

Project Name
“PP eCommerce Promo Code”
Business Requirement Document (BRD)

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INTRODUCTION

PP eCommerce is a leading online retail platform committed to enhancing its customer experience by introducing new features that streamline the shopping and checkout process. This document outlines the business requirements for developing a **Promo Code Feature** to be integrated into the existing eCommerce platform. The solution aims to enhance customer engagement, boost sales, and provide admins with a seamless system for creating and managing promotional offers.

This initiative aligns with PP eCommerce's broader strategy to provide personalized and dynamic shopping experiences for its customers, helping the platform remain competitive in the rapidly evolving eCommerce landscape.

Objectives of Introducing the Promo Code Feature for PP eCommerce:

- **Enhancing Customer Experience:** The primary objective of this project is to offer customers a flexible and rewarding shopping experience by allowing them to apply promo codes during checkout. This will create opportunities for personalized offers and targeted discounts, ultimately improving customer satisfaction and fostering loyalty.
- **Boosting Sales and Engagement:** By introducing a promo code feature, PP eCommerce aims to increase conversion rates, attract new customers, and encourage repeat purchases. The ability to offer discounts through promo codes will also help drive targeted marketing campaigns, enabling better customer segmentation.
- **Providing Admins with a Comprehensive Tool:** The solution will empower the admin team to create, manage, and monitor promo codes efficiently. Admins will have the ability to define promo code parameters, track usage, and generate reports, enabling them to make data-driven decisions on marketing and sales strategies.
- **Ensuring Scalability and Flexibility:** The promo code system is designed to be scalable and adaptable, allowing PP eCommerce to easily add new promo types, integrate with future marketing campaigns, and handle large volumes of users during peak times. This will position the platform for long-term growth and adaptability in a competitive market.
- **Seamless Integration with Existing Systems:** The feature will integrate with PP eCommerce's existing checkout, product, and customer management systems without disrupting current operations. This seamless integration will ensure a smooth transition for both customers and internal teams.

1.1. DOCUMENT PURPOSE

The purpose of this document is to outline the business requirements for developing a Promo Code feature within the existing PP eCommerce platform. This document serves as a comprehensive guide for the design, development, and implementation of a solution that will allow customers to apply promo codes during checkout, enhancing the overall shopping experience. It provides a detailed overview of the project objectives, scope, functional and non-functional requirements, and the overall strategy for delivering an efficient and user-friendly promo code system. The goal is to improve customer engagement, drive sales, and enable seamless management of promotional offers by the admin team.

1.2. INTENDED AUDIENCE

This document is intended for PP eCommerce's (Business Side) project managers, business analysts, and stakeholders involved in enhancing customer experience and sales through promotional features. It is also targeted at IT stakeholders involved in the development, implementation, and evaluation of the Promo Code feature, including project managers, developers, testers, and business analysts. Additionally, it serves as a reference for marketing teams who will utilize the promo code system to create and manage campaigns, as well as the customer support team responsible for assisting users with promo code-related queries.

1.3. PROJECT BACKGROUND

PP eCommerce, a prominent online retail platform, has established itself as a leading provider of innovative shopping solutions since its launch. With a strong commitment to customer satisfaction and convenience, PP eCommerce has continually evolved to meet the dynamic demands of its diverse and growing customer base.

- **Legacy of Innovation and Growth:** PP eCommerce has a rich history of delivering cutting-edge features and services. The platform has always prioritized innovation, efficiency, and customer engagement. It has consistently embraced emerging technologies and market trends, positioning itself as a forward-thinking company in the competitive online retail space.
- **Focus on Customer Experience:** In line with its strategic objectives, PP eCommerce is dedicated to enhancing the overall customer experience. Recognizing the importance of personalized and flexible shopping experiences, the company aims to introduce new features that streamline the checkout process and offer targeted promotions. By focusing on improving customer interactions and leveraging advanced promotional tools, PP eCommerce seeks to create a more engaging and rewarding shopping experience.
- **Strategic Enhancement Initiative:** To align with its growth goals and market competition, PP eCommerce has identified the need to introduce a Promo Code feature. Recognizing the increasing demand for promotional offers and discounts, the platform aims to implement this feature to boost customer engagement, increase sales, and provide value through targeted promotions.
- **Evolution of PP eCommerce's Digital Offerings:** PP eCommerce has continuously evolved its product portfolio to cater to the diverse needs of its customers. From personalized recommendations to streamlined checkout options, the platform has embraced digital advancements to better serve its users. The introduction of the Promo Code feature is a natural progression in this evolution, aimed at improving both customer satisfaction and sales performance.

1.4. BUSINESS GOALS/OBJECTIVES TO BE ACHIEVED

The primary goal of this project is to introduce a **Promo Code feature** into the existing eCommerce application to enhance both customer engagement and operational efficiency. By integrating this feature, PP eCommerce aims to optimize the customer purchasing experience, boost sales through targeted promotions, and provide admin teams with effective tools for managing promotional campaigns.

