**Mock 4**

A company is having manufacturing plants and warehouses in various parts of the country. They

manufacture ice cream and milk products. They want to build software to achieve two goals.

* Manage the inventory
* Quickest delivery to the customers

Assignment 1:

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

**BRD Template:**

**<Online Ice-Cream & Milk Product Store>**

**<Project ID- PROJ124>**

**<Version ID- 1.0>**

**<Kavya garg>**

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1. **Document Revisions**

|  |  |  |
| --- | --- | --- |
| Date | Version Number | Document Changes |
| 05/02/2025 | 1.0 | Initial Draft Created |
| 12/02/2025 | 1.0 | Added project objectives and scope |
| 20/02/2025 | 1.0 | Included risk assessment and dependencies |
| 01/03/2025 | 1.0 | Finalized document after stakeholder review |
| 10/03/2025 | 1.0 | Add New Wireframes |
| 14/03/2025 | 1.0 | Final Review and Approval |

1. **Approvals**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Role | Name | Title | Signature | Date |
| Project Sponsor  | Mr. Amit Sharma | CEO, Innoplexus Consulting Service | A.S. Shrama | 27-01-2025 |
| Business Owner  | Mr. Akshay Jagtap | Founder, Innoplexus Consulting Service | A.M. Jagtap | 27-01-2025 |
| Project Manager | Mrs. Nilima Jagtap | Project Manager, Innoplexus Consulting Service | N. P. Jagtap | 28-01-2025 |
| System Architect | Mr. Vivek Suryawanshi  | Lead System Architect | V.D. Suryawanshi | 30-01-2025 |
| Development Lead | Mr. Kunal Kad | Senior Software Engineer | K.L.Kad | 02-02-2025 |
| User Experience Lead | Mr. Pratik Jog | UX Lead | P.A.Jog | 06-03-2025 |
| Quality Lead | Mr. Aniket Lohar | QA Manager | A.S.Lohar | 10-02-2025 |
| Content Lead | Mrs. Pooja Patil | Content Strategist | P.S.Patil | 14-02-2025 |

**3. RACI Chart for This Document**

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

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Position** | **\*** | **R** | **A** | **S** | **C** | **I** |
| Mr. Amit Sharma | Project Sponsor | Yes |  | Yes |  | Yes | Yes |
| Mr. Akshay Jagtap | Business Owner | Yes |  | Yes |  | Yes | Yes |
| Mrs. Nilima Jagtap | Project Manager |  | Yes |  | Yes | Yes | Yes |
| Mr. Vivek Suryawanshi  | System Architect |  | Yes |  | Yes | Yes | Yes |
| Mr. Kunal Kad | Development Lead | Yes |  |  |  | Yes | Yes |
| Mr. Pratik Jog | User Experience Lead | Yes |  |  |  | Yes | Yes |
| Mr. Aniket Lohar | Quality Lead | Yes |  |  |  | Yes | Yes |
| Mrs. Pooja Patil | Content Lead | Yes |  |  |  | Yes | Yes |
| Mrs. Kavya garg | Business Analyst | Yes |  |  |  | Yes | Yes |

**4. Introduction-**

* 1. **Business Goals-**
* Streamline inventory management across all plants and warehouses.
* Ensure the quickest and most cost-effective delivery of products to customers.
* Improve coordination between manufacturing, warehousing, and logistics teams.
* Achieve better demand forecasting and supply planning.
* Enhance customer satisfaction with real-time delivery tracking and prompt order fulfillment.
	1. **Business Objectives-**
* Build a centralized inventory management system accessible by all stakeholders.
* Integrate real-time tracking of stock levels and product movement.
* Implement a delivery optimization algorithm based on location, product availability, and route efficiency.
* Reduce delivery time by 25% within 6 months of implementation.
* Decrease inventory holding costs by 15% through just-in-time practices.
	1. **Business Rules – [List Organization Policies, Procedures, and Rules and Regulations]**
* Perishable inventory must be rotated using FIFO (First-In, First-Out) method.
* Cold chain must be maintained for ice-cream and milk products at all stages of storage and delivery.
* Warehouses and plants operate from 6 AM to 10 PM (Mon–Sat).
* Stock audits must be performed every week at all warehouses.
* All product deliveries must comply with FSSAI guidelines.
* Orders must be fulfilled within a maximum 48-hour SLA.
	1. **Background-**

