# Test Plan for evaly.com.bd

## 1. Introduction:

The purpose of this test plan is to outline the approach, scope, objective and schedule of all testing activities for evaly.com.bd website. This document provides a structured framework for systematically assessing the functionality, usability, compatibility, performance and security aspects of the website. The evaly.com.bd website is an e-commerce platform for selling every kind of goods and products, and it's essential to make sure that it meets high-quality standards to provide a seamless user experience.

### 1.1. Webpage overview:

evaly.com.bd is an e-commerce platform which is capable of providing every kind of goods and products from every sector to every consumer located in Bangladesh. The webpage serves as a hub for users to explore products, compare specifications, place orders, and access customer support. It is crucial for the webpage to perform flawlessly across various browsers and devices while ensuring the security and confidentiality of user data.

### 1.2. Purpose

The primary purpose of this test plan is to ensure the quality and reliability of the evaly.com.bd webpage by thoroughly assessing its various components and functionalities. The testing process aims to verify that the webpage functions as intended, is user-friendly, performs well under different conditions, and adheres to security best practices.

## 2. Scope of Testing Approach:

### 2.1. Scope of Testing:

The testing approach for the evaly.com.bd webpage will enclose an extensive evaluation of its features, functionalities, and performance across various dimensions. The testing scope includes, but is not limited to:

1. **Functionality Testing:**
    - Verification of core functionalities such as navigation, search, product browsing, filtering, and sorting.
    - Testing of user account features including registration, login, and password recovery.
    - Assessment of shopping cart management, including adding/removing products and updating quantities.
    - Validation of the checkout process, including address selection, payment methods, and order confirmation.

2. **Usability Testing:**
    - Evaluation of the user interface (UI) design, ensuring intuitive layouts, proper alignment, and consistent styling.
    - Testing of responsiveness across different screen sizes and resolutions.

3. **Compatibility Testing:**
    - Validation of the webpage's rendering and functionality across popular browsers such as Chrome, Firefox, Safari, and Edge.
    - Testing on various devices, including desktops, laptops, tablets, and mobile phones, to ensure a consistent user experience.

4. **Performance Testing:**
    - Measurement of page load times, ensuring acceptable performance even under varying network conditions.
    - Evaluation of the webpage's responsiveness to user actions and interactions.
    - Stress testing to assess the system's stability and response times under heavy user loads.

5. **Security Testing:**
    - Identification and validation of potential security vulnerabilities, including SQL injection, cross-site scripting (XSS), and data exposure.
    - Verification of secure communication protocols (e.g. HTTPS) and encryption mechanisms for user data protection.
    - Testing of login and logout processes to ensure secure user authentication.

6. **Error Handling and Recovery Testing:**
    - Assessment of how the webpage handles errors, such as invalid inputs, unavailable products, and server errors.
    - Validation of error messages for clarity, accuracy, and helpfulness in guiding users to resolve issues.

7. **Navigation and Links Testing:**
    - Verification of internal and external links, ensuring they lead to the correct destinations and pages.
    - Testing of breadcrumb navigation and sitemap functionality.

8. **Accessibility Testing:**
    - Evaluation of the web page's adherence to accessibility standards (e.g., WCAG) for users with disabilities.

## 3. Testing Method:

➢ **GUI Testing ➢ Functional Testing**

i) Unit Testing.
ii) Integration Testing.
iii) System Testing.
iv) Smoke Testing**.**
v) Interface Testing**.**
vi) Regression Testing.

➢ **Non-functional Testing:**

i) Performance Testing
ii) Load Testing
iii) Stress Testing

➢ **API Testing:**

Set of procedures to verify the expected functionality, reliability, and security and ensure the correct interaction between the backend and frontend. To validate the logic of the build. Architecture within a short amount of time. Each API test consists of some test actions. mentioned below. Further details of API Testing will be covered in the API Test Plan

- Verify the URL according to the environment.
- Verify required request headers and their correct values.
- Verify response payload.
- Verify the correct HTTP status code and response headers.
- Verify the expected result and correct application state.
- Verify correct performance sanity.

➢ **Automation Testing:**

Automate all the implemented functionalities of the website.
Creation of the automation test cases. Details of Automation testing will be discussed and covered inside the Test Plan of automation testing.

- Write the test cases in a test rail for specific features.
- Analysis of test cases which are possible to be automated
- Plan the test cases and how to execute all the test cases.
- Write the test cases w.r.t environment.
- Write the logic for how to validate the test.
- Write the pass/fail criteria against each test case.

