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

1. **Document Revisions**

|  |  |  |
| --- | --- | --- |
| Date Version  | Number | Document Changes |
| 1/6/2024 | 0.2 |  |

1. **Approvals**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Role | Name  | Title  | Signature  | Date |
| Project Sponsor  | Kalyani | Senior Executive  | Kalyani | 1/6/2024 |
| Business Owner | Praful | Head of Loan Division | Praful | 11/6/2024 |
| System Architect | Jovial |

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| Project Manager |

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 | Jovial | 13/6/2024 |
| Development Lead | Snehal |

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| System Architect |

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 | Snehal | 14/6/2024 |
| Lead User  | Sanchita |

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| Lead Developer |

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 | Sanchita | 16/6/2024 |
| User Experience Lead  | Punam | UX Designer  | Punam | 17/6/2024 |
| Quality Lead  | Satish | QA Manager  | Satish | 18/6/2024 |
| Content Lead | Vaishali | Content Specialist  | Vaishali | 19/6/2024 |

1. **3. RACI Chart for This Document**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Position | R | A | C | I |
| Kalyani |

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| Project Sponsor |

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| Praful |

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| Business Owner |

 |  | ✓ | ✓ | ✓ |
| Jovial |

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| Project Manager |

 | ✓ |  | ✓ | ✓ |
| Snehal | System Architect | ✓ |  | ✓ | ✓ |
| Sanchita |

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| Development Lead |

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| Punam |

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| UX/UI Lead |

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| Satish | QQA | ✓ |  | ✓ |  |
| Vaishali |

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| IT  |

Integration team

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| Suresh | Marketing Team |  |  | ✓ | ✓ |
| Ramesh | Support Team |  |  | ✓ | ✓ |

**4. Introduction**

 **4.1. Business Goals**

* **Efficient Inventory Management:** Ensure real-time stock tracking across multiple manufacturing plants and warehouses.
* **Optimized Delivery System:** Minimize delivery time and maximize order fulfillment efficiency.

**4.2. Business Objectives**

* Enhance customer satisfaction by offering delivery and improved service Automate inventory tracking and reduce stock discrepancies.
* Enable seamless communication between manufacturing plants, warehouses, and delivery teams.
* Implement AI-driven delivery route optimization for quicker customer deliveries.
* Provide real-time reporting and analytics for inventory and logistics management.

**4.3. Business Rules**

#### **Organization Policies and Procedures`**

* Orders must be processed within **30 min** of placement.
* Warehouse stock updates must occur in **real-time**.
* Delivery must occur within **24 hours** for local orders and **48 hours** for national orders.
* Inventory levels should trigger automated restocking when reaching the **minimum threshold.**

####  **Rules & Regulations**

* Compliance with **FSSAI (Food Safety and Standards Authority of India)** for food storage & transportation.
* Follow **temperature-controlled** storage regulations for dairy and ice-cream products.
* Adherence to **taxation and billing laws** based on region.

 **4.4. Background**

The company operates multiple **manufacturing plants and warehouses** across the country and supplies **ice cream and milk products** to customers. Current operations involve **manual inventory tracking and delivery management**, leading to inefficiencies. A new software solution is required to streamline operations and improve efficiency.

 **4.5. Project Objective**

To develop an **automated inventory and delivery management system** that integrates with warehouses and delivery channels to reduce errors, optimize stock levels, and improve order fulfillment speed.

 **4.6. Project Scope**

**4.6.1. In Scope Functionality**

* Inventory tracking and automated stock updates.
* AI-driven delivery route optimization.
* Order management system with real-time status updates.
* Customer notifications via email/SMS for order tracking.
* Analytics dashboard for inventory and delivery performance.

**4.6.2. Out Scope Functionality**

* Payment gateway integration.
* Integration with external **third-party logistics providers.**
* Mobile app development (limited to web-based system for Phase 1).

**5. Assumptions**

* The company will provide all existing inventory and logistics data for migration.
* Internet connectivity will be available at all warehouses and manufacturing plants.
* Users will be trained to use the new system effectively.
1. **Constraints**
* **Budget Limitation:** The project must be developed within the allocated budget.
* **Timeframe:** The system must be operational within X months.
* **Regulatory Compliance:** The system must comply with food safety and transport regulations.
1. **Risks**
* **Data Migration Challenges:** Risk of errors while transferring existing inventory records.
* **User Adoption Issues:** Resistance from employees to new technology.
* **System Downtime:** Any failure in the software could disrupt order processing.
* **Scalability Issues:** Future expansion may require additional infrastructure.

**8 Business Process Overview**

**8.1. Legacy System (AS-IS)**

* **Manual** inventory tracking leads to stock discrepancies.
* Orders are processed via **phone and emails**, causing delays.
* Delivery routes are **not optimized**, resulting in higher fuel costs and longer delivery times.