The company has manufacturing plants and warehouses distributed nationally. Managing perishable goods efficiently is a challenge. The current system involves manual stock entries and traditional delivery routing, leading to delays, wastage, and customer dissatisfaction. The company needs an integrated digital solution.

* 1. **Project Objective-**

To develop a software solution that digitizes and optimizes inventory management and delivery operations to ensure quicker customer deliveries and better product tracking, thereby enhancing operational efficiency and customer satisfaction.

* 1. **Project Scope-**

**In-Scope:**

* Centralized inventory management system.
* Delivery routing and optimization module.
* Real-time tracking of shipments and stock.
* Dashboard for analytics and reporting.
* Mobile app/portal for customers to track orders.

**Out-of-Scope**:

* Upgrading physical logistics infrastructure.
* CRM functionalities unrelated to delivery or inventory.
1. **Assumptions-**

Assumption 1 - All warehouses and plants have internet connectivity.

Assumption 2 - Staff is trained to use the new system.

Assumption 3 - Integration with current ERP is possible.

Assumption 4 - Vehicles used for delivery have GPS capability**.**

1. **Constraints-**
* Limited budget for infrastructure upgrades.
* Strict delivery timelines due to perishable nature.
* Compliance with food safety standards and regulations.
* Resource availability during peak season.
1. **Risks-**
* **Technical Risk-**

Software may not handle high volume of real-time data from multiple locations.

Inventory and customer data may be exposed to cyber threats.

Migrating old inventory and order data may be complex or error-prone.

* **Political Risk-**

Changes in government regulations, food safety laws, or transportation policies could affect how products are stored, transported, or delivered. For example, stricter cold chain regulations or regional transport restrictions**.**

Changes in GST, import/export taxes, or state taxes could affect pricing, margins, or software configurations (e.g., tax module updates).

* **Business Risks-**

Resistance to change from employees used to manual processes.

Increased operational cost during transition**.**

* **Requirements Risks-**

Incomplete stakeholder input could lead to gaps in requirements.

Misunderstanding between technical and business teams on system expectations

* **Other Risks**

Data migration from legacy systems.

Downtime during system switch-over.

Hardware failures at plant/warehouse locations**.**

**8. Business Process Overview –**

**Requirement gathering-** Where the elicitation technique have been applied like brainstorming, focus grouping, observations, JAD Session for requirement gathering, Use case Specification, do stakeholder analysis (RASCI Matrix), sort requirements and prioritize requirements

**Requirement Analysis-** Made use case diagrams, Prepare Function Requirements from Business requirements, Take sign off on SRS, prepared RTM from SRS

**Design-** Once requirement analysis done, move forward on Design stage. In this stage made Prototype, Activity diagrams, Create architecture, database schema. In this stage DB architecture uses persistence classes and come up with ER Diagram and DB Schema. GUI Designer will look into transient class and design all possible Screens.

**Development-** In this Phase organize JAD session and clarify queries of technical team during coding, Update End user manuals, developers refers diagram for development.

**Testing**- In this stage prepared Test cases from use cases, performs high level testing, prepare clients for UAT and update RTM. Take signoff from client.

**Deployment and Implementation-** Forward RTM to client or the which should be attached to the Project closure documents. Coordinate to complete and share End user Manuals, Plan training session for end user and prepared Lesson learned from project**.**

**Requirement Gathering and Planning: 2 months**

**Design and Development: 7 months**

**Testing and Training: 2 months**

**Deployment and Go-Live: 1 month**

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

Manual entries for inventory using spreadsheets.

Basic delivery assignment without route optimization.

No real-time inventory updates.