## 5. Testing Need Environment Setup

Like Browser Setup, and Devices with different models and versions.

## 6. Flow Diagram for Testing

Start Test Planning Test Design Test Environment Setup Test Execution Result Analysis Defect Reporting ---> (back to Test Design/Execution if defects found) Regression Testing Test Closure End.

## 7. Reporting:

i) A list of the test cases that were executed.

ii) A description of the testing environment.

iii) The names of the testers who participated in the testing.

iv) The date and time of the testing.

## 8. Fixing Bugs:

During the testing process, the testing team will diligently identify and document defects (bugs) encountered while evaluating the evaly.com.bd webpage. Defects will be reported through the defined defect reporting mechanism (e.g., issue tracking tool), including detailed information such as:

i) Defect description

ii) Steps to reproduce the defect Expected behavior

iii) Actual behavior

iv) Severity and priority levels

**Defect Classification and Prioritization**

The identified severity for each problem implies a general reward for resolving it, and a general risk for not addressing it, in the current release.

**Severity Level**

**Severity 1** - Crash or High impact problems that often prevent a user/host from correctly completing an experience/booking.

**Severity 2** - Moderate to high-frequency problems with the functionality / UI or UX impact

**Severity 3(functionality/UI or UX impact)** - Either moderate problems with low frequency or low problems with moderate frequency; these are minor annoyance problems faced by a number of participants.

**Severity 4 -** Low impact problems faced by few participants; there is a low risk of not resolving these problems.

**Priority Level**

1. **Critical:**-Definition: Defects that cause a complete failure of critical functionality or severely impact the overall functionality of the application.
2. **High:** Definition: Defects that significantly impact key functionalities or have the potential to affect a large portion of users.
3. **Medium:** Definition: Defects that impact non-critical functionalities or affect a small portion of users.
4. **Low:** Definition: Defects that have minor impacts or are considered cosmetic in nature.

## 9. Not fix Bugs

- The issues are not considered a priority, and the development team is focusing on other tasks or features instead.
- There may be a lack of resources or time to address the bugs at the moment.

- The team may have decided to leave certain bugs in place because
- They do not significantly impact the overall functionality of the software or because fixing them could introduce new issues.
- In any case, not fixing bugs can have various implications depending on the specific situation and the reasons behind this decision. It's generally considered important to address and fix bugs, especially if they affect the usability, security, or stability of a software application**.**

# 10. Test Resources

## 10.1 Human Resources

The following human resources will be involved in testing the evaly.com.bd webpage:

**Testing Team:**

QA Analysts: Responsible for designing and executing test cases, and reporting defects.

Test Automation Engineers: Develop and maintain automated test scripts for critical functionalities. Usability Testers: Conduct usability evaluations to ensure an intuitive user experience.

Performance Testers: Execute performance tests to assess page load times and responsiveness. Security Testers: Identify and report security vulnerabilities and data protection issues.

**Development Team:**

Developers: Responsible for addressing defects and issues identified during testing. Frontend and Backend Developers: Collaborate to fix UI and functional defects.

**Stakeholders:**

Product Owners: Provide requirements, clarify user stories, and validate acceptance criteria. Project Managers: Oversee testing progress, prioritize defect fixes, and ensure timely releases. Designers: Assist in evaluating UI/UX aspects and design alignment.

## 10.2 Testing Tools and Environments

The following tools and environments will be used for testing the evaly.com.bd webpage:

**Testing Tools:**

Test Management Tool: Jira for test case management and defect tracking tool

Automation Tools: Selenium WebDriver with Java for UI automation.

Performance Testing Tool: Apache JMeter for load and performance testing

Security Testing Tools: OWASP ZAP for security assessments.

## 10.3 Infrastructure

The required infrastructure for testing the evaly.com.bd webpage includes: Test Environments:
Dedicated testing environments with mirrored production infrastructure for accurate testing. Testing Workstations:

Workstations with the necessary software and tools for manual testing, test case design, and defect reporting.

### 10.4 Documentation and References

The following documentation and references will be used for testing:

Test Plan Document: Comprehensive test plan document outlining testing approach, scope, and methodologies.
Test Cases: Detailed test cases covering various scenarios including navigation, search, cart management, and checkout.
Defect Reports: Detailed defect reports with descriptions, steps to reproduce, and attached screenshots. User Stories/Requirements: Business requirements and user stories to guide testing efforts. Design Specifications: Design documents outlining UI/UX expectations and layouts.