- **Enhancing Customer Experience:** The key goal is to significantly enhance the shopping experience for customers by offering the ability to apply promo codes at checkout. This will make the shopping journey more rewarding and encourage customer loyalty through discounts and special offers. A seamless and easy-to-use interface for entering promo codes will improve customer satisfaction and promote positive brand perception.
- **Boosting Sales and Customer Retention:** Introducing promo codes is expected to drive higher sales and customer retention by incentivizing customers with discounts and special offers. This feature aims to increase conversion rates by encouraging customers to complete their purchases and reduce cart abandonment rates.
- **Enabling Admins to Manage Promotions:** A critical objective is to empower the admin team with tools for creating, managing, and tracking promo codes. The admin portal will allow setting promo code validity, usage limits, and specific terms, providing full control over promotions and the ability to analyze their effectiveness.
- **Improving Marketing Campaigns:** The promo code feature will also enhance marketing efforts by enabling targeted promotions. This will allow the marketing team to implement time-sensitive campaigns and special offers based on customer segmentation, driving personalized promotions.
- **Ensuring Scalability for Future Growth:** The system is designed to be scalable, allowing PP eCommerce to introduce more complex and varied promo code campaigns as business needs grow. The feature will be adaptable to accommodate future promotional strategies, ensuring long-term business growth.
- **Maintaining System Performance and Security:** Ensuring system reliability and security while integrating this feature is essential. The promo code feature will include robust validation mechanisms to prevent misuse and ensure data security, safeguarding both customer and business interests.

1.5. STAKEHOLDERS

1. **PP eCommerce Management Team:** The management team defines the strategic direction and goals for the introduction of the Promo Code feature. They approve budgets, allocate resources, and provide overall leadership to ensure that the feature aligns with business objectives and contributes to customer satisfaction and sales growth.
2. **Project Managers:** Project managers oversee the planning, execution, and monitoring of the Promo Code feature development. They define the scope, manage timelines and budgets, and coordinate efforts across teams to ensure that the feature is delivered on time and within budget.
3. **Development Team:** The development team includes software engineers, UI/UX designers, and backend developers responsible for building and implementing the Promo Code functionality in both the Admin and Customer portals. They transform business requirements into functional and secure features.

4. **Quality Assurance (QA) Team:** The QA team tests the Promo Code feature to ensure that it meets quality standards and customer expectations. They develop test cases, identify bugs, and collaborate with the development team to resolve issues before deployment.
5. **Business Analysts:** Business analysts gather and document requirements from various stakeholders. They ensure that the Promo Code feature addresses business needs and aligns with the overall eCommerce strategy and work closely with the development team to ensure clarity in execution.
6. **Customers:** Customers are the end users who will interact with the Promo Code feature during the checkout process. Their feedback is essential in refining the feature to enhance the user experience and drive engagement with the eCommerce platform.
7. **Customer Support Team:** The customer support team handles any inquiries or issues related to the use of Promo Codes. Their feedback helps identify common challenges customers may face and assists in improving the feature for future iterations.
8. **Marketing Team:** The marketing team is responsible for promoting the Promo Code feature through various campaigns and aligning it with broader marketing strategies. They will develop strategies to drive customer engagement through targeted promotions.
9. **Finance Team:** The finance team monitors the impact of Promo Code usage on revenue, profits, and customer acquisition costs. They also help define the financial limits, budget allocations, and performance measures for promotions.
10. **Compliance and Security Team:** This team ensures that the Promo Code feature complies with legal regulations and data protection standards. They ensure that the system is secure and protected from potential fraud or misuse.
11. **External Vendors/Partners:** External technology providers, if involved, may provide specific tools or platforms for managing and tracking promo codes. They offer the technical expertise required to integrate the Promo Code feature into the existing eCommerce platform.

1.6. Dependencies on Existing Systems

1. **Existing eCommerce Platform:** The Promo Code feature will be integrated into the current eCommerce application, requiring modifications to both the Admin and Customer portals. The existing infrastructure must support the new feature without disrupting other functionalities, such as payment gateways, cart systems, and user accounts. Coordination with the development team is essential to ensure a seamless integration.
2. **Inventory Management System:** The Promo Code feature may need to interact with the inventory system to validate whether specific products or categories are eligible for discounts. Any changes to product data or availability must sync with the Promo Code functionality to avoid applying discounts to ineligible products.
3. **Payment Gateway Integration:** The existing payment gateway must accommodate Promo Code discounts during checkout. This will require modifications to ensure that the final amount reflects the applied discount without affecting payment processing. The system needs to support accurate reporting of discounted transactions.
4. **Customer Relationship Management (CRM) System:** Integration with the existing CRM system is necessary to track customer interactions and promo code usage. The CRM must be updated to store and manage customer-specific promo data, including redemption history and eligibility for future promotions.
5. **Order Management System (OMS):** The Promo Code feature must integrate with

the OMS to ensure that orders with applied promo codes are processed correctly. This includes tracking discounted orders, adjusting totals, and reflecting the discount in order confirmation emails and invoices.

6. **Analytics and Reporting Systems:** The Promo Code feature will depend on existing analytics tools to track performance metrics, including promo code redemption rates, conversion rates, and customer behavior. Any new data fields generated by the Promo Code feature must be incorporated into existing reports.
7. **Security Systems:** The implementation of the Promo Code feature must comply with the existing security protocols to prevent misuse or fraudulent activities. The system should integrate with fraud detection tools and follow the same security measures already in place for transactions and customer data.

1.7 REFERENCES

1. **eCommerce Platform Documentation:** This document outlines the architecture, functionalities, and integration points of the existing eCommerce application. It includes technical details about the Admin and Customer portals, payment gateways, inventory systems, and other critical components that the Promo Code feature will interact with.
2. **Promo Code Guidelines and Policies:** This reference provides the standards and rules for creating and managing promo codes, including usage limitations, discount types, eligibility criteria, and expiration policies. It also includes best practices for promoting and tracking promo code campaigns.
3. **Industry Best Practices for Promotion and Discount Management:** These guidelines are widely recognized in the eCommerce industry for managing promotions effectively. They cover the design, implementation, and optimization of promo codes to enhance customer engagement and conversion rates.
4. **Security and Fraud Prevention Standards for eCommerce:** This reference outlines the essential security protocols to ensure that the Promo Code feature is protected from fraud and misuse. It includes measures for detecting abuse, securing customer data, and maintaining compliance with data protection regulations.
5. **Customer Relationship Management (CRM) Integration Guidelines:** This document provides instructions on how to integrate new features, like the Promo Code, into the existing CRM system. It ensures that customer interactions, usage history, and eligibility for future promotions are accurately tracked.
6. **Order Management System (OMS) Integration Manual:** This reference includes the technical specifications for integrating new features with the existing OMS to ensure accurate discount application, order processing, and reporting for transactions involving promo codes.
7. **Payment Gateway Integration Guide:** This guide outlines how to modify the current payment gateway setup to ensure proper handling of discounts applied via promo codes during the checkout process, ensuring that payments reflect the correct amount.

