Track progress and ensure meet deadline | 1 | Manage time line resourse and stakeholder |
| Business Analyst | Gather Req and project scope | 1 | Work closly with client req  |
| Developers backend and front end | Develop data base and user interface |  4 | Responsible for the building the software |
| QA Engineer | Test the syste finf the bugs and software performance |  2 | Ensure system will meet all functional and non functional req |
| Delivery and logistic experts | Provide inputs on system | 1 | Emsure planning and delivery integration |
| Administrator | Responsible for deployment and maintainance | 1 | Manages servers and database |

**Risk Management**

1 Delay in Development

Mitigation - Set clear milestones and have a buffer period for unexpected delays.

2 Integration Issues with Third-Party Logistics

Mitigation -Thoroughly test integrations before go live and work closely with logistics partners.

3 Data Security Breaches

Mitigation- Implement strict encryption, multi-factor authentication, and regular security audits.

**Budget Estimation**

Development cost 4 lac

Infrastructure cost 3 lac

Third party software 2 lac

Maintainance and support 1 lac

Training and marketing 1 lac

**Approval**

Client Name: ABC Milk Products

Signature: S D Sargar

Date: 24-02-2025

Project Manager -Kunal Gawali

Signature - K gawali

Date - 24-02-2025

2 Process Flow Chart

 **Raw Materials**

 **Milk, Sugar, etc**

 **Manufacturing Process- Ice Cream and Milk Products**

 **Finished Products Stored - Warehouse**

 **Inventory Management - Track Stock, Expiry**

 **Customer Order Received - Web, Phone**

 **Order Validation - Product Availability**

 **Nearest Warehouse Identified -Geogrphic locations**

 **Allocate Products from - Warehouse Stock**

**Delivery Route Optimized - Fastest Route**

**Products Ready for Delivery - Packed and ready**

 **Deliver to Customer - Quick Delivery**

**Customer Feedback or Returns - Post Delivery**

Raw Materials- Gather raw materials like milk, sugar, and other ingredient needed for ice cream production.

 Manufacturing Process- Ice cream and milk products are manufactured from the raw materials

Finished Products Stored in Warehouse - The finished products are stored in regional warehouses, categorized and ready for distribution.

1. Inventory Management - Inventory is continuously tracked, including stock levels, product expiry, and alerts for reordering.
2. Customer Order Received - Orders come in through online channels web, phone, app from customers.
3. Order Validation - Check if the requested products are available in the warehouse and validate delivery details.
4. Nearest Warehouse Identified -The system identifies the closest warehouse to the customer’s location using geolocation technology.
5. Allocate Products from Warehouse -Products are allocated from the identified warehouse based on availability.
6. Delivery Route Optimized -The quickest delivery route is selected using routing algorithms, factoring in traffic and distance.
7. Products Ready for Delivery - Products are packed and prepared for delivery, ensuring perishable items like ice cream are kept at the correct temperature.
8. Deliver to Customerr -The products are delivered to the customer as quickly as possible.
9. Customer Feedback or Returns - After delivery, the customer provides feedback on their satisfaction, and any returns or issues are handled.

**3 Introduction letter for client as business analyst**

Satish Sargar

 Business Analyst]

Kotak Bank

25-02-2025

ABC Milk Products

Pune 411015

Dear Team

I am writing to introduce myself as the Business Analyst who will be working closely with you and your team to understand your business requirements for the new software solution. As discussed, the primary objectives of this project are to develop a system that efficiently manages your inventory and enables the quickest delivery of your ice-cream and milk products to customers.

I am excited to collaborate with you to gather business requirements, identify pain points, and develop a comprehensive understanding of your current processes. This information will be crucial in designing a tailored solution that meets your specific needs and goals.

In the coming weeks, I will be scheduling meetings and workshops with your team to initiate the business understanding process. I will also be sharing a detailed project plan and timeline with you shortly.

Please feel free to reach out to me directly if you have any questions, concerns, or need any clarification on the project scope. I am committed to ensuring that this project is a success and that the final solution meets your expectations.

Thank you for entrusting us with this project. I look forward to working closely with you and your team.

Best regards

Satish Sargar

Business Analyst

Kotak Bank

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**Business Requirements Document and a Software Requirements Specification for an Online Store project**

Business Requirements Document

The online store project aims to create an e-commerce platform for customers to purchase products online.

Business Objectives

1. Provide customers with a user-friendly online shopping experience.

2. Increase sales revenue through online channels.

3. Improve customer engagement and loyalty.

Functional Requirements

1. User registration and login functionality.

2. Product browsing and search functionality.

3. Shopping cart and checkout functionality.

4. Payment gateway integration.

5. Order management and tracking functionality.

Non-Functional Requirements

1. The system should be available 24\*7 with minimal downtime.

2. The system should be scalable to handle increased traffic and sales.

3. The system should ensure secure payment transactions.

Assumptions and Dependencies

1. The project will utilize existing product catalogs and inventory management systems.

2. The project will require integration with third-party payment gateways.

Success criteria

1. Increase online sales revenue by 20% within the first six months.

2. Achieve an average customer satisfaction rating of 4.5/5.

3. Maintain system uptime of 99.9%.

Software Requirements Specification

This SRS document outlines the software requirements for the online store project.

Functional Requirements

1. User Management

    The system shall allow users to register and log in.

    The system shall validate user credentials.

2. Product Management

 The system shall display product information, including descriptions, prices, and images.

    The system shall allow users to search and filter products.