 **8.2. Proposed Recommendations (to be)**

* **Automated inventory tracking** to reduce stock mismatches.
* **Centralized order processing system** for faster handling.
* **AI-based delivery route optimization** to reduce delivery time.
* **Automated customer notifications** for better order tracking.

 **9. Business Requirements**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID |

|  |
| --- |
| **Requirement****Description** |

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| --- |
| **System Functionality** |

|  |
| --- |
|  |

 | Priority |
| FR1 | Track inventory |

|  |
| --- |
| The system must track real-time inventory at all manufacturing plants and warehouses. |

|  |
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 | High |
| FR2 | Restock alert |

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|  |
| The system must generate low-stock alerts and reorder recommendations. |

|  |
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|  |

 | High |
| FR3 | Track Orders | The system must track product expiration dates and suggest stock rotation | High |
| FR4 | Online delivery | The system must enable customers to place online orders. | Medium |
| FR5 | Allocate stock | The system must allocate orders to the nearest warehouse with available stock. | High |
| FR6 | Third party logistics | The system must integrate with third-party logistics for seamless order dispatch. | Medium |
| FR7 | Reports on stock | The system must generate reports on stock movement, sales, and demand trends. | Highe |
| FR8 | Optimize delivery rout | The system must optimize delivery routes based on real-time traffic data. | Medium |
| FR9 | Customer track order | The system must allow customers to track their order status and estimated delivery time. | High |

**10. Appendices**

**10.1. List of Acronyms**

* **AI** – Artificial Intelligence
* **ERP** – Enterprise Resource Planning
* **FSSAI** – Food Safety and Standards Authority of India

 **10.3 Glossary of Terms**

* **Inventory Management:** Tracking and maintaining stock levels across multiple locations.
* **Route Optimization:** AI-driven process to find the fastest delivery path.
* **Stock Replenishment:** Automated system to order more stock when inventory is low.

**10.3. Related Documents**

* Process Flow Diagram
* System Architecture Diagram
* Use Case Documentation

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



**Assignment 2:
1. Write an introduction letter to a client introducing yourself as a business analyst in charge of working with the client and his team to start the business understanding process.**
**Subject:** Introduction as Business Analyst for Project Collaboration

Dear Pradeep,

I hope this email finds you well. My name is Kalyani Shelke, and I am pleased to introduce myself as the **Business Analyst** assigned to collaborate with you and your team on this exciting project. I look forward to working closely with you to ensure a thorough understanding of your business needs and objectives.

Our primary goal at this stage is to establish a clear **business understanding,** identify key requirements, and define a roadmap that aligns with vision. Through structured discussions, requirement-gathering sessions, and process analysis, I aim to help bridge the gap between business needs and technical implementation, ensuring a smooth and efficient development process.

To get started, I would love to schedule an **initial discussion** at your convenience to discuss your expectations, challenges, and desired outcomes for the project. Please let me know a time that works best for you.

I look forward to collaborating with you and contributing to the success of this initiative. Feel free to reach out if you have any immediate questions.

Best Regards,
kalyani shelke
Business Analyst
7448795678
Jocayta

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

**Online store**

**1 Document Revisions**

|  |  |  |
| --- | --- | --- |
| Date Version  | Number | Document Changes |
| 1/6/2024 | 0.2 |  |

**2 Approvals**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Role | Name  | Title  | Signature  | Date |
| Project Sponsor  | Kalyani | Senior Executive  | Kalyani | 1/6/2024 |
| Business Owner | Praful | Head of Loan Division | Praful | 11/6/2024 |
| System Architect | Jovial |

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| Project Manager |

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 | Jovial | 13/6/2024 |
| Development Lead | Snehal |

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 | Sanchita | 16/6/2024 |
| User Experience Lead  | Punam | UX Designer  | Punam | 17/6/2024 |
| Quality Lead  | Satish | QA Manager  | Satish | 18/6/2024 |
| Content Lead | Vaishali | Content Specialist  | Vaishali | 19/6/2024 |

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| Name | Position | R | A | C | I |
| Kalyani |

|  |
| --- |
| Project Sponsor |

 |  | ✓ | ✓ | ✓ |
| Praful |

|  |
| --- |
| Business Owner |

 |  | ✓ | ✓ | ✓ |
| Jovial |

|  |
| --- |
| Project Manager |

 | ✓ |  | ✓ | ✓ |
| Snehal | System Architect | ✓ |  | ✓ | ✓ |
| Sanchita |

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| Development Lead |

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| Punam |

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| UX/UI Lead |

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| Satish | QQA | ✓ |  | ✓ |  |
| Vaishali |

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| IT  |

Integration team

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| Suresh | Marketing Team |  |  | ✓ | ✓ |
| Ramesh | Support Team |  |  | ✓ | ✓ |

**4. Introduction**

 **4.1. Business Goals**

* Develop an online platform for seamless product browsing and purchasing.
* Ensure secure and efficient payment processing.
* Optimize inventory and order management.
* Enhance customer experience with fast delivery and support services.