1.8 ASSUMPTIONS

1. **Access to Existing System Infrastructure:** The project team assumes that they will have full access to the existing eCommerce application infrastructure, including the Admin and Customer Portals, for the seamless development and integration of the Promo Code feature.

2. **User Roles and Permissions:** The current user roles and permissions are well-defined. Admins have sufficient privileges to manage new features, while customers have access to the checkout and order placement processes.
3. **Database Schema:** The existing database schema supports extensions. The system will need to integrate promo code data, such as code details, discount values, and usage limits, into the current database without significant restructuring.
4. **Promo Code Logic:** The promo code logic includes:
 - Validation (e.g., format, expiration, usage limits)
 - Application of discounts (e.g., percentage-based or fixed amount)
 - Integration with existing cart and checkout processes
 - Ability to handle multiple promo codes if required
5. **User Interface Design:** The current user interface of both the admin and customer portals can accommodate the new promo code feature. Design adjustments will be minimal and will focus on integrating the promo code functionality smoothly.
6. **Performance and Scalability:** The system should handle the additional load introduced by promo code functionality, including increased data processing and validation tasks. Performance benchmarks will need to be evaluated to ensure that promo code validation does not adversely affect the user experience.
7. **Security Considerations:** The addition of promo codes must adhere to the existing security standards of the eCommerce application, including secure handling and storage of promo code data to prevent unauthorized use or tampering.
8. **Regulatory Compliance:** The implementation of the promo code feature will comply with relevant regulatory requirements and industry standards, such as data protection laws, to ensure privacy and data security.
9. **Testing and Validation:** Comprehensive testing (including functional, integration, and user acceptance testing) will be performed to ensure the promo code feature works as intended and does not introduce any issues in the existing application.
10. **Training and Documentation:** Admins and support staff will be provided with updated training materials and documentation to manage and support the new promo code feature effectively.
11. **Customer Communication:** Customers will be informed about the new promo code feature through appropriate communication channels, such as email notifications, website banners, or in-app messages.
12. **Stakeholder Engagement and Collaboration:** It is assumed that all key stakeholders, such as product managers, marketing teams, and technical teams, will actively engage and collaborate throughout the development and implementation phases, providing timely feedback and approvals.
13. **Seamless Integration with Existing eCommerce Features:** The Promo Code feature is expected to integrate smoothly with existing systems, including order processing, payment gateways, inventory management, and customer accounts, without significant rework or architectural changes.
14. **Existing Payment Gateway Compatibility:** It is assumed that the current payment gateway system will be able to handle the application of discounts provided through the Promo Codes without requiring extensive modifications.
15. **No Major Changes in Customer Experience:** The addition of the Promo Code feature will not require any major changes to the existing user interface of the Customer or Admin Portals, except for adding the necessary fields and functionalities related to promo codes.
16. **User Awareness of Promo Code Functionality:** It is assumed that customers using the eCommerce platform will be familiar with the concept of Promo Codes and how

to apply them during checkout, requiring minimal training or user support.

17. **Support for Marketing and Reporting Requirements:** The existing reporting and analytics tools are assumed to support the tracking and analysis of promo code usage, redemption rates, and their impact on sales without significant adjustments.
18. **Compliance with Legal and Regulatory Standards:** The Promo Code feature will comply with any applicable legal, financial, or consumer protection regulations, particularly concerning discounts, pricing, and promotions in eCommerce settings.

2 REQUIREMENTS SCOPE

2.1. IN SCOPE (FEATURES)

1. **Promo Code Management in Admin Portal:** Develop functionality for admins to create, edit, and manage promo codes. This includes setting up discount values, defining code validity periods, and specifying usage limits. Admins should also be able to view usage statistics and track the performance of each promo code.
2. **Promo Code Application in Customer Portal:** Implement a feature in the customer portal that allows users to enter and apply promo codes during the checkout process. Ensure that the system validates the promo code, applies the appropriate discount to the order total, and provides feedback on successful or failed code applications.
3. **Integration with Order Processing:** Ensure that the promo code functionality integrates seamlessly with the existing order processing system. This includes recalculating order totals with applied discounts, updating invoice details, and reflecting promo code usage in order records.
4. **Validation and Error Handling:** Implement robust validation mechanisms to ensure that promo codes are correctly validated based on criteria such as expiration dates, usage limits, and applicable products. Provide clear error messages to customers if a promo code is invalid or cannot be applied.
5. **Reporting and Analytics:** Develop reporting capabilities for admins to track and analyze promo code performance. This includes generating reports on code usage, redemption rates, impact on sales, and other relevant metrics to support data-driven decision-making.
6. **User Interface Updates:** Update the customer portal interface to include fields for promo code entry during checkout and display relevant information about applied discounts. Ensure that the design is intuitive and consistent with the existing user experience.
7. **Marketing and Notifications:** Create features for marketing teams to communicate promo codes to customers, including email notifications and promotional banners on the website. Ensure that promo codes are easily accessible and visible to customers.
8. **Security and Compliance:** Implement security measures to protect promo code data and ensure compliance with relevant data protection regulations. Ensure that promo codes cannot be exploited or misused, and that all data related to promo code usage is securely handled.
9. **Performance and Scalability:** Design the promo code feature to handle high volumes of traffic and transactions without compromising system performance. Ensure that the feature can scale as needed to accommodate growing user interactions and promotional activities.
10. **Integration with Existing Systems:** Ensure that the promo code feature integrates smoothly with existing systems, including inventory management, payment

processing, and customer relationship management (CRM). This integration will ensure that all aspects of the order and discount process are accurately reflected across the system.