High dependency on human judgment for dispatching.

**8.2. Proposed Recommendations (TO-BE)-**

Centralized cloud-based inventory platform.

Route optimization using GIS & GPS.

Automated reorder levels and stock alerts.

Real-time dashboard for management.

Customer delivery tracking portal.

**9. Business Requirements-**

BR0001- The system must track inventory levels in real time.

BR0002- The system must suggest the optimal delivery route based on customer location, traffic, and warehouse stock.

BR0003- Notifications must be sent when stock reaches reorder level.

BR0004- The system should support barcode scanning for product entry and dispatch.

BR0005- Users must have role-based access control.

BR0006- The system must integrate with GPS-enabled delivery vehicles.

BR0007- Customers must be able to track their orders via web/mobile.

BR0008- All data must be stored securely with regular backups.

BR0009- Inventory aging reports must be available to reduce wastage.

BR0010- Admins should be able to generate customizable reports.

**10. Appendices-**

10.1 List of Acronyms

- SLA - Service Level Agreement

- NFR - Non-Functional Requirement

- FR - Functional Requirement

- BR - Business Requirement

10.2. Glossary of Terms

- Compliance - Adhering to regulations and industry standards, such as HIPAA and GDPR.

10.3 Related Documents

- User Manual

- System Requirements Specification (SRS)

- Regulatory Compliance Guidelines

- Requirement Traceability Matrix (RTM)

- Risk Assessment Report

- Compliance and Security Documents

- Use Case Documentation

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.

Answer -

Subject: Introduction - Business Analyst for Your Project

Innoplexus Consulting Services, Pune,

I hope this message finds you well.

My name is Nikita Shivaji Surayawnshi, I’m pleased to introduce myself as the Business Analyst assigned to work with you and your team on Ticketing system. I will be your primary point of contact as we begin the business understanding phase of this engagement.

My role is to collaborate closely with you to gain a deep understanding of your business goals, challenges, and requirements. This will help ensure that our project aligns perfectly with your expectations and delivers value to your organization. Over the coming weeks, I’ll be facilitating discussions, gathering insights, and translating your business needs into clear and actionable requirements for the project team.

I look forward to building a strong working relationship and contributing to the success of your initiative. Please feel free to reach out to me anytime if you have questions, ideas, or concerns. I’ll be in touch soon to schedule our initial meeting.

Thank you, and I’m excited to get started!

Warm regards,

Kavya garg,

Business Analyst

(Contact No- 9734679921)

1. Prepare a brief BRD and SRS for a project- Ticketing system.

**BRD Template:**

**<Ticketing System>**

**<Project ID- PROJ125>**

**<Version ID- 1.0>**

**<Kavya garg>**

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| **Date** | **Version Number** | **Document Changes** |
| **06/02/2025** | **1.0** | **Initial Draft Created** |
| **14/02/2025** | **1.0** | **Added project objectives and scope** |
| **22/02/2025** | **1.0** | **Included risk assessment and dependencies** |
| **02/03/2025** | **1.0** | **Finalized document after stakeholder review** |
| **11/03/2025** | **1.0** | **Add New Wireframes** |
| **15/03/2025** | **1.0** | **Final Review and Approval** |

1. **Approvals**

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| **Role** | **Name** | **Title** | **Signature** | **Date** |
| **Project Sponsor**  | **Mr. Amit Sharma** | **CEO, Innoplexus Consulting Service** | **A.S. Shrama** | **27-01-2025** |
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| **Project Manager** | **Mrs. Nilima Jagtap** | **Project Manager, Innoplexus Consulting Service** | **N. P. Jagtap** | **28-01-2025** |
| **System Architect** | **Mr. Vivek Suryawanshi**  | **Lead System Architect** | **V.D. Suryawanshi** | **30-01-2025** |
| **Development Lead** | **Mr. Kunal Kad** | **Senior Software Engineer** | **K.L.Kad** | **02-02-2025** |
| **User Experience** **Lead** | **Mr. Pratik Jog** | **UX Lead** | **P.A.Jog** | **06-03-2025** |
| **Quality Lead** | **Mr. Aniket Lohar** | **QA Manager** | **A.S.Lohar** | **10-02-2025** |
| **Content Lead** | **Mrs. Pooja Patil** | **Content Strategist** | **P.S.Patil** | **14-02-2025** |