**4.2. Business Objectives**

* Integrate a secure and user-friendly payment gateway.
* Implement real-time inventory tracking.
* Provide a robust order management system with tracking and notifications.
* Offer customer support through chat and call assistance.

**4.3. Business Rules**

#### **Organization Policies and Procedures**

* Customers must register to place orders.
* Payments should be processed securely via the integrated payment gateway.
* Orders can be canceled within a stipulated time before shipment.
* Inventory updates should be real-time to prevent stockout issues.
* Delivery times should be based on location and product availability.

####  **Rules & Regulations**

* Compliance with e-commerce laws and consumer protection policies.
* Secure handling of user data in accordance with GDPR and data privacy laws.
* Compliance with agricultural product regulations and chemical safety standards.
* Adherence to taxation laws based on the region of operation

 **4.4. Background**

The current market lacks a **dedicated online platform** for customer. The business aims to bridge this gap by providing an **easy-to-use e-commerce platform** with efficient logistics and order fulfillment.

 **4.5. Project Objective**

To build an **end-to-end online store** that enables customers to browse, purchase, and receive products efficiently while ensuring seamless inventory and order management.

 **4.6. Project Scope**

**4.6.1. In Scope Functionality**

* User registration and authentication.
* Product catalog with detailed descriptions and pricing
* Secure online payment integration.
* Order tracking and notifications.
* Admin dashboard for inventory and order management.
* Customer support system.
* Reports and analytics for business insights.

**4.6.2. Out Scope Functionality**

* Integration with third-party logistics providers (Phase 2 feature).
* International shipping (Limited to domestic operations in Phase 1).
* Mobile app development (Web-based system for initial release).

**5. Assumptions**

* The company will provide product data, pricing, and supplier details.
* Internet access is available for all users.
* Payment gateway integration will comply with financial regulations.
* Sufficient storage and server capacity for peak traffic handling.
1. **Constraints**
* Budget Limitations: Development must be completed within allocated funds.
* Time Constraints: The project must be delivered within X months.
* Regulatory Compliance: Must adhere to taxation and data protection laws.
* Technical Limitations: Initial version will be web-based only.
1. **Risks**
* Cybersecurity Threats: Risk of data breaches and fraud.
* Operational Challenges: Difficulty in integrating real-time inventory updates.
* **Scalability Issues:** Increased demand may require server upgrades.
* Logistics Dependencies: Delivery delays due to transportation challenges.
* User Adoption Issues: Farmers may face difficulties in transitioning to online purchasing.

**8 Business Process Overview**

**8.1. Legacy System (AS-IS)**

* customer rely on physical stores for purchases.
* Orders are manually managed through phone calls and paperwork.
* Payments are typically cash-based, leading to accounting inefficiencies.
* Delivery is unstructured, relying on local distributors.

 **8.2. Proposed Recommendations (to be)**

* Fully automated e-commerce platform with online product selection and ordering.
* Secure online payment system with multiple payment options.
* Integrated order tracking and customer notifications.
* AI-driven inventory management to prevent stockouts.
* Data analytics for demand forecasting and business growth insights.

 **9. Business Requirements**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Requirement ID |

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| --- |
| **Requirement Description** |

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| --- |
| **System Functionality** |

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 | Priority |
| FR1 |

|  |
| --- |
| Easy login |

 |

|  |
| --- |
| The system shall support secure user registration and authentication. |

 | High |
| FR2 | Browse product |

|  |
| --- |
|  |
| The platform shall allow customers to browse and search for products. |

|  |
| --- |
|  |

 | High |
| FR3 | Available product | The system shall provide real-time stock availability updates. | High |
| FR4 | Easy paymentmode | The payment gateway shall support multiple modes (Credit/Debit Cards, UPI, Net Banking). | Medium |
| FR5 | Order tracking | The system shall enable order tracking and delivery status updates | High |

**10. Appendices**

**10.1. List of Acronyms**

* **ERP** – Enterprise Resource Planning
* **UPI** – Unified Payments Interface
* **GDPR** – General Data Protection Regulation

 **10.3 Glossary of Terms**

* Inventory Management: Tracking and maintaining stock levels efficiently.
* Order Fulfillment: The process of receiving, processing, and delivering customer orders.
* Payment Gateway: A service that processes online payments securely.
* User Authentication: Verifying the identity of users accessing the system.

**10.3. Related Documents**

* System Architecture Diagram
* Use Case Documentation
* Process Flow Diagrams

## **SRS for a projection online store.**

## **1. Introduction**

### **1.1 Purpose**

The purpose of this document is to define the software requirements for an online store facilitating the purchase of agricultural products. This document serves as a foundation for system development, testing, and deployment.

### **1.2 Scope**

The online store will enable users to browse, select, and purchase agricultural products. The system will support secure payments, real-time inventory management, order tracking, and customer support features.

### **1.4 Assumptions and Dependencies**

* Users will have internet access to access the platform.
* A payment gateway will be integrated for online transactions.
* Inventory data will be managed via an internal system or ERP.