2.1.2. IN SCOPE (USE CASES)

1. **Create Promo Code:** Enable admins to create new promo codes through the admin portal. This includes defining the discount type (e.g., percentage or fixed amount), setting expiration dates, specifying usage limits (e.g., one-time or multiple uses), and determining applicable product categories.
2. **Manage Promo Code:** Allow admins to view, edit, and deactivate existing promo codes. This functionality includes updating promo code details, adjusting validity periods, and managing usage limits or restrictions as needed.
3. **Apply Promo Code:** Provide customers with the ability to enter and apply promo codes during the checkout process on the customer portal. The system should validate the promo code, apply the discount to the order total, and display the updated amount to the customer.
4. **Validate Promo Code:** Ensure the system validates promo codes based on predefined criteria such as validity period, usage limits, and applicable products. This use case involves checking the code's authenticity and providing appropriate error messages if the code is invalid or expired.
5. **Process Order:** Integrate the promo code functionality with the existing order processing system. This includes recalculating order totals with the applied discount, updating order records, and reflecting promo code usage in financial transactions.
6. **Generate Report:** Develop reporting features for admins to track and analyze the performance of promo codes. This includes generating reports on usage statistics, redemption rates, impact on sales, and identifying trends or patterns related to promo code effectiveness.
7. **Notify Customer:** Implement functionality to notify customers about promo codes through various channels such as email, SMS, or on-site banners. This ensures that customers are aware of available promotions and can take advantage of them.
8. **Analyze Performance:** Offer analytics tools for admins to review and assess the impact of promo codes on sales, customer engagement, and overall business performance. This includes visualizing data trends and making informed decisions based on promo code effectiveness.
9. **Integrate Promo Code:** Allow the promo code feature to be integrated with marketing campaigns, enabling targeted promotions and tracking the success of marketing initiatives. This use case involves linking promo codes to specific campaigns or customer segments.
10. **View History:** Provide customers with access to their promo code history, including codes used, discounts applied, and transaction details. This functionality enhances transparency and helps customers track their savings.
11. **Control Admin Access:** Implement access controls within the admin portal to ensure that only authorized personnel can create, manage, or view promo codes. This includes setting permissions and roles for different admin functions related to promo codes.
12. **Support Customer Issues:** Enable customer support teams to assist customers with issues related to promo codes, such as troubleshooting failed applications or resolving

questions about promo code eligibility. This includes providing support documentation and tools for handling promo code-related inquiries.

IN SCOPE (SCREEN)

1. Screen 1: Customer - Apply Promo Code

The screenshot shows a web browser window with the URL `https://pp.store/order-page`. The page is titled "Checkout" and features a lock icon in the top right corner. The main content is divided into four sections:

- 1 Select a delivery address ^**: This section contains three radio button options for delivery addresses. The second option is selected. Each option includes a link to "Edit Address" and "Add delivery instructions".
 - ☐ John Doe, 7 Street, Ring Road, Bengaluru, Karnataka, 530068, India [Edit Address](#) | [Add delivery instructions](#)
 - ☒ John Doe, House No:50, New RD colony, MG Road, Pune, Maharashtra, 411048, India [Edit Address](#) | [Add delivery instructions](#)
 - ☐ Alex Doe, 5 Street, Hill Road, Mumbai, Maharashtra, 400708, India [Edit Address](#) | [Add delivery instructions](#)
- 2 Add a promotion code**: This section includes a sub-header "Add a gift card or promotion Code". It features a text input field labeled "Enter Promo Code", an "Apply" button, and a "Change" link below the input field.
- 3 Payment Method v**: This section is currently collapsed.
- 4 Items and delivery v**: This section is currently collapsed.

On the right side of the page, there is a sidebar with the following elements:

- Use this address**: A yellow button.
- Choose a shipping address and payment method to calculate shipping, handling and tax.**: A text instruction.
- Order Summary**: A table showing the breakdown of the order:

Items:	₹ 350.00
Delivery:	₹ 40.00
Total	₹ 390.00
Promo Discount:	-₹ 50.00
Order Total:	₹ 340.00
- Place Order**: A yellow button at the bottom of the sidebar.

OUT OF SCOPE (FEATURES)

- Integration with Third-Party Platforms Beyond Current Project Requirements:** The project will not cover integration with third-party platforms or services that are not directly related to the promo code functionality or existing eCommerce systems. This excludes integrations with marketing automation tools, external analytics services, or any non-essential external systems.
- Customization of Software for Non-Ecommerce Operations:** Customizing the promo code feature for operations beyond the existing eCommerce application, such as brick-and-mortar store promotions or other business units unrelated to the

- eCommerce environment, is not included in the scope.
3. **Development of Mobile Applications:** The project does not include the development or enhancement of mobile applications for iOS or Android platforms. The focus is strictly on implementing the promo code feature within the existing web-based customer and admin portals.
 4. **Implementation of Additional Features Unrelated to Promo Code Functionality:** Features or functionalities not directly related to the core promo code functionality, such as advanced gamification elements, social media integrations, or unrelated marketing strategies, are excluded from this project.
 5. **Training and Support Beyond Basic User Onboarding:** The project scope includes only basic user onboarding and initial guidance on the promo code feature. Extensive training programs, detailed user manuals, or long-term support services beyond initial implementation and technical troubleshooting are not included.

