**Business Requirement Document**

**Project Name:** nopCommerce Automation  
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**Version:** 2.0

**1. Introduction**

The purpose of this project is to automate the testing of the nopCommerce web ecommerce application using Selenium and TestNG. This will ensure core functionalities like login, dashboard navigation, and customer management are thoroughly tested with improved accuracy and reduced manual effort.

**2. Business Objectives**

* Validate the functionality of the nopCommerce portal after updates.
* Reduce manual testing effort and human errors through automation.
* Increase testing speed, accuracy, and reusability with automation scripts.
* Ensure quick feedback to the development team by integrating automated tests into the build process.
* Support scalability by making it easy to add new test cases as the application grows.

**3. Scope**

**In Scope:**

* Automate and validate Login functionality for the portal.
* Verify dashboard elements and navigation after successful login.
* Automate navigation and basic operations in key modules like Customers, Orders, and Products.
* Create automated test scripts using Selenium + TestNG for functional validation.
* Generate test execution reports for completed tests.

**Out of Scope:**

* Performance, load, or stress testing of the application.
* Security, penetration, or vulnerability testing.
* Mobile or cross-browser testing beyond Chrome.
* Testing of features outside the admin demo portal.

**4. Stakeholders**

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| **Role** | **Name/Team** | **Responsibility** |
| Product Owner | Project Trainer / Client | Defining requirements & prioritization |
| Development Team | Demo Website Dev Team | Maintaining and updating nopCommerce portal |
| QA Team | Selenium TestNG Team | Writing & executing automated test cases |
| Project Manager | Training Coordinator | Planning, timelines, and coordination |
| UX Designer | Design Team (Demo) | UI/UX improvements (if applicable) |

**5. Business Requirements**

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| **Requirement ID** | **Requirement Description** | **Priority** |
| **BR-01** | The system must allow new users to register by providing valid details. | High |
| **BR-02** | The system must prevent login with empty fields or invalid credentials. | High |
| **BR-03** | The system must allow registered users to log in securely. | High |
| **BR-04** | The system must display all the main submodules of the NopCommerce portal. | Medium |
| **BR-05** | The system must allow users to access and view Electronics submodules. | Medium |
| **BR-06** | The system must allow users to navigate to the Cell Phones section and view available products. | High |
| **BR-07** | The system must allow users to view product descriptions, set quantity, enter shipping address, and add products to the cart. | High |
| **BR-08** | The system should allow users to view and validate items in the shopping cart. | High |
| **BR-09** | The system should allow users to proceed through the checkout process including billing address validation. | High |

**6. Functional Requirements**

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| **FR ID** | **Functional Requirement Description** | **Priority** |
| **FR-1.1** | Provide a registration form with required fields for user details. | High |
| **FR-1.2** | Validate registration details and create a new user account. | High |
| **FR-2.1** | Display an error message when login is attempted with empty fields. | High |
| **FR-2.2** | Display an error message when login is attempted with invalid credentials. | High |
| **FR-2.3** | Provide login functionality using valid username and password. | High |
| **FR-2.4** | Redirect user to “My Account” page upon successful login. | High |
| **FR-3.1** | Display all NopCommerce submodules in the navigation menu. | Medium |
| **FR-4.1** | Display Electronics category and allow users to click to expand. | Medium |
| **FR-4.2** | Show all available Electronics submodules under the category. | Medium |
| **FR-5.1** | Allow users to navigate to the Cell Phones page and display product list. | High |
| **FR-5.2** | Ensure correct page title and URL are displayed when navigating to Cell Phones. | High |
| **FR-5.3** | Allow users to select a required cell phone from the list. | High |
| **FR-6.1** | Display product description and details for the selected cell phone. | High |
| **FR-6.2** | Display the price of the selected phone. | High |
| **FR-6.3** | Allow users to set shipping address before adding to cart. | High |
| **FR-6.4** | Allow users to set quantity and successfully add product to the cart. | High |
| **FR-7.1** | Display shopping cart when hovered/clicked. | High |
| **FR-7.2** | Show all items added and Allow user to validate items before checkout. | High |
| **FR-8.1** | Display checkout page with order summary. | High |
| **FR-8.2** | Validate billing address details entered by user. | High |
| **FR-8.3** | Confirm order and generate order record. | High |

**7. Non-Functional Requirements**

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| **NFR ID** | **Non-Functional Requirement Description** | **Priority** |
| **NFR-01** | The system should load the login page within 3 seconds | High |
| **NFR-02** | User data must be encrypted both in transit (HTTPS) and at rest. | Medium |
| **NFR-03** | The application should handle at least 50 concurrent user logins | Low |
| **NFR-04** | The application should be available 99.9% of the time, excluding scheduled maintenance. | Medium |
| **NFR-05** | The application should be scalable to handle future feature enhancements. | High |

**8. Integrations**

* Payment: Stripe, Razor pay, PayPal
* Shipping: UPS, FedEx, DHL APIs
* Email: SendGrid or SMTP setup
* Analytics: Google Analytics, Facebook Pixel
* Social login (Google, Facebook, Apple)

**9. Assumptions**

* The demo site will remain available throughout the project duration.
* Login credentials will not change during testing.
* Test data used for adding customers or orders will be provided or created as needed.
* Browser and system compatibility will be limited to Windows OS with Chrome browser.

**10. Constraints**

* Only functional testing using Selenium + TestNG; no performance or security testing included.
* Testing limited to Chrome browser; no cross-browser or mobile testing in scope.
* Test execution depends on internet connectivity since the site is online.

**11. Deliverables**

* Business Requirement Document (BRD)
* Test Plan and Test Scenarios
* Selenium + TestNG Automation Scripts
* Test Execution Reports (HTML or PDF format)
* Final Project Summary Document

**12. Timeline**

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| **Phase** | **Duration** |
| BRD Preparation | 1 day |
| Test Plan & Scenario Design | 2 day |
| Test Script Development | 4–5 days |
| Test Execution | 2 day |
| Test Reporting | 1 day |

**13. Reporting & Analytics**

* Sales reports by day/week/month
* Customer registration report
* Product stock and inventory alerts
* Abandoned cart report (if plugin available)