# Test Plan: Demo Web Shop Automation

## 1. Objective

This test plan outlines the strategy and scope for automated testing of the Demo Web Shop application. The goal is to validate critical user workflows like authentication and cart operations using Playwright (UI) and Postman/Newman (API).

## 2. What is Being Tested

Application Under Test (AUT): Demo Web Shop — a web-based e-commerce platform for browsing and purchasing books.

**Functional Areas Covered with Playwright Automation:**

- User Login (Valid/Invalid)  
- Viewing product list (Books)  
- Adding item to cart  
- Editing item quantity  
- Deleting item from cart  
- Verifying cart contents

**Functional Areas Covered with Postman:**

- User Login  
- Retrieve all booking details  
- Create booking  
- Update booking  
- Delete booking

## 3. Test Approach and Coverage

### A. UI Functional Tests (Playwright)

**URL used is:** <https://demowebshop.tricentis.com/>

**Scope:** Automate critical business flows using Playwright and Page Object Model (POM).

**Test Scenarios:**

- Login with valid credentials  
- Login with invalid credentials  
- Add a book to shopping cart  
- Edit item quantity in cart  
- Delete item from cart

### B. API Test Automation (Postman)

**URL used is:** <https://restful-booker.herokuapp.com/apidoc/index.html>

**Test Scenarios:**

- Retrieve all booking details: GET   
- Auth/Login success: POST   
- Create booking: POST  
- Update booking: PUT  
- Delete booking: DELETE

## 4. Tools and Technologies

|  |  |
| --- | --- |
| **Tool** | **Purpose** |
| Playwright | UI Automation |
| Test Runner | Test execution (Built-in with Playwright) |
| Postman | Manual API validation |
| Newman | API test automation |

## 5. How to Run the Tests

### A. UI Tests (Playwright)

**Run All UI Tests:**  
npx playwright test  
  
**Run Specific Test:**  
npx playwright test demoWebShop.spec.ts --grep "Login"  
  
**View HTML Report:**  
npx playwright show-report

### B. API Tests (Postman/Newman)

**Run API Tests via Newman:**  
newman run restful-booker.postman\_collection.json

## 6. Assumptions & Limitations

- The website must be reachable.  
- Valid login credentials are known and managed securely via config.  
- Playwright tests are designed for Chromium, Firefox & WebKit.  
- Tests assume DOM structure and selectors remain consistent.  
- API tests depend on external service uptime and reset behavior.

## 7. Conclusion

This strategy ensures key functional flows are tested end-to-end using modern automation tools, with flexibility to integrate into CI/CD pipelines.