FUNCTIONAL REQUIREMENTS

1. **User Authentication:** The system shall provide secure user authentication mechanisms for both the Admin Portal and Customer Portal to ensure that only authorized users can access and utilize the promo code features.
2. **Promo Code Creation:** Admins shall be able to create and configure promo codes, including defining the code, discount type (percentage or fixed amount), applicable products or categories, usage limits, and expiration dates.
3. **Promo Code Management:** Admins shall have the ability to view, modify, and delete existing promo codes. They shall also be able to activate or deactivate promo codes based on promotional needs.
4. **Promo Code Application:** Customers shall be able to apply promo codes during the checkout process. The system shall validate the promo code, apply the discount to the order total, and display the updated total to the customer.
5. **Promo Code Validation:** The system shall validate promo codes based on predefined rules, such as expiration dates, usage limits, and applicable products or categories. Invalid or expired promo codes shall be rejected with an appropriate error message.
6. **Order Adjustment:** If a promo code is applied successfully, the system shall automatically adjust the order total and update the final amount payable by the customer. The discount details shall be reflected in the order summary and invoice.
7. **Usage Tracking:** The system shall track and report the usage of each promo code, including the number of times it has been used, the total discount amount applied, and any remaining usage limits.
8. **Customer Notifications:** Customers shall receive notifications via email or in-app messages confirming the successful application of promo codes, including details of the discount applied to their order.
9. **Integration with Existing Systems:** The promo code feature shall integrate seamlessly with existing eCommerce systems, including inventory management and payment processing, to ensure that discounts are correctly applied and recorded.
10. **Reporting Functionality:** Admins shall have access to reporting functionalities that provide insights into promo code usage, effectiveness, and impact on sales and revenue.

3.1 ACTOR/USER PROFILE SPECIFICATION

1. Customer:

- **Log In:** Authenticate using their login credentials to access their account and personalized features.
- **Browse and Search Products:** Explore and search for products in the inventory.
- **View Product Details:** Access detailed product information, including descriptions, images, and pricing.
- **Add to Cart:** Add products to the shopping cart and specify quantities for purchase.
- **View Promo Code Details** – The customer can view the available promo codes and their validity.
- **Apply Promo Code:** Enter and apply promo codes during the checkout process to receive discounts.
- **Proceed to Checkout with Discount:** Complete the order by making payment and applying any applicable promo codes.
- **Track Orders:** Monitor the status and progress of orders, including delivery updates.
- **Manage Account:** Update personal details, view order history, and manage preferences.

2. Admin:

- **Log In:** Access the admin dashboard using secure credentials.
- **Create Promo Codes:** Design and configure promo codes, including setting discount values, usage limits, and expiration dates.
- **Manage Promo Codes:** View, edit, activate, or deactivate existing promo codes as needed.
- **Set Promo Code Rules:** Define the rules (e.g., valid products, minimum order value, customer eligibility).
- **Track Promo Code Usage:** Track and report on the usage of promo codes, including performance metrics and discount impacts.
- **Order Management:** Process and fulfil customer orders, including reviewing and modifying orders as necessary.
- **Manage Inventory:** Oversee inventory levels, add new products, update stock quantities, and remove discontinued items.
- **Generate Reports:** Produce reports on promo code performance, sales trends, and other relevant metrics.
- **Address Issues:** Resolve technical issues and address user feedback related to promo codes and order processing.

3. Service:

- **Track Promo Code Usage:** Track and report on the usage of promo codes, including performance metrics and discount impacts.
- **Validate Promo Code:** System/Service checks the validity of the promo code based on pre-defined rules.
- **Calculate Discount:** System/Service applies the discount to the order total once the promo code is verified.

