

# Software Test Plan (STP) for ToolShop

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## 1. Introduction

### 1.1 Purpose

This test plan outlines the testing activities for the Tool Shop website, an e-commerce platform for purchasing tools (hand tools, power tools, and accessories) that also serves as a training environment for software testers. The objective is to ensure that the website meets all specified functional requirements and performs as expected under normal operating conditions.

### 1.2 Scope

Testing will cover the following features:

- Product Catalog and Browsing (display, pagination, filtering, sorting)
- Product Details (detailed view, multiple images, customer reviews)
- Shopping Cart (add, update, remove items)
- Checkout Process (multi-step checkout, simulated payment, order confirmation)
- User Authentication (registration, login, password recovery, account management)
- Search Functionality (keyword search, product filtering)
- Reviews and Ratings (submission and display of product reviews)
- API Endpoints for key functionalities (product retrieval, cart management, checkout, user authentication, review submission)

### 1.3 Non-functional testing

performance:

- Website pages must load within 3 seconds.
- API endpoints must respond within 1–2 seconds under typical loads.
- The system must support a high number of simultaneous users without significant performance degradation.

### 1.4 References

- Feature Requirement Design (FRD) for Tool Shop Website
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## 2. Test Items

- **Module 1:** Product Catalog and Browsing
  - **Module 2:** Product Details
  - **Module 3:** Shopping Cart
  - **Module 4:** Checkout Process
  - **Module 5:** User Authentication
  - **Module 6:** Search Functionality
  - **Module 7:** Reviews and Ratings
  - **Module 8:** API Endpoints (Product Retrieval, Cart Management, Checkout, User Authentication, Review Submission)
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### 3. Testing Strategy

#### 3.1 Test Levels

- **System Testing:** Verify the complete end-to-end workflow of the website.
- **Integration Testing:** Validate the interactions between UI components and API endpoints.
- **User Acceptance Testing (UAT):** Confirm that the website meets user needs and requirements.
- **Regression Testing:** Re-run test cases after updates to ensure existing functionalities remain intact.

#### 3.2 Testing Types

- **Functional Testing:**
  - Verify that all features perform as specified.
- **Performance Testing:**
  - Measure page load times and API response times.

#### 3.3 Test Design Techniques

- Equivalence Partitioning
  - Boundary Value Analysis
  - Error Guessing
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## 4. Test Environment

#### 4.1 Hardware Requirements

- Desktop/Laptop: Minimum 8GB RAM, Intel i5 processor, SSD storage.
- Mobile Devices: Latest versions of iOS and Android smartphones/tablets.

#### 4.2 Software Requirements

- Operating Systems: Windows 10 or later, macOS, iOS, Android.
- Browsers: Latest versions of Chrome, Firefox, Safari, and Edge.

### 4.3 Test Data

- Predefined user accounts (with varying roles)
- Sample product data (names, images, prices, descriptions)
- Data for shopping cart, checkout, and order processing
- API test data for product retrieval and review submission

### 4.4 Test Plan:

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## 5. Roles and Responsibilities

- **Test Manager:** [Name] – Overall test planning and coordination.
- **QA Engineers:** [Names] – Development and execution of test cases; defect reporting.
- **Developers:** [Name] – Fixing reported defects and implementing enhancements.
- **UAT Testers:** [Name] – Final user acceptance testing and validation.

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## 6. Schedule

Activity	Start Date	End Date	Responsible
Test Plan Preparation	YYYY-MM-DD	YYYY-MM-DD	Test Manager
Test Case Development	YYYY-MM-DD	YYYY-MM-DD	QA Team
Test Execution	YYYY-MM-DD	YYYY-MM-DD	QA Team
Bug Fixing & Retesting	YYYY-MM-DD	YYYY-MM-DD	Developers
User Acceptance Testing	YYYY-MM-DD	YYYY-MM-DD	UAT Team

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## 7. Test Deliverables

- Software Test Plan (STP) document
- Test Cases Document (STD)
- Automated Test Scripts (if applicable)
- Test Execution Reports
- Defect/Bug Reports
- Test Summary Report

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## 8. Entry and Exit Criteria

### 8.1 Entry Criteria

- The FRD and all related requirements are approved.
- Test cases are developed, reviewed, and approved.
- The test environment is set up and verified.

### 8.2 Exit Criteria

- All critical and high-priority defects are resolved.
- Test coverage is at least 95%.
- Performance benchmarks are met (page load within 3 seconds; API response within 1–2 seconds).
- User Acceptance Testing is completed and approved by stakeholders.

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## 9. Risk and Mitigation

Risk	Mitigation Strategy
Delayed test environment setup	Use virtual or cloud-based test environments as backup.
Frequent UI changes	Maintain modular test scripts and update them regularly.
Network issues during testing	Simulate offline mode and use backup connectivity.

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## 10. Approvals

Name	Role	Signature	Date
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[John Doe]	Project Manager		YYYY-MM-DD
[Jane Smith]	QA Lead		YYYY-MM-DD