Test Plan

for E-Commerce Website

Project Name: New E-Commerce Website

Test Plan Version: 1.0

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1. Introduction

The testing approach and strategy for the new e-commerce website are described in this test plan. The site allows users to search for products, place orders, manage shipping addresses, and use multiple payment methods. In addition, it generates receipts and offers an order summary and purchase confirmation. The objective is to guarantee that the website performs as expected, offering customers a reliable and easy shopping experience.

2. Features to be Tested

The following features will be tested:

- **Multiple Payment Methods:**
    - Credit/Debit Cards (Visa, MasterCard)
    - Digital Wallets (PayPal)
    - Bank Transfers

- **Shipping Options and Address Management:**
    - Standard and express shipping methods
    - International and domestic shipping
    - Ability to add, edit, and delete multiple shipping addresses

- **Order Summary and Review:**
    - Display products in the cart with the correct prices, quantities, and shipping costs
    - Review of final order before checkout (including taxes and discounts)

- **Order Confirmation and Receipt Generation:**
    - Display of order confirmation after successful payment
    - Generation of digital receipts with order details
    - Email confirmation with a PDF or HTML receipt

3. Test Objectives

The objectives of the test plan are to:

- Ensure all functionalities related to payments, shipping, and order management work as expected.

- Validate the accuracy of order details (prices, taxes, shipping fees, etc.).

- Verify that the website handles user input correctly, including invalid and edge cases.

- Confirm that error messages and validations are implemented correctly.

- Test compatibility across multiple browsers and devices.

4. Scope

In Scope:

- Functional testing of payment methods, shipping options, order summary, and order confirmation features.

- End-to-end testing of the purchase process from product selection to order confirmation.

- UI testing for forms (address management, payment selection, etc.).

- Cross-browser testing on Chrome, Firefox, Safari, and Edge.

- Mobile device testing for responsiveness.

- Performance testing for checkout speed, especially during peak load.

Out of Scope:

- Product catalog and search functionality.

- Backend systems such as inventory management, unless integrated with order processing.

- Marketing features (e.g., promotions and discounts) unless they impact checkout and payments.

5. Test Strategy

Test Levels:

- Unit Testing: Performed by developers on individual components (e.g., address forms, payment validation).

- Integration Testing: Ensures that components such as payment gateways and shipping services work together as expected.

- System Testing: End-to-end testing of the entire order placement and checkout process.

- Acceptance Testing: User acceptance testing (UAT) to validate that the system meets business requirements.

Types of Testing:

- Functional Testing: Verify that all features work according to specifications.

- Usability Testing: Ensure that the user interface is easy to navigate, particularly during checkout and payment processes.

- Security Testing: Validate secure transmission of sensitive data (e.g., payment information, user addresses).

- Performance Testing: Ensure that the system performs well under load, especially during high traffic or sales periods.

- Cross-Browser/Device Testing: Verify the site's compatibility on multiple browsers and mobile devices.

6. Test Environment

Hardware: Desktop PC

Browsers: Chrome Version 128.0.6613.120

Test Data:

- Various user profiles with different shipping addresses
- Test credit card numbers, PayPal sandbox accounts, and other mock payment methods
- Sample products with different pricing, taxes, and availability

7. Test Cases

Feature: Multiple Payment Methods

Test Case ID	Test Case Description	Expected Outcome
TC_PM_01	Verify user can select and pay using a credit card	Payment is processed and the order is confirmed
TC_PM_02	Verify user can select and pay using PayPal	PayPal payment is successful and the order is confirmed
TC_PM_03	Validate error message for expired card	"Card expired" error is shown; payment not processed
TC_PM_04	Validate payment failure due to insufficient funds	The proper error message is shown; the user can retry the payment

Feature: Order Summary and Review

Test Case ID	Test Case Description	Expected Outcome
TC_OS_01	Verify product details (name, price, quantity) in order summary	Correct product details are shown in the order summary
TC_OS_02	Validate tax and shipping fees are correctly calculated	Taxes and shipping costs are accurate based on location and method
TC_OS_03	Verify discounts and coupons are applied correctly	Discount is reflected in the total amount

Feature: Shipping Options and Address Management

Test Case ID	Test Case Description	Expected Outcome
TC_SH_01	Verify user can add a new shipping address	A new address is added and displayed in the address book
TC_SH_02	Validate deletion of an existing address	The selected address is deleted from the list
TC_SH_03	Verify correct shipping method is selected based on user choice	Correct shipping option (standard/express) is applied
TC_SH_04	Validate address fields with invalid data	Proper error messages are displayed for invalid address inputs

Feature: Order Confirmation and Receipt Generation

Test Case ID	Test Case Description	Expected Outcome
TC_OC_01	Verify order confirmation message after successful payment	Confirmation message is displayed with order number
TC_OC_02	Validate receipt is generated and downloadable	Receipt is generated and can be downloaded or emailed
TC_OC_03	Verify order confirmation email is sent to user	Email is sent with the correct order details and receipt

8. Entry and Exit Criteria

Entry Criteria:

All features are implemented and development is complete.

The test environment is set up and ready for testing.

Test data is available.

Necessary resources (QA team) are assigned and available.

Exit Criteria:

All critical test cases are executed with a pass rate of 95%.

All high-priority bugs are fixed and verified.

UAT is complete, and sign-off is received from stakeholders.

Performance and security testing is complete with acceptable results.

9. Risk and Mitigation

Risk	Mitigation Plan
Payment gateway downtime	Use mock payment methods for testing and monitor gateway status
Cross-browser incompatibility	Regular cross-browser testing on key milestones
Delays in test data availability	Collaborate early with the development team to gather test data
Performance issues during peak load	Conduct load testing and optimize before launch

10. Test Deliverables

- Test Plan (this document)
- Test Cases
- Test Execution Reports
- Bug/Defect Reports
- Final Test Summary Report

11. Approval

Thushani Marapana (QA Manager)

(Manager's Name)

(Stakeholder's name)