4. Marketing Team:

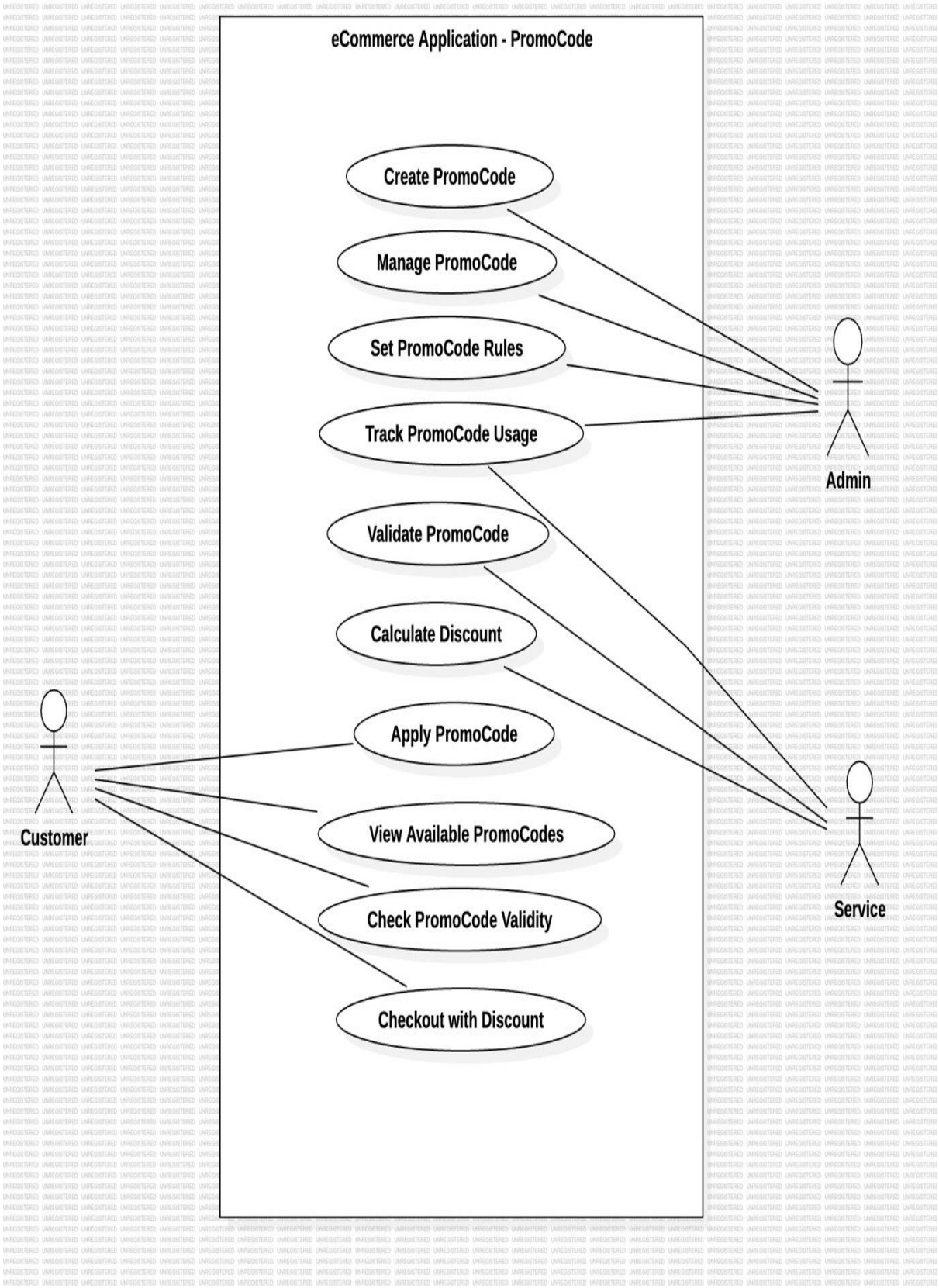
- **Analyze Promo Code Effectiveness:** Review the performance of promo codes in terms of sales and customer engagement.
- **Plan Promotions:** Develop strategies for future promotions and discounts based on data insights and market trends.
- **Collaborate with Admins:** Work with admin teams to ensure promo codes align with marketing campaigns and business objectives.
- **Monitor Trends:** Stay informed about industry trends and customer preferences to optimize promotional strategies.

5. Customer Support:

- **Assist with Promo Code Issues:** Help customers with issues related to promo code application, validation, and discount application.
- **Provide Guidance:** Offer support and instructions for using promo codes during the checkout process.
- **Resolve Complaints:** Address any complaints or concerns related to promo codes and their impact on customer orders.
- **Feedback Collection:** Gather customer feedback on promo code usage and relay it to the admin and marketing teams for improvements.

3.2 Use Case Diagram (High-level)

(only Promo Code related use cases are considered for UML)



3.2 Use Case Specification

1. Apply Promo Code

Use Case ID:	UC001		
Use Case Name:	Apply Promo Code		
Created By:	Shweta Mangrule	Last Updated By:	NA
Date Created:	13-09-2024	Date Last Updated:	16-09-2024

Actor:	Customer
Description:	Customers apply promo codes during the checkout process to receive discounts on their orders. This functionality allows customers to enter a promotional code provided by the eCommerce platform.
Preconditions:	The customer is logged in to the web portal The customer has added items to their shopping cart The Promo code is active and valid
Postconditions:	Promo code is applied to the order, and the discount is reflected in the final price. Customer receives confirmation of the applied discount.
Priority:	High
Frequency of Use:	Frequently used during checkout
Normal Course of Events:	<ol style="list-style-type: none"> 1. Customer navigates to the checkout page of the web portal. 2. System displays a field for entering a promo code. 3. Customer enters a promo code and submits it. 4. System validates the promo code against the database. 5. If the promo code is valid, the system applies the discount and updates the total order price. 6. System displays the updated price and a confirmation message to the customer. 7. If the promo code is invalid, the system displays an error message and prompts the customer to enter a valid code.
Alternative Courses:	NA
Exceptions:	<p>If the promo code has expired or has exceeded its usage limit, the system informs the customer and prompts them to use a different code.</p> <p>1) For expired promo code - It will display an error message ("Promo code has expired. Please try a valid code or check for available promotions.")</p> <p>2) For Exceeding usage limit – It will display an error message ("Promo code usage limit exceeded.")</p>
Includes:	NA

Special Requirements:	The system should validate promo codes efficiently and securely. The promo code field should be user-friendly and handle various input errors gracefully.
Assumptions:	Promo codes are pre-configured and managed in the system by the admin. Customers are aware of the promo code policies and validity.
Notes and Issues:	Ensure that promo code logic handles various discount structures (e.g., percentage, fixed amount) accurately.

2. Create Promo Code

Use Case ID:	UC002		
Use Case Name:	Create Promo Code		
Created By:	Shweta Mangrule	Last Updated By:	NA
Date Created:	13-09-2024	Date Last Updated:	16-09-2024

Actor:	Admin
Description:	Admins create and configure promo codes, including setting discount values, usage limits, and expiration dates. Admins are responsible for generating and configuring promotional codes that can be used by customers during checkout.
Preconditions:	Admin is logged in to the admin dashboard. Admin has necessary permissions to create and manage promo codes.
Postconditions:	A new promo code is created and made available for customers to use.
Priority:	High
Frequency of Use:	Occasionally, as needed for marketing campaigns
Normal Course of Events:	<ol style="list-style-type: none"> Admin navigates to the “Promo Code Management” section of the admin dashboard. System presents options to create a new promo code. Admin enters details for the promo code, including code name, discount type (percentage or fixed amount), discount value, usage limits, and expiration date. Admin saves the promo code. System validates the entered information and confirms the creation of the promo code. System updates the promo code database and makes it available for customer use.