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| **Name** | **Position** | **\*** | **R** | **A** | **S** | **C** | **I** |
| **Mr. Amit Sharma** | **Project Sponsor** | **Yes** |  | **Yes** |  | **Yes** | **Yes** |
| **Mr. Akshay Jagtap** | **Business Owner** | **Yes** |  | **Yes** |  | **Yes** | **Yes** |
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| **Mrs. Pooja Patil** | **Content Lead** | **Yes** |  |  |  | **Yes** | **Yes** |
| **Mrs. Kavya garg** | **Business Analyst** | **Yes** |  |  |  | **Yes** | **Yes** |

**4. Introduction-**

**4.1. Business Goals-**

- Streamline the customer support process by providing a centralized platform for tracking and managing support tickets.

- Enhance communication between customers and support teams.

- Improve customer satisfaction by ensuring timely ticket resolution.

**4.2. Business Objectives-**

**-** Reduce average ticket resolution time by 30%.

- Achieve 90%+ customer satisfaction score within 6 months of implementation.

- Implement a secure, scalable, and user-friendly web-based support platform**.**

**4.3. Business Rules – [List Organization Policies, Procedures, and Rules and Regulations]**

**-** Tickets must be acknowledged within 4 business hours.

- Only registered users can raise tickets.

- Support agents must update ticket status after every interaction.

- All resolved tickets are archived after 30 days.

- Admins can assign tickets and monitor SLAs.

**4.4. Background-**

The organization currently handles customer queries via email and spreadsheets, resulting in delayed responses, poor tracking, and inconsistent customer service. A digital ticketing system will replace this manual process.

**4.5. Project Objective-**

To develop a centralized, automated ticketing system that allows customers to raise issues, track progress, and receive timely resolutions, while support agents manage and resolve issues efficiently.

**4.6. Project Scope-**

**In-Scope:**

* User registration and login
* Ticket creation and tracking
* Support agent and admin dashboards
* Ticket categorization and prioritization
* Notifications via email and in-app
* SLA management

**Out-of-Scope:**

**-** Integration with third-party CRM tools (Phase 2)

- Mobile application version

- AI-based ticket classification

**5. Assumptions-**

Assumption 1 **-** End users have access to the internet and basic digital literacy.

Assumption 2 - Stakeholders are available for timely feedback and sign-offs.

Assumption 3 - System will be hosted on a secure cloud environment**.**

**6. Constraints-**

**-** Budget and timeline constraints as per project plan

- Compliance with industry data protection regulations (e.g., GDPR)

- Limited availability of internal IT resources

**7. Risks-**

**- Technical Risk-**

Integration issues with existing systems

Technology stack compatibility

**- Political Risk-**

Change resistance from internal staff

Shift in leadership priorities

**- Business Risks-**

Low adoption by users

Misalignment between IT solution and business expectations

**-Requirements Risks-**

Incomplete or evolving requirements

Unclear stakeholder roles

**- Other Risks**

Vendor delays

Security vulnerabilities

**8. Business Process Overview -**

**Requirement gathering-** Where the elicitation technique have been applied like brainstorming, focus grouping, observations, JAD Session for requirement gathering, Use case Specification, do stakeholder analysis (RASCI Matrix), sort requirements and prioritize requirements

**Requirement Analysis-** Made use case diagrams, Prepare Function Requirements from Business requirements, Take sign off on SRS, prepared RTM from SRS

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**Development-** In this Phase organize JAD session and clarify queries of technical team during coding, Update End user manuals, developers refers diagram for development**.**

**Testing-** In this stage prepared Test cases from use cases, performs high level testing, prepare clients for UAT and update RTM. Take signoff from client**.**