## **3. Functional Requirements**

### **3.1 User Registration and Authentication**

* Users must register with valid credentials (email/phone verification).
* Passwords should be securely stored and encrypted.

### **3.2 Product Catalog and Search**

* Users should be able to search and filter products.
* Product descriptions, pricing, and availability should be displayed.

### **3.3 Shopping Cart and Checkout**

* Users can add/remove products from the cart.
* Checkout process should support multiple payment options.

### **3.4 Order Management**

* Users should receive order confirmation and tracking details.
* Admins should be able to update order status.

### **3.5 Inventory Management**

* System should auto-update stock levels after purchases.
* Admin should receive alerts for low stock items.

## **4. Non-Functional Requirements**

### **4.1 Performance Requirements**

* The system should handle 500 transactions per minute.
* Response time should not exceed 2 seconds.

### **4.2 Security Requirements**

* Data encryption for user-sensitive information.
* Role-based access control for different user types.

### **4.3 Availability Requirements**

* System uptime should be 99.9%.
* Daily backups should be maintained.

Use case diagram


Use case specifiaction

|  |  |
| --- | --- |
| USE Case ID | DC 001 |
| Use case name | User Registration |
| Created By | suman | Last update Date | 11-11-2024 |
| Date created | 1-11-2024 | Last Revision Date | 11-10-2024 |
| Actor | Customer, System |
| Description | This use case describes the process by which a **new customer registers** on the online store by providing their personal details and creating an account. |
| Pre-Condition | The online store website/application must be live and accessible.The user must have a valid email ID and/or mobile number for verification. |
| Post Condition | The user account is successfully created, and the user receives a confirmation message via email or SMS.The user can log in and start using the online store. |
| Normal flow of event | * The user accesses the registration page on the online store.
* The system displays a registration form requiring details such as name, email, phone number, password, and address.
* The user fills in the details and submits the registration form.
* The system validates the input (e.g., checks for missing fields, incorrect formats, or weak passwords).
* If the input is valid, the system stores user details in the database.
* The system sends a confirmation email or SMS with a verification link/code.
* The user verifies their account by clicking the link or entering the code.
* The system confirms registration and redirects the user to the login page.
 |
| Alternate Flow | * Invalid Input: If the user submits incomplete or incorrect details, the system highlights the errors and prompts the user to correct them.
* Duplicate Email/Phone Number: If the email or phone number is already registered, the system notifies the user and suggests using a different one.
* Verification Not Completed: If the user does not verify the account, they cannot log in.
* Resend Verification Link: The user can request a new verification link or code if they did not receive the first one.
 |
| Expectation | * If the server is down, the system should display an error message and allow the user to try again later.
* If the email/SMS service fails, the system should provide an option to resend the verification link.
 |
| Frequency of use | High |
| Assumption |  Users have a stable internet connection to access the platform. The system has email/SMS integration for sending verification links or codes. Users will provide accurate details during the registration process. |

|  |  |
| --- | --- |
| USE Case ID | DC 002 |
| Use case name | Order Management |
| Created By | suman | Last update Date | 11-11-2024 |
| Date created | 1-11-2024 | Last Revision Date | 11-10-2024 |
| Actor | Customer,System |
| Description | This use case describes the process of order placement, processing, and tracking in the online store. It ensures that a customer can successfully place an order, the system processes it, and the delivery partner fulfills it. |
| Pre-Condition | * The customer must be registered and logged in to place an order.
* The product must be available in stock.
* **The payment gateway must be functional for successful transactions**
 |
| Post Condition | * The order is successfully placed and confirmed.
* The customer receives an order confirmation email/SMS.
* The order status updates as it moves through processing, shipping, and delivery.
 |
| Normal flow of event |  The customer selects products and adds them to the shopping cart. The customer proceeds to checkout and provides shipping details. The system displays available payment methods. The customer selects a payment method and completes the transaction. The system verifies the payment and confirms the order. The order details are stored in the database, and an order ID is generated. The system notifies the admin and updates inventory. The order is assigned to a delivery partner for fulfillment. The system updates the order status as it progresses (Processing → Shipped → Out for Delivery → Delivered). The customer receives real-time updates via email/SMS. |
| Alternate Flow |  Product Out of Stock: If an item is unavailable, the system notifies the user and suggests alternatives. Payment Failure: If the payment fails, the user is prompted to retry with a different method. Address Issues: If the shipping address is invalid, the system requests the user to update it. Order Cancellation: The customer can cancel the order before it is shipped. |
| Expectation | * If the payment gateway is down, the system alerts the customer and provides an option to pay later.
* If the order processing system crashes, it should retry or notify the admin.
* If the delivery is delayed, the customer is notified with an estimated time.
 |
| Frequency of use | Very High |
| Assumption | 1. Customers have a valid payment method available.
2. The inventory management system is updated in real-time.
3. A delivery partner is available to fulfill the order.
 |

