Regression Testing Strategy – Demo Web Shop

1. Objective

The goal of regression testing is to make sure that all existing features still work correctly after new updates, bug fixes, or changes are made to the website. This helps keep the system stable and prevents old issues from coming back.

2. Risk Assessment Matrix

Module / Area	Main Function	Impact	Chance of Breaking	Risk Level	Action
Registration	Create and log in users	High	Medium	High	Test in every cycle
Product Browsing	Category and search	Medium	High	High	Test UI and filters
Add to Cart	Add and update items	High	High	Critical	Must test in smoke and full regression
Checkout	Billing, shipping, payment	High	Medium	Critical	Always include in testing
Order Confirmation	Final order and thank-you page	Medium	Low	Medium	Test order details
Login/Logout	Session control	Medium	High	High	Test after backend changes
UI/Responsive Design	Layout on devices	Low	Medium	Medium	Test on different browsers

3. Feature Priority

Priority	Meaning	Examples
P1 (Critical)	Must work; affects core purchase flow	Registration, Checkout
P2 (High)	Important but not blocking	Product Search, Cart Updates
P3 (Medium)	Improves usability	Filters, Sorting
P4 (Low)	Cosmetic or minor	Footer links, Help pages

4. Impact vs. Probability

Impact	Chance	Testing Needed
High	High	Always test (Smoke + Full Regression)
High	Low	Test before big releases
Medium	High	Test after small updates
Low	Low	Test occasionally or quarterly

5. Test Selection Strategy

Smoke Testing

Run after every deployment to check if the main functions work:

- Open homepage
- Register or log in
- Search and open a product
- Add product to cart
- Checkout and confirm order
- Logout

Full Regression

Run before major releases.
Includes all positive, negative, and boundary test cases for every module.

Targeted Regression

Run after small fixes or minor changes.
Focus only on updated features and related areas.

Automation vs. Manual

Area	Approach	Reason
Repeated tasks	Automated	Saves time and improves consistency
New or complex features	Manual	Needs human observation
UI and Accessibility	Manual + Tools	Visual and usability checks

6. Execution Framework

Aspect	Strategy
Test Case Priority	P1 first, then P2, P3, and P4
Suite Maintenance	Review every 2 sprints and update
Frequency	Smoke: every buildTargeted: after fixesFull: before release
Defect Tracking	Log in Jira with related test cases
Reporting	Record pass/fail rate and defect trend

7. Execution Timeline

Type	Description	Time Estimate
Smoke Testing	After every build	1–2 hours
Targeted Regression	For small fixes	1 day

| Full Regression | Before release | 2–3 days |
| Maintenance | Update test cases | Half day per sprint |

8. Summary

This plan helps ensure the Demo Web Shop remains stable after every change.
It uses a mix of automated and manual testing, focuses on high-risk areas, and supports quick feedback through smoke and targeted regression cycles.