Alternative Courses:	Admin can edit or delete the promo code before it becomes active.
Exceptions:	<p>If there are validation errors (e.g., invalid discount values or dates), the system displays an error message and prompts the admin to correct the information. Error messages (Discount Value -</p> <ol style="list-style-type: none"> 1. “Invalid discount value. Please enter a valid amount.” <p>Date -</p> <ol style="list-style-type: none"> 2. “Invalid start date. Please select a valid date.” 3. “Invalid end date. Please ensure the date is in the future.” 4. “End date cannot be before the start date.”)
Includes:	NA
Special Requirements:	<p>The system should provide a user-friendly interface for creating and managing promo codes.</p> <p>Ensure accurate validation of promo code details to prevent configuration errors.</p>
Assumptions:	<p>Admins are trained on how to use the promo code management features.</p> <p>Promo codes are created in alignment with marketing strategies and business rules.</p>
Notes and Issues:	Ensure proper testing of promo code configurations to avoid issues with discounts or expirations.

4) DATA REQUIREMENT (TO BE FILLED BY TECH BA'S)

1.1. Data Volumes

This section describes the expected approximate Data volumes (initial volume and annual growth %) for each conceptual Class or Entity.

1.2. Data Conversion

This section describes the high-level Data Conversion Requirements.

Specify any requirements/rules for data conversion. Also, if there are any regulatory requirements around data conversion, then mention them explicitly.

1.3. Data Retention and Archiving

This section describes the Data retention (time frames for online Data retention before archiving) and also the archiving requirements.

1.4. Privacy Implications

This section describes the sensitivity levels of each class of data. The following criteria are used in determining the sensitivity level of each conceptual class/entity).

- **Non-sensitive** information that would not reasonably be expected to cause injury (harm) if released to the public.
- **Protected A:** information that, if compromised, could reasonably be expected to

cause injury (harm), e.g. loss of privacy.

- **Protected B:** information that, if compromised, could reasonably be expected to cause serious injury (harm), e.g. the conduct of a court proceeding would be adversely affected.
- **Protected C:** information that, if compromised, could reasonably be expected to cause extremely grave injury (harm), e.g. loss of life.

Conceptual Class / Entity Name	<u>Data Sensitivity Level</u> (Non-sensitive, Protected A, Protected B, Protected C)

5. NON-FUNCTIONAL REQUIREMENTS

1. **Security Requirements:** The system shall adhere to industry-standard security protocols, including encryption of promo code data and user information both in transit and at rest. Secure authentication mechanisms shall be implemented to ensure only authorized users can create, manage, or redeem promo codes. Protection against common security threats such as SQL injection, cross-site scripting (XSS), and cross-site request forgery (CSRF) shall be enforced.
2. **Availability Requirements:** The system shall maintain a minimum uptime of 99.9%, ensuring continuous availability of promo code features and related functionalities for both admins and customers. Scheduled maintenance and upgrades shall be planned to minimize impact on system availability.
3. **Usability Requirements:** The user interface for both the Admin Portal and Customer Portal shall be intuitive and user-friendly, featuring clear navigation and consistent layout. The design shall be responsive to ensure accessibility and a seamless experience across various devices and screen sizes.
4. **System Help Requirements:** The system shall provide contextual help features, including tooltips, inline documentation, and user guides specific to promo code

management and redemption. Help resources shall be readily accessible to assist users in understanding and utilizing promo code functionalities effectively.

5. **Performance Requirements:** The system shall handle concurrent user interactions efficiently, ensuring minimal latency during promo code application, validation, and processing. Performance benchmarks shall be established to ensure responsiveness even under peak load conditions, such as high traffic during promotional events.
6. **Scalability Requirements:** The solution shall be scalable to accommodate an increasing number of users and promo code transactions without significant degradation in performance or functionality.
7. **User Scalability:** The system shall support a scalable number of user accounts, ensuring performance remains optimal as the number of customers and admins grows.
8. **Application Scalability:** The architecture shall be designed to scale horizontally and vertically, allowing for the addition of resources and infrastructure components to meet increasing demand for promo code features.
9. **Integration Requirements:** The system shall integrate seamlessly with existing eCommerce systems and third-party services (e.g., payment gateways, CRM systems), utilizing standard protocols and APIs to facilitate data exchange and interoperability.
10. **Data Volumes:** The system shall be capable of handling large volumes of data related to promo codes, including customer usage statistics, with efficient storage and retrieval mechanisms to ensure optimal performance.
11. **Data Retention and Archiving:** The system shall provide mechanisms for data retention and archiving of promo code data and usage statistics, allowing for long-term storage and retrieval for compliance, auditing, and analysis purposes.
12. **Privacy Implications:** The system shall comply with relevant data protection regulations, including GDPR, HIPAA, and CCPA, ensuring the confidentiality, integrity, and availability of personal and sensitive information related to promo code usage.
13. **Regulatory Compliance:** The system shall adhere to industry-specific regulations and compliance standards, including those related to financial transactions and data security, ensuring that promo code features meet all regulatory requirements.
14. **Interoperability Requirements:** The system shall be interoperable with other systems and platforms commonly used within the organization, allowing for seamless data exchange and collaboration across different departments and functions involved in the promo code management process.