3. Shopping Cart and Checkout

    The system shall allow users to add and remove products from their shopping cart.

    The system shall calculate totals and apply discounts.

4. Payment Gateway Integration

    The system shall integrate with third-party payment gateways.

    The system shall process payment transactions securely.

5. Order Management

    The system shall generate order confirmations and receipts.

  The system shall allow administrators to manage orders and track shipping.

Non Functional Requirements

1. Performance

    The system shall respond to user requests within 3 seconds.

    The system shall handle a minimum of 100 concurrent users.

2. Security

    The system shall encrypt sensitive data, including payment information.

    The system shall implement secure authentication and authorization mechanisms.

3. Usability

  The system shall provide an intuitive user interface.

    The system shall be accessible on desktop and mobile devices.

Interface Requirements

1. User Interface

    The system shall provide a user-friendly interface for users to navigate and interact with the system.

Testing Requirements

1. Unit Testing

    The system shall undergo unit testing to ensure individual components function correctly.

2.User Acceptance Testing

    The system shall undergo UAT to ensure the system meets business requirements and user expectations.

**Entity Relationship Diagram**



**User Story for shopping ecommerce**

1.As a customer, I want to be able to view a list of available products on the e-commerce website, including product names prices and images

Acceptance Criteria

    The product list is displayed on the homepage or a dedicated product page.

    Each product is displayed with its name, price, and image.

2.As a customer, I want to be able to filter products by price, brand, and category, so that I can quickly find products

Acceptance Criteria

    The website provides filters for price, brand, and category.

    The filters can be applied individually

3.As a customer, I want to be able to view detailed product information, including product descriptions prices and images so that I can make informed purchasing decisions.

 Acceptance Criteria

    Each product has a dedicated product page with detailed information.

    The product page includes product descriptions, prices, and images.

4.As a customer I want to be able to add products to my shopping cart and view the contents of my cart, so that I can keep track of the products I want to purchase.

Acceptance Criteria

   The website provides an "Add to Cart" button for each product.

    The shopping cart is displayed on the website, showing the products added.

5.As a customer, I want to be able to update the quantity of products in my shopping cart and remove products from my cart, so that I can make changes to my order.

Acceptance Criteria:

    The shopping cart allows customers to update the quantity of products.

    The shopping cart allows customers to remove products.

    The changes are reflected in the shopping cart and the total cost.

6.As a customer, I want to be able to proceed to checkout and enter my shipping and payment information, so that I can complete my purchase.

Acceptance Criteria

    The website provides a "Checkout" button.

    The checkout process allows customers to enter shipping and payment information.

7.As a customer, I want to be able to review and confirm my order before submitting payment, so that I can ensure everything is correct.

    The checkout process includes a review step.

    The review step displays the order summary, including products, prices, and shipping information.

8.As a customer, I want to receive an order confirmation email after submitting payment, so that I have a record of my purchase.

 Acceptance Criteria

  The website sends an order confirmation email after payment is submitted.

    The email includes any relevant tracking information.

9.As a customer I want to be able to track the status of my order, so that I can stay informed about when I can expect to receive my products.

 Acceptance Criteria

    The website provides order tracking information.

    The customer can view the status of their order, including shipping and delivery information.

10.As a customer, I want to be able to view my order history and reorder products I've purchased in the past, so that I can easily purchase products I've liked.

Acceptance Criteria

    The website provides an order history page.

    The customer can view their past orders, including products, price

11.As a customer, I want to be able to create and manage my own account on the e-commerce website, so that I can save my information and track my orders.

 Acceptance Criteria

    The customer can create an account and save their information.

    The customer can log in to their account to view their order history and track their orders.

12.As a customer, I want to be able to reset my password if I forget it, so that I can regain access to my account.

Acceptance Criteria

    The website provides a Forgot Passwort link.

  The customer can reset their password using the link.

13.As a customer, I want to be able to search for products by keyword or product name, so that I can quickly find specific products.

Acceptance Criteria

    The website provides a search bar.

    The customer can enter keywords or product names to search for products.

14.As a customer, I want to be able to view product reviews and ratings from other customers so that I can get a sense of the product quality and performance.

Acceptance Criteria

    The website displays product reviews and ratings.

    The customer can sort and filter reviews by rating, date, and relevance.

15.As a customer, I want to be able to leave product reviews and ratings after purchasing a product, so that I can share my experience with other customers

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 Acceptance Criteria

    The website provides a review submission form.

16.As a customer, I want to be able to view and redeem promotional codes and discounts, so that I can save money on my purchases.

 Acceptance Criteria

    The website displays available promotional codes and discounts.

    The customer can enter a promotional code during checkout.

17.As a customer, I want to be able to view and track my loyalty points and rewards, so that I can earn and redeem rewards.

Acceptance Criteria

    The website displays the customer's loyalty points and rewards balance.

    The customer can view their loyalty points and rewards history.

18.As a customer, I want to be able to contact customer support through multiple channels phone, email so that I can get help when I need it.

Acceptance Criteria

    The website provides multiple contact channels for customer support.

    The customer can contact customer support through phone, email, or chat.

19.As a customer, I want to be able to view and manage my wishlist, so that I can keep track of products I'm interested in purchasing.

 Acceptance Criteria:

    The website provides a wishlist feature.

    The customer can add and remove products from their wishlist.

20.As a customer, I want to be able to share products with friends and family through social media and email, so that I can recommend products to others.

Acceptance Criteria

    The website provides social media sharing buttons.

    The shared product link includes product information and images.