### **Test Plan for E-Commerce Session**

#### **1. Objectives**

**What are the Objectives?** The objectives of this test plan are to:

* Ensure the e-commerce session functionality meets the specified requirements.
* Identify and fix defects before the production release.
* Validate the performance, security, and usability of the e-commerce session.
* Ensure a seamless user experience during browsing, adding items to the cart, and checking out.

#### **2. Scope**

**What is the Scope?** The scope of this test plan includes:

* Testing the functionality of user login and session management.
* Verifying the process of browsing products and adding them to the cart.
* Ensuring the checkout process, including payment gateway integration, functions correctly.
* Testing various user scenarios such as guest checkout, registered user checkout, and session timeout handling.
* Excluding non-session-related features like admin dashboard functionalities.

#### **3. Approach**

**What is the Approach?** The approach to testing will include:

* **Manual Testing:** To verify functional and usability aspects.
* **Automated Testing:** For regression testing and performance testing.
* **Black Box Testing:** Focusing on input and output without considering internal code structure.
* **Test Phases:** Unit Testing, Integration Testing, System Testing, and User Acceptance Testing (UAT).
* **Test Types:** Functional Testing, Performance Testing, Security Testing, Usability Testing, and Regression Testing.

#### **4. Resources**

**What are the resources?**

* **Human Resources:**
  + Test Manager
  + Manual Testers
  + Automation Testers
  + Developers (for fixing issues)
  + UI/UX Designers (for usability feedback)
* **Tools and Software:**
  + Test Management Tool (e.g., TestZephyr)
  + Automation Tools (e.g., Selenium)
  + Performance Testing Tools (e.g., JMeter)
  + Bug Tracking Tool (e.g., JIRA)
* **Hardware:**
  + Test Servers
  + Various devices (desktops, laptops, tablets, smartphones) for cross-device testing

#### **5. Schedule**

**What is the schedule?**

* **Test Planning:** 1 week
* **Test Case Design:** 2 weeks
* **Test Environment Setup:** 1 week
* **Test Execution:** 4 weeks
* **Bug Fixing and Re-testing:** 2 weeks
* **User Acceptance Testing (UAT):** 1 week
* **Final Review and Sign-Off:** 1 week

#### **6. Risks and Mitigation**

**What are Risks and Mitigations?**

* **Risk 1:** Late delivery of code for testing.
  + **Mitigation:** Close coordination with the development team and regular status updates.
* **Risk 2:** QA environment instability.
  + **Mitigation:** Ensure backup environments and quick resolution protocols.
* **Risk 3:** Unplanned leaves or low resource availability.
  + **Mitigation:** Maintain a buffer of additional testers and cross-train team members.
* **Risk 4:** High number of critical bugs found late in the testing cycle.
  + **Mitigation:** Prioritize early and continuous testing to catch issues early.

#### **7. Deliverables**

**What are Deliverables?**

* **Test Plan Document:** Detailing objectives, scope, approach, resources, schedule, risks, and deliverables.
* **Test Cases:** Comprehensive list of test cases covering all in-scope functionalities.
* **Bug Reports:** Detailed documentation of any bugs found during testing.
* **Test Summary Report:** Summary of test execution, including passed and failed test cases, and overall quality assessment.
* **UAT Sign-Off Document:** Confirmation from stakeholders that the product is ready for production.

This comprehensive test plan ensures that the e-commerce session is thoroughly tested, defects are identified and addressed, and the final product delivers a seamless user experience.