

Software Requirements Specification (SRS)

Project: NopCommerce Full STLC (manual + automation)

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Modules: Homepage, Register Page, Login Page, Wishlist Page, Cart Page

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1. Introduction

1.1 Purpose

The purpose of this SRS document is to define the functional and non-functional requirements for selected modules of the nopCommerce application. It supports Manual + Automation Testing for Home Page, Login Page, Register Page, Wishlist, and Cart Page.

1.2 Scope

The scope includes understanding features, expected behavior, validations, and business rules for selected modules. This SRS will be used to create test scenarios, test cases, and automation scripts.

1.3 Intended Audience

This document is intended for QA Testers, Automation Engineers, Developers, and Reviewers.

2. Overall Description

2.1 Product Overview

nopCommerce is an open-source e-commerce platform allowing users to browse products, register, log in, manage wishlist, and cart items. And it is also very useful for automation testing path. It provides the best environment and modules like homepage, register, login, wishlist, cart page. By which testers can practice in very flexible manner.

2.2 User Classes

- **Guest User:** Can browse products but cannot use wishlist and cart.
- **Registered User:** Can login, use wishlist, and access cart functionalities.

2.3 Assumptions

- Application is accessible.
- Test data will be created by QA.
- Testing is done mainly on Chrome browser.

3. Functional Requirements

3.1 Home Page

FR ID	Description	Priority	Preconditions
FR-HM-01	System must display top navigation menu (Computers, Electronics, Apparel, Digital Downloads, Books, Jewelry, Gift Cards).	High	AUT is loaded
FR-HM-02	System must allow clicking on each category and navigate to respective product listing page.	High	Category must exist
FR-HM-03	Search bar must accept text input.	High	Homepage loaded
FR-HM-04	On clicking “SEARCH”, system must display relevant search results.	High	Valid keyword entered
FR-HM-05	Homepage must display promotional banner/slider.	Medium	Banner configured
FR-HM-06	Banner arrows/dots must allow user to switch slides.	Medium	Multiple slides present
FR-HM-07	Currency dropdown must update product price display across website.	Medium	Currency list available
FR-HM-08	Wishlist count & Cart count must be displayed on header.	High	User logged in/guest
FR-HM-09	Register/Login links must navigate to respective pages.	High	AUT running

3.2 Login Page

FR ID	Description	Priority	Preconditions
FR-LG-01	System must display two sections: New Customer & Returning Customer.	Medium	Login page loaded
FR-LG-02	Email field must accept only valid email format.	High	User enters data
FR-LG-03	Password field must mask entered characters.	High	User typing
FR-LG-04	Clicking “LOG IN” must authenticate user with valid credentials.	High	Valid account exists
FR-LG-05	For invalid login, system must show proper validation message.	High	Incorrect credentials
FR-LG-06	“Remember me” checkbox must allow persistent login.	Medium	User selects checkbox
FR-LG-07	“Forgot Password?” link must redirect to password recovery page.	Medium	AUT available
FR-LG-08	New Customer → “Register” button must navigate to register page.	High	AUT running

3.3 Register Page

FR ID	Description	Priority	Preconditions
FR-RG-01	System must display mandatory fields (First Name, Last Name, Email, Password, Confirm Password).	High	Register page loaded
FR-RG-02	Gender selection must allow choosing	Medium	Aut loaded

	only one option (Male/Female).		
FR-RG-03	Email field must validate valid email format.	High	User enters data
FR-RG-04	Password & Confirm Password must match.	High	Valid input
FR-RG-05	System must show error when mandatory fields are blank.	High	User clicks Register
FR-RG-06	Email must be unique; duplicate email must show validation message.	High	Email exists
FR-RG-07	Clicking “REGISTER” must create new account if all data valid.	Critical	All inputs valid
FR-RG-08	After successful registration, system must redirect user to success/confirmation page.	High	Account created

3.4 Wishlist Page

FR ID	Description	Priority	Preconditions
FR-WL-01	Wishlist page must be accessible only for logged-in users.	High	User logged in
FR-WL-02	For guest users, clicking Wishlist must redirect to Login page.	High	Guest user
FR-WL-03	System must display wishlist items when added.	High	Item added
FR-WL-04	Wishlist count must update when product is added/removed.	High	User has actions

FR-WL-05	User must be able to remove items from wishlist.	Medium	Items exist
FR-WL-06	Empty wishlist must display message: “The wishlist is empty!”	Medium	No items present
FR-WL-07	Wishlist page must display item image, name, price, and “Add to cart” button.	Medium	Product exists