|  |  |
| --- | --- |
| USE Case ID | DC 003 |
| Use case name | product delivery |
| Created By | suman | Last update Date | 11-11-2024 |
| Date created | 1-11-2024 | Last Revision Date | 11-10-2024 |
| Actor | System, customer |
| Description | This use case describes the process of delivering a product to the customer after an order has been placed. It involves assigning delivery agents, tracking the package, updating delivery status, and notifying the customer. |
| Pre-Condition | * The order must be successfully placed and processed.
* The delivery boy must be assigned to the order.
* The system must have real-time tracking enabled.
 |
| Post Condition | * The product is successfully delivered to the customer.
* The system updates the order status as "Delivered."
* The customer is notified about the delivery completion.
 |
| Normal flow of event | * The system assigns a delivery boy to the order.
* The delivery boy logs into the system and accesses assigned deliveries.
* The package is picked up from the warehouse or supplier.
* The system updates the order status to "Out for Delivery."
* The delivery boy navigates to the customer’s address.
* The customer receives the package and confirms delivery.
* The delivery boy updates the system with the successful delivery status.
* The system sends a confirmation notification to the customer.
* The order is marked as completed.
 |
| Alternate Flow | * **Delivery Failure**: If the customer is unavailable, the system logs an attempted delivery and schedules a reattempt.
* **Wrong Address**: If the address is incorrect, the system notifies the admin and requests an update.
* **Customer Request**: If the customer reschedules delivery, the system updates the expected delivery time.
* **Lost/Damaged Product**: If a product is lost or damaged, the system initiates a replacement or refund process.
 |
| Expectation | * If the delivery is delayed, the system notifies the customer with a new estimated time.
* If the package is not delivered within a set time, the admin is alerted for resolution.
* If the customer refuses the package, the system processes a return request.
 |
| Frequency of use | High |
| Assumption | 1. The system has GPS-based real-time tracking enabled.
2. Delivery personnel have mobile devices with system access.
3. Notifications and alerts reach customers without delays.
 |

|  |  |
| --- | --- |
| USE Case ID | DC 004 |
| Use case name | Add to Cart and Checkout |
| Created By | suman | Last update Date | 11-11-2024 |
| Date created | 1-11-2024 | Last Revision Date | 11-10-2024 |
| Actor | Customer, System |
| Description | This use case describes the process of adding products to the cart and completing the checkout process, including payment and order confirmation. |
| Pre-Condition | * The customer must be logged in (optional for guest checkout).
* The product must be available in stock.
* The payment system must be operational.
 |
| Post Condition | * The order is successfully placed, and an order confirmation is generated.
* The customer receives an order confirmation via email/SMS.
* The inventory is updated to reflect the purchase.
 |
| Normal flow of event |  The customer browses products and selects an item. The customer clicks "Add to Cart", and the system updates the cart. The customer can review, update quantity, or remove items from the cart. The customer proceeds to checkout. The system prompts the customer to enter shipping details. The system displays available payment options. The customer selects a payment method and completes the transaction. The system processes the payment through a secure gateway. Upon successful payment, the system confirms the order. The customer receives an order confirmation with tracking details. |
| Alternate Flow |  Product Out of Stock: If an item is unavailable, the system notifies the customer. Payment Failure: If payment is unsuccessful, the system allows retrying with a different method. Address Issues: If the shipping address is invalid, the system prompts for correction. Cart Abandonment: If the customer does not complete checkout, the system may send reminders. |
| Expectation |  If the payment gateway is down, the system notifies the user and allows order placement with a "Pay Later" option. If the system crashes during checkout, it saves cart data so the user can resume later. If inventory updates fail, the system prevents overselling by restricting checkout. |
| Frequency of use | High |
| Assumption | 1. Customers have a valid payment method.
2. The inventory system updates in real-time.
3. The system has email and SMS integration for order confirmations.
 |

|  |  |
| --- | --- |
| USE Case ID | DC 005 |
| Use case name | Product Search and View |
| Created By | suman | Last update Date | 11-11-2024 |
| Date created | 1-11-2024 | Last Revision Date | 11-10-2024 |
| Actor | Customer, System |
| Description | This use case describes the process by which a customer searches for products in the online store and views product details. |
| Pre-Condition |  The customer must have access to the online store (via website or mobile app). The system must have a functional product catalog with searchable attributes. |
| Post Condition | * The customer successfully finds the desired product.
* The system displays relevant search results with product details.
* The customer can proceed to add the product to the cart or wishlist.

