006 Test Forge: Test Plan v1.0

Test Plan Designer: Nazish Jehangir
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Software to be Tested: Rakuten

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Introduction **%**:

This test plan outlines the strategy and framework for automating the critical flows of Rakuten using Cypress with the Page Object Model (POM). The objective is to simulate and validate real-world e-commerce flows in a scalable and modular testing environment.

Test Plan ID: TP-2025-006

Objectives

- Develop a robust and reusable Cypress automation framework.
- Validate critical user flows in Rakuten.
- Ensure high reliability, test accuracy, & maintainability for long-term real-use scenarios.

Testing Scope ⊴:

This test plan focuses on automating the core functionalities of the website using Cypress and Page Object Model (POM). The objective is to validate key user interactions and ensure a seamless shopping experience.

In-Scope

The following functionalities will be covered in the automation testing framework:

- <u>M</u> Homepage Navigation
- Store & Product Browsing
- TCoupons & Cashback
- Jack Flow
- Luser Interactions & Account Functionality

Out of Scope

- Real transaction payments.
- Backend API validation.
- Actual redirection to affiliate shopping sites.

Approach 🕲:

The testing phase will follow a structured framework using Cypress & the POM. This ensures scalability, reusability, and ease of maintenance while validating critical user interactions.

Testing Methodology

- Manual Testing
- Automation Testing

Test Implementation Steps:

- 1. Prepare Test Scenarios and Test Cases: Well-documented test scenarios and test cases.
- 2. Set Up Cypress Environment: Install Cypress with required dependencies.
- 3. Implement Page Object Model: Structure test scripts using Cucumber + POM.
- 4. Write and Execute Test Cases: Develop reusable test cases for the required features.
- 5. **Test Execution & Reporting**: Run test cases, log results & generate reports for analysis.

Tools & Technologies Used:

- **Cypress**: Test automation framework.
- JavaScript: Test scripting language.
- XMind: Mindmap creation tool.
- Microsoft Excel: A tool to document testing reports.
- Jira: Tool for bug tracking and project management.

This approach ensures comprehensive automation coverage while maintaining efficiency.

Entry Criteria ?:

The following conditions must be met before starting test automation:

- Test Environment Readiness: Cypress is set up with dependencies installed.
- Test Cases & Data Availability: Well-documented test cases & test data are available.

Exit Criteria END:

The following conditions must be fulfilled before concluding the testing phase.

- All test cases executed with documented results.
- Critical defects are resolved or logged for further action.
- The test summary report is submitted.

Test Environment =:

- **Devices:** Desktops, laptops, tablets, mobiles etc.
- OS: Windows 10, Windows 11, etc.
- Browsers: Chrome, Edge, Electron etc.
- Network: 50-75 Mbps Fibre, VPN Enabled.

Scheduling 17:

Activities	Durations	Responsible Persons
Necessary Documentation & Manual Testing.	1 Day	Nazish Jehangir
Cypress Setup & POM Implementation	1 Day	Nazish Jehangir
Test Scripts Praparation & Execution.	1 Day	Nazish Jehangir
Debugging & Final Reporting	1 Day	Nazish Jehangir

Deliverables

- Test plan & necessary documentation.
- Folder structure with framework & POM files.
- Executable test cases with assertions.
- Bug report & summary report documents.

Roles & Responsibilities 🕵:

Role	Assigned To	Responsibility/Assignment
Test Author & Reviewer	Nazish Jehangir	Coordinating the testing efforts.
Executor & Reporter	Nazish Jehangir	Executing automation scripts and reporting logs.

Risks & Assumptions 1:

- Limited time for testing across all browsers and devices.
- Test execution failures due to network issues.
- Rakuten UI may change during test execution.
- Real-time cashback tracking cannot be verified.
- Third-party redirects may be blocked in test mode.

Assumptions :

- Focus on the most commonly used browsers & devices.
- Execute in a reliable network environment to reduce network failures.
- The internet connection is stable & the test user accounts exist.
- Coupons and cashback flows are visible on the test run.

Sign Off/Conclusion <a>□:

This document formalises the academic Cypress test automation plan for Rakuten. Upon successful implementation, it will serve as a foundation for testing large-scale e-commerce platforms using scalable best practices e.g. POM, modular test design & Cypress execution.