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**Requirement Gathering and Planning: 2 months**

**Design and Development: 7 months**

**Testing and Training: 2 months**

**Deployment and Go-Live: 1 month**

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

**-** Manual ticket management through emails and spreadsheets

- No centralized reporting or tracking

- Lack of accountability and status visibility

**8.2. Proposed Recommendations (TO-BE)-**

**-** Web-based platform with ticket submission, tracking, and resolution

- Role-based access control

- Automated SLA tracking and notifications

- Dashboards for metrics and reporting

**9. Business Requirements-**

BR001- The system must allow users to raise support tickets with category and priority.

BR002- The system must notify users about ticket status changes.

BR003- The system must provide a dashboard for agents to manage tickets

BR004- The system must log all ticket activity.

BR005- The system must ensure data privacy and access control

**10. Appendices-**

**10.1 List of Acronyms**

**-** SLA - Service Level Agreement

- NFR - Non-Functional Requirement

- FR - Functional Requirement

- BR - Business Requirement

**10.2. Glossary of Terms**

- Compliance - Adhering to regulations and industry standards.

**10.3 Related Documents**

**-** User Manual

- System Requirements Specification (SRS)

- Regulatory Compliance Guidelines

- Requirement Traceability Matrix (RTM)

- Risk Assessment Report

- Compliance and Security Documents

- Use Case Documentation

**Software Requirements Specification (SRS)-**

**Project: Ticket Tracking System**

**Version: 1.0
Date: April 17, 2025
Prepared by: Kavya garg**

**Introduction-**

**1.1 Purpose**

The purpose of this document is to define the functional and non-functional requirements for the Ticket Tracking System. This system enables users to raise tickets, support agents to resolve them, and administrators to monitor and manage the overall ticket lifecycle.

**1.2 Scope**

This system will be used by three types of users: End Users (to raise tickets), Support Agents (to manage tickets), and Admins (to configure settings and view reports). The application will be accessible via web browser and designed to handle different departments and issue type.

**Functional Requirements-**

|  |  |  |  |
| --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** | **Priority** |
| FR0001 | User Registration | System shall allow users to register with email and role selection (user/admin). | High |
| FR0002 | User Login | Users must be able to log in securely using their credentials. | High |
| FR0003 | Create Ticket | Registered users shall be able to create a support ticket with issue details. | High |
| FR0004 | Assign Ticket | Admin shall assign tickets to support agents. | High |
| FR0005 | Update Ticket Status | Agents shall update ticket status (Open, In Progress, Resolved, Closed). | Medium |
| FR0006 | Comment on Ticket | Users and agents shall add comments to a ticket for communication. | Medium |
| FR0007 | Attach Files | Users/agents can attach files/screenshots to tickets. | Low |
| FR0008 | View Ticket History | Users shall view all tickets raised by them along with current status. | High |
| FR0009 | Search Tickets | Users and admins can search tickets based on ID, status, category, or assignee. | High |
| FR0010 | Notification System | System shall send notifications on ticket updates via email. | Medium |
| FR0011 | Dashboard | Admin dashboard to show ticket stats, SLA breaches, and assignments. | High |

**Non-Function Requirements-**

|  |  |  |  |
| --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** | **Priority** |
| NFR0101 | Performance | System must support 1000+ concurrent users with page loads < 3 seconds. | High |
| NFR0102 | Scalability | System should be horizontally scalable to support future growth. | High |
| NFR0103 | Availability | System should have 99.9% uptime and be accessible 24/7. | High |
| NFR0104 | Security | All user data and payment info must be encrypted | High |
| NFR0105 | Usability | Interface should be intuitive and accessible for all users. | High |
| NFR0106 | Maintainability | Code should follow modular architecture and be well-documented for maintenance. | Medium |
| NFR0107 | Compatibility | System must work across major browsers (Chrome, Firefox, Edge, Safari). | Medium |
| NFR0108 | Backup and Recovery | Daily backups must be maintained and restorable within 1 hour of failure. | High |
| NFR0109 | Localization | Platform must support multi-language options based on user location. | Low |
| NFR0110 | Legal Compliance | System must comply with GDPR for data protection and privacy. | High |

1. **Assumptions and Constraints**
* The initial release will support only English language.
* Users must have a valid email address to register.
1. **User Classes and Characteristics**

End User - raises and tracks tickets.

