**Test Strategy Document for Online Retail Website Testing**

**1. Introduction**

This document outlines the overall **test strategy** for the *Online Retail Website Testing* project. It defines the testing approach, objectives, scope, methodologies, tools, and resources needed to ensure the platform is reliable, secure, and meets user expectations.

**2. Test Objectives**

* **Objective 1:** Validate that the online retail platform fulfills all defined functional requirements.
* **Objective 2:** Ensure the platform offers a seamless, intuitive, and user-friendly shopping experience.
* **Objective 3:** Assess the system’s performance and security under various conditions and loads.

**3. Scope of Testing**

**In Scope:**

* User registration and login workflows
* Product search and catalog navigation
* Shopping cart functionality and checkout process
* Payment gateway processing
* Order placement, management, and tracking

**Out of Scope:**

* External third-party system integrations (e.g., CRM tools)
* Marketing/promotion modules not essential to core e-commerce operations

**4. Test Levels**

* **Unit Testing:** Testing individual components or methods in isolation
* **Integration Testing:** Checking interactions between different modules
* **System Testing:** Validating the complete and integrated application
* **User Acceptance Testing (UAT):** Ensuring the solution meets business requirements

**5. Test Techniques**

* **Black-box Testing:** Used during system and UAT phases to validate functional behavior
* **White-box Testing:** Applied at unit and integration levels to test internal logic
* **Exploratory Testing:** Performed at later stages to identify edge cases and usability issues

**6. Test Environment**

**Hardware:**

* **Desktop/Laptop:** Windows 10/11, macOS Catalina/Big Sur/Monterey (8GB RAM, 256GB SSD minimum)
* **Mobile Devices:** Android (v8.0+), iOS (v12+)

**Software:**

* **Operating Systems:** Windows 10/11, macOS, Ubuntu 20.04/22.04
* **Browsers:** Chrome, Firefox, Safari, Edge (latest stable versions)
* **Testing Tools:** Selenium, JMeter, Bugzilla, Postman, Figma

**Network:**

* Stable internet connection (minimum 100 Mbps)
* Proper firewall configurations and valid SSL certificates for secure testing

**Supported Devices/Browsers:**

* **Windows:** Chrome, Firefox, Edge
* **macOS:** Safari
* **Android:** Chrome
* **iOS:** Safari

**7. Test Schedule**

* **Test Plan Development:** Week 1
* **Test Case Design:** Weeks 2–3
* **Test Execution:** Weeks 4–8
* **Test Summary & Closure:** Week 9

**8. Test Deliverables**

* Test Strategy Document
* Test Cases and Scenarios
* Test Execution Reports
* Defect Logs/Reports
* Performance Test Summary

**9. Resource Planning**

**Test Lead**

* **Role:** Manage the entire testing lifecycle
* **Skills:** Team coordination, test planning, communication
* **Headcount:** 1

**Testers**

* **Role:** Create/execute test cases, log/report defects
* **Skills:** Manual testing, defect tracking, functional validation
* **Headcount:** 4

**Automation Engineers**

* **Role:** Build and maintain automation scripts
* **Skills:** Selenium, scripting (Java/Python), test frameworks
* **Headcount:** 2

**10. Risk Assessment and Mitigation**

* **Risk 1:** Unavailability of key testing personnel
  + *Mitigation:* Maintain backup resources
* **Risk 2:** Delay in stable build delivery
  + *Mitigation:* Collaborate closely with development, include schedule buffer
* **Risk 3:** Lack of adequate test data
  + *Mitigation:* Prepare and validate data sets in advance

**11. Test Exit Criteria**

* All planned test cases have been executed
* No open critical/severe defects remain
* Minimum 95% of testable requirements are covered

**12. Test Metrics and Reporting**

**Key Performance Indicators (KPIs)**

* Number of executed test cases
* Defect detection rate and resolution status
* Requirement-to-test-case coverage percentage

**Reporting Details:**

* **Frequency:** Weekly reports and daily stand-ups
* **Format:** Status summary, defect metrics, risk updates
* **Recipients:** Project Manager, Dev Lead, Stakeholders

This strategy ensures a structured and efficient testing approach for the **Online Retail Website**, aimed at delivering a high-quality, secure, and user-focused shopping platform.