**Test Strategy Document**

**Project Name:** nopCommerce Automation  
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**Table of Contents**

1. Introduction
2. Objectives
3. Scope
4. Test Approach
5. Test Environment
6. Sprint Plan
7. Defect Management
8. Risks & Mitigation
9. Entry & Exit Criteria
10. Test Metrics
11. Communication Plan
12. Timeline
13. Review & Approval

**1. Introduction**

The purpose of this document is to outline the testing strategy for the nopCommerce Ecommerce Portal Automation project. The main goal is to ensure that all key features of the admin portal work as expected after updates and to improve testing efficiency through automation using Selenium and TestNG.

**2. Objectives**

* Ensure all key functionalities of the Portal are tested.
* Automate test cases to reduce manual testing effort.
* Improve test coverage and accuracy.
* Detect defects early to minimize production issues.
* Use Jira for task management and test progress tracking.

**3. Scope**

* **In Scope**
* User Registration & Account Creation
* User Login & Logout (Valid, Invalid, Empty Fields)
* My Account Dashboard Access & Verification
* Submodule Navigation (NopCommerce Modules & Electronics)
* Product Browsing & Selection (Cell Phones Section)
* Shopping Cart (Description, Quantity, Add to Cart, Shipping Address)
* Checkout Process (Billing Details, Shipping Method, Order Summary)
* Payment & Order Confirmation (Payment Gateway, Success Message, Order History)
* **Out of Scope:**
  + Front-end Website Testing
  + Mobile Application Testing
  + Third-Party Integrations

**4. Test Approach**

* **Process:**

1. We will follow the Agile model for iterative development and testing.
2. Start with manual test case creation, then automate critical test scenarios.
3. Defects will be tracked and managed in Jira.
4. Regression suite will be automated for future releases.

* **Test Levels:**
  1. **Unit Testing** – Done by developers before release.
  2. **Integration Testing** – Ensures smooth interaction between modules.
  3. **System Testing** – Verifies full end-to-end workflows.
  4. **Regression Testing** – Ensures updates don’t break existing features.
* **Test Types:** Functional, Regression, Cross-Browser, and UI Testing.
* **Tools Used:**
  1. **Automation:** Selenium WebDriver, TestNG
  2. **Task & Defect Tracking:** JIRA
  3. **Reporting:** TestNG Reports, JIRA Reports

**5. Test Environment**

* **Browsers:** Chrome, Edge, Firefox
* **Test URL:** https://admin-demo.nopcommerce.com/login
* **OS:** Windows 10/11
* **Test Data:** Sample data for products, customers, and orders will be prepared for execution.

**6. Sprint Plan**

|  |  |  |
| --- | --- | --- |
| **Sprint No.** | **Duration** | **Feature/Modules Covered** |
| **Sprint 1** | 1 Day | User Registration |
| **Sprint 2** | 1 Day | User Login (Positive, Negative, Error Handling) |
| **Sprint 3** | 1 Day | NopCommerce Submodules & Electronics |
| **Sprint 4** | 1 Day | Cell Phones Section |
| **Sprint 5** | 1 Day | Add to Cart Functional, Data Validation, End-to-End Flow |
| **Sprint 6** | 1 Day | Address selection, shipping method, order summary |
| **Sprint 7** | 1 Day | Payment gateway, order success message, order history |

**7. Defect Management**

* Defects will be created in JIRA with proper details like title, description, steps to reproduce, severity, priority, and screenshots if needed.
* Lifecycle of defects: **Open → In Progress → Resolved → Retest → Closed**

**8. Risks & Mitigation**

|  |  |  |
| --- | --- | --- |
| **Risk** | **Impact** | **Mitigation** |
| Requirement changes mid-sprint | Delays in testing | Track changes in Jira and re-prioritize test cases |
| Test data unavailability | Test case failure | Prepare test data in advance |
| Environment downtime | Blocked testing | Inform dev team immediately and re-schedule tests |

**9. Entry & Exit Criteria**

**Entry Criteria:**

* Requirements finalized
* Test environment ready
* Test data prepared

**Exit Criteria:**

* All planned test cases executed
* No critical defects open
* Test summary report shared

**10. Test Metrics**

* Number of test cases planned vs executed
* Number of defects raised vs closed
* Automation coverage percentage
* Defect density and severity

**11. Communication Plan**

* Daily status updates in Jira or project group
* Weekly progress meetings with QA & Dev team
* Final test summary report shared after execution

**12. Timeline**

Testing activities will align with sprint cycles:

* Sprint Planning → Test Case Creation → Execution → Defect Closure → Automation Updates

**13. Review & Approval**

The Test Strategy document will be reviewed by the QA Lead and approved by the Project Manager before testing starts.