. |
| Normal flow of event |   **The customer accesses the store's search bar or product categories.**** The customer enters keywords or selects filters (e.g., price, brand, category).**** The system retrieves matching products from the database.** **The system displays relevant product listings** with images, prices, and short descriptions. The customer clicks on a product to view details. The system displays the product page with full description, specifications, reviews, and stock availability. The customer can choose to add the product to the cart, wishlist, or compare it with others. |
| Alternate Flow |  No Search Results: If no products match the query, the system suggests similar products. Slow Search Response: If the system experiences delays, a loading indicator is shown. Invalid Search Query: If the search input is invalid (e.g., special characters), the system prompts for correction. |
| Expectation |  If the database is down, the system displays an error message and asks the customer to try later. If product images or details fail to load, the system provides a placeholder image and basic information. If a product is out of stock, the system notifies the customer and suggests alternatives. |
| Frequency of use | High |
| Assumption | 1. The product database is updated regularly.
2. Customers can refine their searches using filters.
3. The system provides real-time product availability information.
 |

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

**Ticketing life cycle.**

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| --- |
| **Ticket** |
| Ticket ID int |
| User ID varchar |
| Issue des varchar |
| Status varchar |
| Created date int |
| Priority Varchar |

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| --- |
| **customer** |
| Customer ID varchar |
| Name varchar |
| Email varchar  |
| Phone varchar |

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| --- |
| **Ticket Assignment** |
| Assignment ID int |
| Ticket ID int |
| Agent ID int |
| Assigned Date int |

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| **Support Agent** |
| Agent ID int |
| Name int |
| Email int |
| Phone varchar |

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| --- |
| **Resolution** |
| Resolution ID int |
| Ticket ID int |
| Reso Details int |
| Resolution Date int |

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

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| UserStoryNo:1 | Tasks:01 | Priority: High |
| As a user, I want to create an account so that I can save my preferences and track my orders. |
| BV: 100 | CP:03 |
| Acceptance Criteria :User can enter email, phone number, and password.System validates unique email and phone number.User receives a confirmation email after registration. |

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| UserStoryNo:2 | Tasks:02 | Priority: Medium |
|  As a user, I want to log in to my account so that I can access my saved information and orders. |
| **BV:** 200 | **CP:** 05 |
| Acceptance Criteria :User can log in using email/phone and password.System locks the account after 5 failed attempts."Forgot Password" option allows resetting the passwor |

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| UserStoryNo:3 | Tasks:03 | Priority: High |
| As a user, I want to log in using Google/Facebook so that I can access my account quickly. |
| **BV:** 400 | **CP:** 05 |
| Acceptance Criteria :Users can log in using valid social media credentials.System fetches user details from the social profile. |

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| UserStoryNo:4 | Tasks:04 | Priority: Medium |
| As a user, I want to search for products using keywords so that I can qickly find what I need. |
| BV:250 | CP:03  |
| Acceptance Criteria :Search bar allows users to enter keywords.Results are displayed based on relevance. Auto-suggestions appear as users type. |

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| UserStoryNo:5 | Tasks:04 | Priority: low |
| As a user, I want to filter products by price, brand, and category so that I can narrow my search. |
| **BV:** 100 | **CP:** 02 |
|  Acceptance Criteria :Filters include price range, brand, category, and ratings.Users can apply multiple filters at once. |

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| UserStoryNo:6 | Tasks:04 | Priority: High |
| As a user, I want to see detailed information about a product so that I can make an informed purchase decision. |
| **BV:** 500 | **CP:** 05 |
|  Acceptance Criteria :Provide a search bar on the home page.Return relevant products based on keywords.Include suggestions for similar searches. |

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| UserStoryNo:7 | Tasks:04 | Priority: Medium |
| As a user, I want to see similar or recommended products so that I can explore alternatives. |
| **BV:** 200 | **CP:** 03 |
| Acceptance Criteria :System suggests similar products based on category and user behavior. |

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| UserStoryNo:8 | Tasks:04 | Priority: Medium |
| As a user, I want to add products to my cart so that I can purchase them later. |
| **BV:** 100 | **CP:** 03 |
|  Acceptance Criteria :Clicking "Add to Cart" updates the cart.Cart icon shows the number of items added. |

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| UserStoryNo:9  | Tasks:04 | Priority: Medium |
| As a user, I want to view my shopping cart so that I can see my selected items before checkout. |
| **BV:** 100 | **CP:** 03 |
|  Acceptance Criteria :Cart displays all added items with prices and quantities. |

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| UserStoryNo:10 | Tasks:04 | Priority: Medium |
| As a user, I want to update the quantity or remove items from my cart so that I can modify my order before checkout. |
| **BV:** 500 | **CP:** 05 |
|  Users can increase, decrease, or remove items. Price updates dynamically based on quantity. |

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| UserStoryNo:11 | Tasks:04 | Priority: High |
| As a user, I want to proceed to checkout so that I can finalize my order. |
| **BV:** 500 | **CP:** 02 |
|  Clicking "Checkout" redirects to the payment page.*  User must be logged in to continue.
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| UserStoryNo:11 | Tasks:04 | Priority: Medium |
| As a user, I want to enter my shipping details so that my order is delivered to the correct location. |
| **BV:** 100 | **CP:** 03 |
| Acceptance Criteria :Users can enter and save multiple addresses. |