3.5 Cart Page

FR ID	Functional Requirement Description	Priority	Preconditions
FR-CT-01	User must be able to view all added cart items.	High	Items added
FR-CT-02	Quantity field must allow updating item quantity.	High	Item present
FR-CT-03	Quantity must accept only numeric values (1–99).	High	User inputs qty
FR-CT-04	Invalid quantity (0, negative, characters) must show validation error.	High	Invalid input
FR-CT-05	“Update Cart” must recalculate subtotal accurately.	Critical	Qty updated
FR-CT-06	User must be able to remove any item using “Remove” button.	High	Item present
FR-CT-07	Cart total must calculate sum of all subtotals.	Critical	Multiple items
FR-CT-08	Empty cart must show message: “Your Shopping Cart is empty!”	Medium	No items

FR-CT-09	Header cart count must update correctly after add/remove.	High	Add/Remove
FR-CT-10	User must be able to navigate to product page by clicking item name/image.	Medium	Items visible
FR-CT-11	Price must support decimal values.	Medium	Decimal price
FR-CT-12	Guest user cart must persist until session/browser is closed.	Medium	Guest user

4. Non-Functional Requirements

NFR ID	Category	Requirement Description	Priority	Acceptance Criteria
NFR-01	Performance	All pages must load within 2–4 seconds on standard internet.	High	Page load ≤ 4 sec on Chrome
NFR-02	Performance	Search results must appear within 3 seconds.	High	Search response ≤ 3 sec
NFR-03	Usability	UI must be clean, readable and consistent across pages.	Medium	All pages follow same alignment, fonts, spacing
NFR-04	Usability	System must show clear error messages for invalid inputs.	High	Error appears instantly & visible near field
NFR-05	Security	Password must be encrypted	Critical	Characters

		and masked while typing.		never visible in plain text
NFR-06	Security	Wishlist & Cart features must require login.	High	Guest users redirected to login page
NFR-07	Security	Sensitive data must not appear in URL.	Critical	No personal info visible in browser URL
NFR-08	Compatibility	Application must run on latest Chrome browser.	High	All features functional on Chrome latest
NFR-09	Compatibility	UI must support 1366x768 resolution without breaking layout.	Medium	No UI overlap / misalignment
NFR-10	Reliability	System should handle up to 50 concurrent users without failure.	Medium	No crash under normal load
NFR-11	Maintainability	Components should allow easy updates without breaking others.	Medium	Code/feature updates do not break pages
NFR-12	Localization	Changing currency should update product prices globally.	Medium	Price of all products changes when currency changes

NFR-13	Error Handling	System must show proper 404 or friendly error page on invalid URLs.	Medium	Custom error message instead of crash
NFR-14	Accessibility	Buttons and menus should be navigable using keyboard (Tab).	Low	Keyboard navigation works on key elements

5. Constraints

1. C-01: Payment and Checkout Features Not Included

- The system does not include payment gateway integration or checkout workflow.
- These components are out of testing scope for this phase.

2. C-02: Admin Panel Excluded from Testing

- All functionalities related to the nopCommerce Admin Module (Dashboard, Product Management, Orders, Reports, etc.) are excluded.
- Testing is limited to customer-facing modules only.

3. C-03: API Testing Not Supported

- The current project focuses only on UI-level testing.
- No REST API, SOAP API, or backend service testing will be performed.

4. C-04: Limited Browser Support

- Testing is restricted to **Google Chrome (latest version)** only.
- Cross-browser testing (Edge, Firefox, Safari) is not included.

5. C-05: No Mobile/Responsive Testing

- Mobile layout, responsive view, and device-based behaviour testing are excluded.
- Only desktop resolution (1366x768 and above) is considered.

6. C-06: No Database Validation Testing

- Direct database verification (queries, DB integrity checks) is not performed.
- QA will validate only UI-level behaviour.

7. C-07: No Load/Stress Testing

- Performance testing under heavy traffic is out of scope.
- Only basic functional performance (page load expectations) will be validated.

6. Dependencies

D-01: Server Availability

- The execution of test scenarios depends on the availability and uptime of the nopCommerce server.
- Any downtime may directly affect test execution and delay timelines.

D-02: Stable Test Environment

- A stable and consistent test environment is required to validate functionalities accurately.
- Any unexpected environment changes (browser updates, server resets, demo data refresh) may impact results.

D-03: Valid User Accounts

- Functionalities such as Login, Wishlist, and Cart require valid pre-created user accounts.

- Testing cannot proceed if account creation or email verification fails.

D-04: Browser and System Configuration

- The testing process depends on the availability of the required browser (Google Chrome – latest version) and a compatible system configuration.
- Any browser incompatibility may cause deviation in expected behaviour.

D-05: Test Data Availability

- Certain scenarios depend on the availability of correct test data (e.g., products, prices, categories).
- If test data is modified or deleted on the server, related scenarios may fail.

D-06: Internet Connectivity

- Continuous and stable internet connection is required to load pages, perform UI operations, and access server resources.
- Poor connectivity may cause false test failures.