6. Constraints and Dependencies

6.1. Technical Constraints:

1. **Technology Stack Adherence:** The project must conform to the predetermined technology stack, including specific programming languages, frameworks, and databases used by the existing eCommerce application, as defined by the organization's technical architecture guidelines.
2. **Integration with Existing Systems:** The solution must integrate seamlessly with existing legacy systems used for order management, customer data, and promotions. This integration imposes constraints on data formats, protocols, and APIs to ensure compatibility and smooth operation with the existing infrastructure.
3. **Scalability Constraints:** The architecture must support scalability to handle an increasing number of promo codes, users, and transactions. This requirement impacts the system design, database architecture, and infrastructure provisioning to ensure that performance remains optimal as demand grows.

4. **Compatibility with Existing Security Measures:** The promo code feature must comply with existing security measures and protocols implemented within the eCommerce application, including data encryption, access controls, and secure authentication mechanisms.

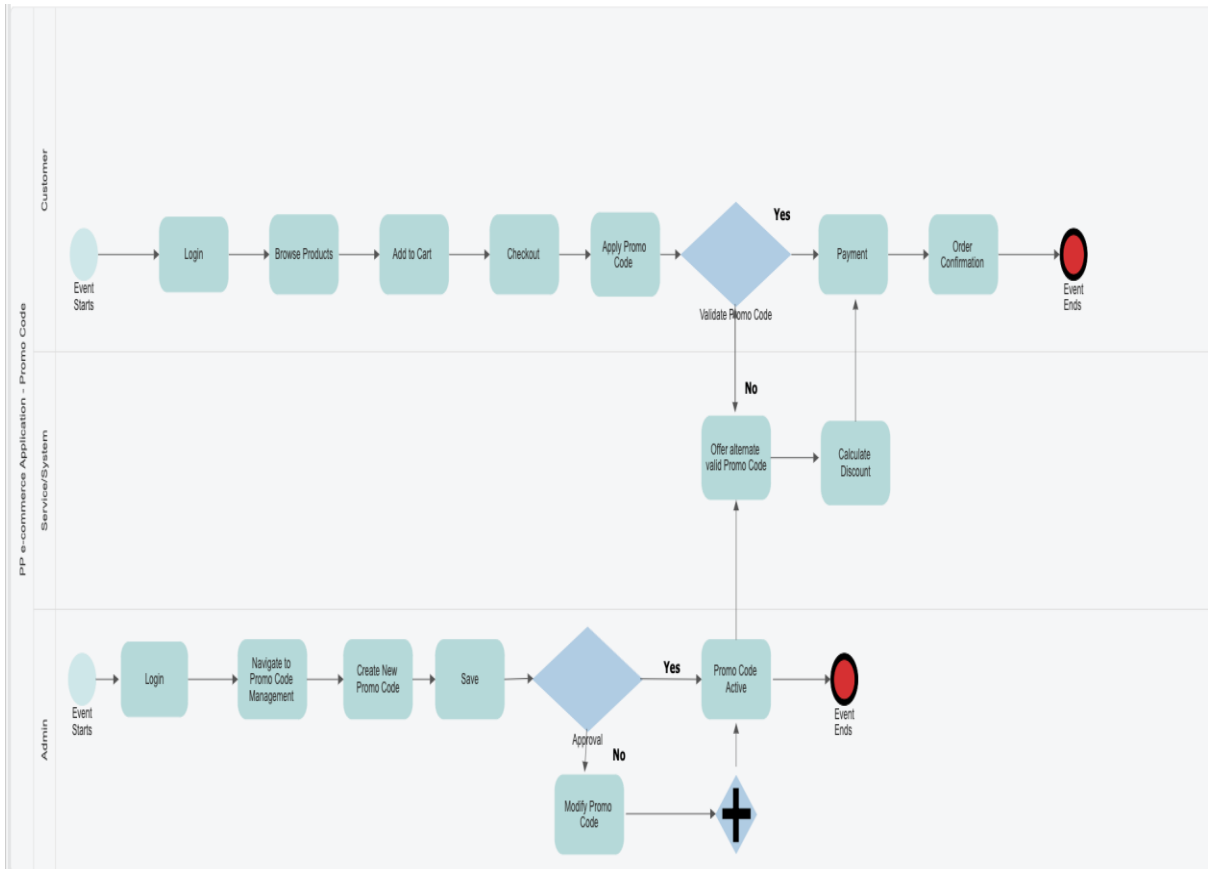
6.2. External Dependencies:

1. **Third-Party API Integration:** The project relies on the availability and functionality of third-party APIs for services such as payment processing and promotional analytics. Coordination with these external vendors is necessary to ensure compatibility and to adhere to their service level agreements (SLAs).
2. **Regulatory Compliance:** The implementation of the promo code feature must comply with relevant regulatory requirements, such as GDPR, HIPAA, and PCI-DSS, affecting data privacy, security, and financial transactions. Adherence to these regulations is essential to avoid legal and compliance issues.
3. **Vendor Support and Services:** The project depends on the availability and support of external vendors for hardware, software, and cloud services. Coordination with these vendors is required to resolve technical issues, implement updates, and ensure continuity of service, especially if their services impact the promo code functionality.
4. **User Training and Documentation:** The effective use of the promo code feature may depend on the availability of updated training materials and user documentation. Dependencies include ensuring that all relevant training and documentation are provided and kept current to support both admins and customers.

• MindMap:



• **Process Flow Diagram:**
(High-Level TO-BE Process Flow Diagram)



Approval

This document has been approved as the official Business Requirements Document for the Project PP eCommerce Application.

Following approval of this document, changes will be governed by the project’s change management process, including impact analysis, appropriate reviews and approvals, under the general control of the Master Project Plan and according to Project Support Office policy.

Prepared by	Signature	Date
Author's Name [Title] [Organization]		
Approved by	Signature	Date
[Client Acceptor’s Name] [Title] [Organization]		