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| UserStoryNo:12 | Tasks:04 | Priority: Medium |
| As a user, I want to choose my preferred payment method so that I can pay securely. |
| **BV:** 50 | **CP:** 03 |
| Acceptance Criteria :1. Users can choose from credit card, debit card, PayPal, and COD., city, postal code).
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| UserStoryNo:13 | Tasks:04 | Priority: Medium |
| As a user, I want to apply a discount code so that I can save money on my order. |
| **BV:** 100 | **CP:** 01 |
|  Acceptance Criteria :Coupon codes apply only if valid. |

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| UserStoryNo:14 | Tasks:04 | Priority: Medium |
| As a user, I want to receive an order confirmation after placing an order so that I can verify my purchase details. |
| **BV:** 200 | **CP:** 03 |
| Acceptance Criteria : User receives an email and/or SMS confirmation after successful payment. Confirmation includes order ID, product details, total amount, and estimated delivery date. Users can view the confirmation page immediately after placing an order. |

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| UserStoryNo:15 | Tasks:04 | Priority: High |
| As a user, I want to track my order status so that I know when to expect my delivery. |
| **BV:** 100 | **CP:** 04 |
|  Acceptance Criteria : Users can track orders using an order ID in the "My Orders" section. System displays order status updates (Processing, Shipped, Out for Delivery, Delivered). Users receive notifications when the order status changes. |

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| UserStoryNo:16 | Tasks:04 | Priority: Medium |
| As a user, I want to view my past orders so that I can reorder items or check previous purchases. |
| **BV:** 100 | **CP:** 03 |
| Acceptance Criteria :Users can access a "My Orders" section displaying all past orders.Each order entry includes order date, items purchased, total cost, and status.Users can filter orders by date or status. |

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| UserStoryNo:17 | Tasks:04 | Priority: High |
| As a user, I want to cancel an order before it is shipped so that I can avoid unnecessary charges. |
| **BV:** 500 | **CP:** 05 |
| Acceptance Criteria : Users can cancel orders only if the status is "Processing" and not "Shipped." Refund processing starts automatically for prepaid orders.Cancellation confirmation is sent via email and SMS. |

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| UserStoryNo:18 | Tasks:04 | Priority: Medium |
| As a user, I want to modify my order before it is shipped so that I can change the quantity or shipping details. |
| **BV:** 200 | **CP:** 03 |
| Acceptance Criteria :Users can update address or quantity before the order reaches the "Shipped" status.Modified order details are reflected in the order summary.System restricts modifications if the order is already shipped. |

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| UserStoryNo:19 | Tasks:04 | Priority: High |
| As a user, I want to see an estimated delivery time before placing an order so that I can plan accordingly. |
| **BV:** 350 | **CP:** 04 |
| Acceptance Criteria : Estimated delivery time is shown on the product page and during checkout. System dynamically updates delivery dates based on location and stock availability. |

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| UserStoryNo:20 | Tasks:04 | Priority: Medium |
| As a user, I want to receive notifications about my order delivery so that I can be prepared for its arrival. |
| **BV:** 200 | **CP:** 03 |
| Acceptance Criteria : Users receive notifications at key stages: Shipped, Out for Delivery, Delivered. Notifications are sent via email, SMS, or mobile app push notifications. |

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| UserStoryNo:21 | Tasks:04 | Priority: Medium |
| As a user, I want to return a product within the return window so that I can get a refund or replacement. |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria:** Users can initiate a return request from the "My Orders" section. System validates if the product is within the return period.1.  Return confirmation and pickup details are sent to the user.
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| UserStoryNo:22 | Tasks:04 | Priority: High |
| As a user, I want to exchange a product for a different size or color so that I get the correct item. |
| **BV:** 50 | **CP:** 03 |
| **Acceptance Criteria:** Users can select an exchange option instead of a return. System verifies if the desired variant is available. Exchange confirmation is provided, and a return pickup is scheduled. |

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| UserStoryNo:23 | Tasks:04 | Priority: High |
|  As a user, I want to request a refund after returning a product so that I get my money back. |
| **BV:** 50 | **CP:** 03 |
| **Acceptance Criteria:** Refund request is auto-initiated after successful return pickup. Users can check refund status in the "My Orders" section. Refund is processed to the original payment method within the specified timeline. |

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| UserStoryNo:24 | Tasks:04 | Priority: High |
| As a user, I want to chat with customer support so that I can get immediate help. |
| **BV:** 500 | **CP:** 05 |
| **Acceptance Criteria:** Chat support is available on the website and mobile app. Users can select topics before starting the chat. |

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| UserStoryNo:25 | Tasks:04 | Priority: High |
| As a user, I want to raise a complaint so that I can report issues with my order. |
| **BV:** 100 | **CP:** 04 |
| **Acceptance Criteria:** Users can file complaints through "Help & Support." Users receive a complaint ticket ID for tracking resolution. |

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| UserStoryNo:26 | Tasks:04 | Priority: Medium |
| As a user, I want to contact customer service by phone or email so that I can resolve my issue. |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria:** Customer care contact details are available in the "Help" section. Users receive an email confirmation after submitting queries. |

