# Test Plan (OpenCart)

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## Objective

The objective of this test plan is to ensure the proper functionality, usability, and reliability of the OpenCart application, including the account management features and overall user experience.

## Scope

The scope of this test plan includes the following features and functionalities of the OpenCart application:

1. Account Management

- Registration

- Login

- Forgot password

- Update profile information

- Change password

2. Product Catalog

- Browse products

- Search for products

- View product details

3. Shopping Cart

- Add/remove items to/from cart

- Update quantities

- View cart summary

4. Checkout Process

- Select shipping method

- Enter payment information

- Review and place order

5. Order History

- View past orders

- Track order status

The testing will include both manual and automated testing, covering functional, usability, performance, and compatibility aspects of the application.

### Inclusions

1. Account Management

- Registration

- Login

- Forgot password

- Update profile information

- Change password

2. Product Catalog

- Browse products

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3. Shopping Cart

- Add/remove items to/from cart

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- Enter payment information

- Review and place order

5. Order History

- View past orders

- Track order status

### Test Environments

The OpenCart application will be tested across the following environments:

- \*\*Operating Systems\*\*: Windows 10, macOS, and various versions of Android and iOS

- \*\*Browsers\*\*: Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari

- \*\*Device Types\*\*: Desktop, laptop, tablet, and mobile phone

The test environments will have stable internet connectivity and the necessary hardware/software configurations to run the application smoothly.

### Defect Reporting Procedure

1. The criteria for identifying a defect, such as deviation from the requirements, user experience issues, or technical errors.

2. The steps for reporting a defect, such as using a designated template, providing detailed reproduction steps, and attaching screenshots or logs.

3. The process for triaging and prioritizing defects, such as assigning severity and priority levels, and assigning them to the appropriate team members for investigation and resolution.

4. The tools and systems that will be used for tracking and managing defects, such as a defect tracking software or a project management tool.

5. The roles and responsibilities of the team members involved in the defect reporting process, such as testers, developers, and the test lead.

6. The communication channels and frequencies for updating stakeholders on the progress and status of defects.

7. The metrics and metrics that will be used to measure the effectiveness of the defect reporting process, such as the number of defects found, the time taken to resolve them, and the percentage of defects that were successfully fixed.

### Test Strategy

1. Create test scenarios and test cases for the various features within the scope.

2. Use a variety of test design techniques, such as Equivalence Class Partition, Boundary Value Analysis, Decision Table Testing, State Transition Testing, and Use Case Testing.

3. Apply additional techniques, such as Error Guessing and Exploratory Testing, to enhance the test coverage.

4. Prioritize the test cases based on their importance and risk.

5. Perform smoke testing to ensure the basic functionality is working as expected.

6. Conduct in-depth testing using the created test cases, once the build passes the smoke testing.

7. Utilize multiple test resources to execute the test cases simultaneously across the supported environments.

8. Report the identified defects in the bug tracking tool and provide daily status updates.

9. Repeat the test cycles until the desired quality level is achieved.

10. Incorporate best practices, such as Context Driven Testing, Shift Left Testing, Exploratory Testing, and End-to-End Flow Testing, to improve the testing process.

### Test Schedule

| Task | Duration |

| --- | --- |

| Test Plan Development | 2 days |

| Test Case Design | 5 days |

| Test Execution | 10 days |

| Defect Reporting and Resolution | Ongoing |

| Test Closure and Reporting | 3 days |

### Test Deliverables

1. Test Plan

2. Test Cases

3. Test Execution Reports

4. Defect Reports

5. Test Summary Report

### Entry and Exit Criteria

#### Entry Criteria:

- The application build is available for testing.

- The test environment is set up and ready.

- The test team has access to the necessary tools and resources.

- The test cases have been reviewed and approved.

#### Exit Criteria:

- All planned test cases have been executed.

- The defect backlog is at an acceptable level, and critical issues have been resolved.

- The test team has obtained approval from the stakeholders to proceed with the release.

### Test Execution

#### Entry Criteria:

- The application build is available for testing.

- The test environment is set up and ready.

- The test team has access to the necessary tools and resources.

- The test cases have been reviewed and approved.

#### Exit Criteria:

- All planned test cases have been executed.

- The defect backlog is at an acceptable level, and critical issues have been resolved.

- The test team has obtained approval from the stakeholders to proceed with the release.

### Test Closure

#### Entry Criteria:

- All planned test cases have been executed.

- The defect backlog is at an acceptable level, and critical issues have been resolved.

- The test team has obtained approval from the stakeholders to proceed with the release.

#### Exit Criteria:

- The final test summary report has been prepared.

- The lessons learned session has been conducted.

- The stakeholders have provided the final sign-off.

### Tools

The following tools will be used during the testing process:

- Test Management Tool: Jira

- Defect Tracking Tool: Jira

- Automation Tool: Selenium

- Performance Testing Tool: JMeter

- Compatibility Testing Tool: BrowserStack

### Risks and Mitigations

| Risk | Mitigation |

| --- | --- |

| Unavailability of test environment | Ensure backup environments are available |

| Defects identified late in the testing process | Implement shift-left testing approach |

| Lack of test data | Create comprehensive test data management plan |

| Resource constraints | Allocate additional resources based on the testing needs |

### Approvals

The following test artifacts will be submitted for client approval:

1. Test Plan

2. Test Cases

3. Test Execution Reports

4. Test Summary Report

The testing will only proceed to the next phase upon receiving the client's approval for the submitted artifacts.