Test Plan - Ecommerce

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1. **Software to be tested :**

The Testing of the Project named “Ecommerce“ is an E-Commerce website to purchase Electronics, Furniture, Books and Fashion. The details of the software are presented in the table below.

|  |  |
| --- | --- |
| Software Name | Ecommerce |
| Database: | MySQL 5.x |
| Language Used: | PHP5.6, PHP7.x |
| User Interface Design | HTML, AJAX, JQUERY, JAVASCRIPT |
| Web Browser | Mozilla, Google Chrome, IE8, OPERA |
| Software | XAMPP / Wamp / Mamp/ Lamp |

1. **Functions to be tested**

**2.1 Customer Side:**

**Search functionality**: This is one of the most critical functions of the website, and it needs to be tested thoroughly to ensure that it returns relevant and accurate results for various queries.

**Product pages:** The product pages are where customers learn about the products and make purchasing decisions. These pages need to be tested to ensure that they display accurate and complete information, such as product images, descriptions, prices, and customer reviews.

**Shopping cart and checkout process:** These functions are critical to the purchasing process, and they need to be tested to ensure that customers can complete purchases smoothly and without errors. This includes testing the payment processing system, order confirmation, and shipping and delivery options.

**User account functionality:** The user account functionality includes registration, login, and account settings. These functions need to be tested to ensure that they are easy to use and secure.

**Social media integration:** Many customers use social media to share and discover products. Ecommerce has social media integration features, such as sharing and liking products. These functions need to be tested to ensure that they work correctly and securely.

**Usability:** The website needs to be tested for its usability and user experience. This includes testing the website's ease of use, accessibility, mobile responsiveness, and language support.

**Compatibility:** The website needs to be tested for its compatibility with various operating systems, browsers, and devices. This includes testing the website's compatibility with different screen sizes and resolutions.

**2.2 Admin Side:**

**Product management:** The admin panel should allow easy and efficient management of product information, including product descriptions, images, pricing, stock levels, and categories.

**Order management:** The admin panel should perform easy tracking and management of customer orders, including order status, shipping details, and payment information.

**User management:** The admin panel should allow for easy management of user accounts, including registration, login, and account settings. This includes testing the user registration and login functionality to ensure it is easy to use and secure.

**Payment and shipping management:** The admin panel should allow for easy management of payment and shipping options, including setting up payment gateways and shipping methods, and managing pricing.

**Discounts and promotions:** The admin panel should allow for easy management of discounts and promotions, including setting up coupons, discount codes, and other promotional offers.

**Reporting and analytics:** The admin panel should provide useful reporting and analytics tools to help ecommerce store to track sales, monitor traffic, and analyze customer behavior..

**Customization:** The admin panel should allow for easy customization of the ecommerce platform, including the ability to add custom fields, modify templates, and integrate with third-party tools.

1. **Testing strategy**

The overall strategy for software testing is described.

* 1. **Unit testing**

**Identifying the scope of the testing:** Determine the scope of the testing by analyzing the requirements, features, and functionalities of the website and prioritize the features based on their criticality, complexity, and frequency of use. The main priority from the Customer perspective would be to Search and choose the product and proceed with the payment options, tracking the order. From the Admin perspective, the admin should be able to generate the report of the amount of sales made for the day, make changes in the inventory and modify the product description as required. And all the individual components from the Customer and the Admin side will be tested individually to check the end to end flow.

**Set up the testing environment:** Create a testing environment that mimics the production environment. This includes setting up the necessary hardware, software, and network configurations. Also, making sure that the testing environment is isolated from the production environment to prevent any accidental changes.

**Define test cases:** Developing a set of test cases that cover all the critical and non-critical functionalities of the website. Each test case should be designed to test a specific feature or functionality, and include test inputs, expected outputs, and the test procedure. And the Testcases should be identified based on priority and focusing mainly on the critical functionalities

**Identify test data:** Identifying the necessary test data for each test case. Mainly the Test data will include the details of the Customer attempting to sing in to the website like Username and password, and all details like the Full name, email id, phone number for Registering to the website for the first time.

**Execute the test cases:** Executing the test cases in the testing environment. Monitor the test execution and record any defects or errors that are found during the test execution.

**Analyze test results:** Analyzing the test results and compare the actual results with the expected results. Record any discrepancies or defects that are found during the test execution.

**Repeat the testing process:** Repeating the testing process for all the critical and non-critical functionalities of the ecommerce website.

**Generate test reports:** Generating test reports that summarize the test results, including the number of test cases executed, the number of defects found, the severity of the defects, and the overall test coverage. Sharing the test reports with the development team and other stakeholders for review and feedback.

* 1. **System testing**

Types of system tests: The system testing for the ecommerce website will include the following types of tests:

**Functional testing:** This testing is performed ensure that all the functionalities of the website work as expected. It will include testing the product catalog, search functionality, shopping cart, checkout process, payment gateway, and order confirmation. This will be performed

**Performance testing:** This testing is done to make sure that the website can handle the expected traffic volume and that it responds in a reasonable amount of time. It will include load testing, stress testing, and endurance testing, which will be performed simultaneously while the functional test is being performed using JMeter

**Usability testing:** This testing is performed to ensure that the website is user-friendly and that customers can navigate it easily. It will include testing for accessibility, readability, and ease of use.

**Responsibility for tests:** The testing team will be responsible for conducting the system testing. Both the Testers will work closely with the development team to identify any defects or issues that need to be fixed and also perform the functional tests and the performance tests simultaneously with no delay in the testing cycle.

**Test case design:** The test cases will be designed using a combination of manual and automated testing methods. The test cases will be based on the requirements and specifications of the ecommerce website. The test cases will cover all the critical and non-critical functionalities of the website and will include both positive and negative test cases.

**Test data:** The test data will include both valid and invalid inputs. The valid inputs will include all possible scenarios that customers may encounter while using the website. The invalid inputs will include edge cases and unexpected scenarios.

**Test execution:** The test cases will be executed manually. The test results will be recorded and analyzed for any defects or issues.

**Defect management:** Defects or issues found during the testing process will be reported and managed using a defect tracking system. The defects will be assigned to the appropriate team member for resolution.

**Test reporting:** The testing team will generate test reports after the testing that summarize the test results, including the number of test cases executed, the number of defects found, the severity of the defects, and the overall test coverage .

**Test sign-off:** The testing team will provide a sign-off on the system testing once all the test cases have been executed, defects have been resolved, and the test reports have been reviewed and approved by the stakeholders.

1. **Test record keeping**

Mechanisms for storing and evaluating test results are specified.

1. **Testing tools and environment**

A description of the test environment, including tools, simulators, specialized hardware, test files, and other resources is presented here.

1. **Test schedule**

A detailed schedule for unit and system testing is described, with roles assigned.