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| UserStoryNo:27 | Tasks:04 | Priority: Medium |
| As a user, I want to browse FAQs so that I can find answers to common issues. |
| **BV:** 200 | **CP:** 05 |
| **Acceptance Criteria:**FAQs are categorized for easy navigation. |

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| UserStoryNo:28 | Tasks:04 | Priority: Medium |
| As a user, I want to write a review so that I can share my experience with other buyer |
| **BV:** 200 | **CP:** 05 |
| **Acceptance Criteria:** Users can submit reviews only after purchasing. Reviews can include text, images, and ratings. |

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| UserStoryNo:29 | Tasks:04 | Priority: Medium |
| As a user, I want to rate a product so that I can help others make informed decisions. |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria:**Users can give 1 to 5-star ratings. |

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| UserStoryNo:30 | Tasks:04 | Priority: High |
|  As a user, I want to like or dislike a review so that I can highlight helpful feedback*.* |
| **BV:** 50 | **CP:** 05 |
| **Acceptance Criteria:**Users can upvote or downvote reviews. |

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| UserStoryNo:31 | Tasks:04 | Priority: Medium |
| As a user, I want to add products to my wishlist so that I can save them for future purchase. |
| **BV:** 200 | **CP:** 03 |
| **Acceptance Criteria:** Users can click the "Add to Wishlist" button on a product page. System confirms the addition with a success message. Wishlist items remain saved unless removed by the user. |

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| UserStoryNo:32 | Tasks:04 | Priority: Medium |
| As a user, I want to manage my privacy settings so that I can control what personal information is shared and stored. |
| **BV:** 200 | **CP:** 03 |
| **Acceptance Criteria:** Users can access privacy settings from the account section. Users can enable or disable tracking for personalized recommendations. Users can request data deletion in compliance with privacy regulations. |

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| UserStoryNo:33 | Tasks:04 | Priority: Medium |
| As a user, I want to enable two-factor authentication so that I can secure my account from unauthorized access. |
| **BV:** 50 | **CP:** 03 |
| **Acceptance Criteria:** Users can enable 2FA from the security settings. System supports 2FA via SMS or email verification. Users are required to enter a one-time password (OTP) during login if 2FA is enabled. |

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| UserStoryNo:34 | Tasks:04 | Priority: Medium |
|  As a user, I want to receive alerts when a product is low in stock so that I can purchase it before it runs out. |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria:** Users can subscribe to stock alerts for specific products. System notifies users when stock is low via email or push notification. Alert option is available on product pages... |

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| UserStoryNo:35 | Tasks:04 | Priority: Medium |
|  As a user, I want to receive notifications about my order status so that I stay updated on delivery progress. |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria:**Users receive updates at different order stages (Processing, Shipped, Out for Delivery, Delivered).Notifications are sent via email, SMS, and app push notifications.Users can manage notification preferences in settings. |

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| --- | --- | --- |
| UserStoryNo:36 | Tasks:04 | Priority: High |
| As a user, I want to receive personalized product recommendations so that I can discover relevant items based on my interests. |
| **BV:** 500 | **CP:** 01 |
| **Acceptance Criteria:** Recommendations appear on the homepage and product pages. System analyzes browsing and purchase history to suggest products. Users can choose to enable or disable personalized recommendations. |

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| UserStoryNo:37 | Tasks:04 | Priority: High |
| As a user, I want to receive promotional offers so that I can avail discounts and deals. |
| **BV:** 50 | **CP:** 05 |
| **Acceptance Criteria:** Users receive promotional emails, SMS, or push notifications based on preferences. Users can opt in or out of promotional messages from account settings. Promotional notifications include discount codes and special deals. |

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| UserStoryNo:38 | Tasks:04 | Priority: High |
| As a user, I want to move items from my wishlist to my cart so that I can purchase them easily. |
| **BV:** 50 | **CP:** 05 |
| **Acceptance Criteria:** Users can select one or multiple items to move to the cart. Items successfully moved to the cart are removed from the wishlist. System notifies the user if an item is out of stock. |

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| UserStoryNo:39 | Tasks:04 | Priority: High |
| As an admin,I want to monitor customer feedback and complaints,So that I can take necessary actions to improve customer satisfaction. |
| **BV:** 50 | **CP:** 01 |
| **Acceptance Criteria:**View all customer reviews and ratings for orders and overall service.Sort feedback by rating, date, and issue type (food quality, delivery time, etc.).Allow admins to respond to complaints and resolve issues. |

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| UserStoryNo:40 | Tasks:04 | Priority: High |
| As a user, I want to receive alerts when a product is low in stock so that I can purchase it before it runs out. |
| **BV:** 100 | **CP:** 02 |
| **Acceptance Criteria:**Users can subscribe to stock alerts for specific products.System notifies users when stock is low via email or push notification.Alert option is available on product pages. |