Support Agent - handles and updates assigned tickets.

Admin - manages categories, users, and ticket settings.

1. **Depemdacy-**

User Authentication System

Database Server

Browser Compatibility

Network Connectivity

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



1. User story of shopping from ecommerce.

|  |  |  |
| --- | --- | --- |
| User Story No: 01  | Tasks: User Registration | Priority: High |
| As a UserI want to Register an accountSo that I Can find my desired product |
| BV: 1000 | CP: 03 |
| Acceptance Criteria:1) User can click on register option2) User can enter personal information 3) User can create an account with email/phone |

|  |  |  |
| --- | --- | --- |
| User Story No: 02  | Tasks: Authentication | Priority: High |
| As a UserI want to Log in with credentialsSo that I can Access my account |
| BV: 1000 | CP: 03 |
| Acceptance Criteria:1) Click on Login2) Enter user name and password3) Login works with correct credentials |

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| User Story No: 03  | Tasks: Product Browsing and Search | Priority: High |
| As a UserI want to browse and search for productsSo that I can Find the items I want to purchass |
| BV: 1000 | CP: 05 |
| Acceptance Criteria:1) User can view product categories 2) User can search by keyword 3) Filters (price, brand, rating) are functional |

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| User Story No: 04  | Tasks: Add items to shopping cart | Priority: High |
| As a UserI want to add products to my cartSo that I Can purchase them later |
| BV: 1000 | CP: 05 |
| Acceptance Criteria:1. Item is added to cart successfully
2. Cart icon updates with count
3. Cart persists during session
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| User Story No: 05  | Tasks: Perform checkout and payment | Priority: High |
| As a UserI want to check out and make paymentSo that I can complete my order and get confirmation |
| BV: 500 | CP: 08 |
| Acceptance Criteria:1. User can enter shipping and billing info
2. User selects payment method
3. Order summary is displayed
4. Confirmation message shown after successful payment
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| User Story No: 06  | Tasks: Track order status | Priority: Medium |
| As a UserI want to track the status of my orderSo that I can know when it will be delivered |
| BV: 500 | CP: 03 |
| Acceptance Criteria:1. Order status updates available
2. Delivery date is visible
3. Tracking link or number is shown
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| User Story No: 07  | Tasks: Add products to wishlist | Priority: Medium |
| As a UserI want to add products to my wishlistSo that I can save them for future consideration |
| BV: 500 | CP: 02 |
| Acceptance Criteria:1. Products can be added/removed from wishlist
2. Wishlist persists in user account
3. Option to move item from wishlist to cart
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| User Story No: 08  | Tasks: Submit product review | Priority: Medium |
| As a UserI want to rate and review a productSo that I can share my experience with other customers |
| BV: 1000 | CP: 03 |
| Acceptance Criteria:1. User can leave text and star rating
2. Only verified buyers can review
3. Reviews are displayed on product pages
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| User Story No: 09  | Tasks: Receive order and offer notifications | Priority: Medium |
| As a UserI want to get notifications about my order and promotionsSo that I can stay informed about order progress and deals |
| BV: 1000 | CP: 04 |
| Acceptance Criteria:1. User receives order updates via email/SMS
2. Promotional offers sent if opted in
3. Notifications can be managed in account settings
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| User Story No: 10  | Tasks: Ensure secure and reliable payment | Priority: High |
| As a UserI want to make payments through a secure gatewaySo that I can protect my personal and financial information |
| BV: 1000 | CP: 05 |
| Acceptance Criteria:1. Payment is encrypted and secure
2. Supports multiple payment options
3. User receives a payment confirmation instantly
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