## 11. Verification and Validation

### 11.1 Verification

Verification is the process of confirming that the implemented system matches the design specifications and meets the specified requirements. For the evaly.com.bd webpage, verification activities will include:

Requirements Review:

QA analysts will review the business requirements and user stories to ensure a clear understanding of the expected functionalities.

Design Review:

The testing team will review design specifications and mockups to validate that the user interface matches the intended design.

Test Case Design:

Test cases will be designed to verify each requirement and user story. These cases will serve as a blueprint for validation.

Code Review:

Developers' code will be reviewed by peers to ensure it aligns with design specifications and coding standards.

Unit Testing:

Developers will perform unit tests to verify individual components' correctness and functionality.

### 11.2 Validation

Validation involves assessing whether the evaly.com.bd webpage meets user expectations and functions as intended. Validation activities will include:

Functional Testing: - QA analysts will execute functional test cases to validate that features, such as search, product details, cart management, and checkout, work as specified.

Usability Testing: -Usability testers will evaluate the user interface for ease of use, intuitiveness, and alignment with user expectations.

Compatibility Testing: -Cross-browser and cross-device testing will be conducted to validate that the webpage functions correctly on different platforms.

Performance Testing: -Performance testers will measure page load times and responsiveness to ensure optimal user experience.

Security Testing: -Security testers will assess the webpage for vulnerabilities and validate that user data is adequately protected.

### 11.3 Acceptance Criteria

Validation will be based on acceptance criteria derived from user stories and requirements. These criteria outline the conditions that must be met for each feature to be considered acceptable. The testing team will ensure that these criteria are fulfilled through rigorous testing and verification.

## 12. User Acceptance Testing (UAT)

Upon successful completion of validation testing, user acceptance testing (UAT) will be conducted. In this phase, stakeholders and actual end-users will perform tests to validate that the evaly.com.bd webpage meets their expectations and serves their needs.

## 13 Tools and Defect Tracking

Jira will be used for defect reporting and issue bugs/defects management and traceability.

## 14. Conclusion

The testing efforts for the evaly.com.bd webpage have been comprehensive and systematic, aiming to ensure the quality, reliability, and usability of the platform. Through diligent testing across various dimensions, valuable insights have been gained regarding the webpage's performance, functionality, security, and user experience.

### 14.1 Achievements and Milestones

Throughout the testing lifecycle, several key achievements and milestones were reached:

Successful completion of all testing phases, including functionality, usability, compatibility, performance, and security testing. Identification and resolution of various defects across different severity levels, enhancing the overall stability and user experience. Validation of critical user scenarios, ensuring the smooth flow of key processes such as product selection, cart management, and checkout. A thorough assessment of security mechanisms leads to the identification and mitigation of potential vulnerabilities. Collaboration and engagement with stakeholders, including developers, designers, and product owners, to ensure alignment with project goals.

## 14.2 Readiness for Deployment

Based on the comprehensive testing efforts, the evaly.com.bd webpage is deemed ready for deployment with the following considerations:

Functionality: The core functionalities of the webpage have been thoroughly tested and validated, demonstrating their reliability and accuracy.

Usability: Usability testing has confirmed that the user interface is intuitive and user-friendly, providing a positive browsing and shopping experience.

Compatibility: Cross-browser and cross-device testing has ensured that the webpage performs consistently across various platforms and devices.

Performance: Performance tests have indicated acceptable page load times and responsiveness, even under varying user loads.

Security: Security assessments have led to the identification and mitigation of potential security vulnerabilities, enhancing user data protection.

## 14.3 Recommendations

While the evaly.com.bd webpage is deemed ready for deployment, a few recommendations are provided for further enhancements and continuous improvement:

Continuously monitor and optimize performance metrics to maintain optimal user experience during peak usage. Regularly conduct security assessments to address emerging threats and maintain a robust security posture. Consider gathering user feedback post-deployment to further refine the user experience based on real-world usage.

## 14.4 Acknowledgments

The successful completion of the testing process would not have been possible without the collaborative efforts of the testing team, development team, stakeholders, and all involved parties. The dedication, expertise, and

commitment demonstrated by each team member have contributed to the enhanced quality of the evaly.com.bd webpage.

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