**Test Plan for app.vwo.com Login Page**

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1. **Introduction**

**1.1 Purpose**

This document provides a detailed test strategy for the VWO.com login page, ensuring it meets functional, security, usability, performance, and accessibility standards before production release

**1.2 Scope**

**In-Scope:**

Login functionality (email, password, forget password, CAPTCHA, SSO, Free trial account)

Error handling & validation

Security mechanisms (password hashing, rate limiting)

UI responsiveness & cross-browser compatibility

Accessibility compliance (WCAG 2.1)

**Out-of-Scope:**

Post-login dashboard functionality

Third-party integration (unless related to login)

1. **Test Objectives**

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| **Category** | **Objective** |
| **Functional** | Verify correct login, error messages, and redirections |
| **Security** | Prevent unauthorized access, SQLi, XSS, brute-force attacks |
| **UI/UX** | Ensure consistent design, responsive layout, and intuitive flow |
| **Performance** | Validate page load time (<2s) and API response efficiency |
| **Compatibility** | Cross-browser (Chrome, Firefox, Safari, Edge) & cross-device (iOS, Android) support |
| **Accessibility** | Screen reader support, keyboard navigation, color contrast |

**2.1UI/UX Testing**

**Layout:**Check alignment, spacing, font consistency.

**Responsiveness**: Test on mobile (iPhone/Android), tablet, desktop.

**Error States**: Ensure error messages are clear and non-disruptive.

**Labels & Placeholders**: Validate field hints (e.g., "Enter your email").

**2.2 Performance Testing**

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| --- | --- |
| **Load Time:** Login page should load in **<2s** (Lighthouse). | |
| **Stress Test:** Simulate **500 concurrent users** (JMeter). | |
| **API Check:** /login endpoint response time **<500ms**. | |
| **2.3 Cross-Browser & Cross-Device Testing** | |
| **Browsers:** | |
| Chrome (Latest) | |
| Firefox (Latest) | |
| Safari (Mac/iOS) | |
| Edge (Latest) | |
| **Devices:** | |
| iPhone 14 (Safari) | |
| Samsung Galaxy S23 (Chrome) | |
| iPad (Safari) | |
| Desktop (Windows/macOS)   |  | | --- | | **2.4 Accessibility Testing** | | **Screen Readers:** NVDA, VoiceOver (iOS) | | **Keyboard Navigation:** Tab/Enter/Esc functionality | | **Colour Contrast:** ≥ 4.5:1 (WCAG AA) | | **Alt Text:** Verify for images (if any) | | |

**3. Test Environment**

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| --- | --- |
| **Component** | **Details** |
| **URL** | https://staging.vwo.com/login |
| **Test Data** | Valid/Invalid credentials (masked in reports) |
| **Tools** | BrowserStack, Postman, JMeter, OWASP ZAP |
| **OS** | Windows 11, macOS Ventura, iOS 16, Android 13 |

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| **4. Entry & Exit Criteria** |  |  |
| **4.1 Entry Criteria** |  |  |
| Build deployed to staging. |  |  |
| Test cases reviewed & approved. |  |  |
| Test data prepared. |  |  |
| **4.2 Exit Criteria** |  |  |
| 100% of P0/P1 test cases executed. |  |  |
| Zero critical (P0) defects open. |  |  |
| Performance benchmarks met. |  |  |
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| **5. Defect Reporting** |  |  |
| **Tool:** JIRA |  |  |
| **Fields:** |  |  |
|  |  |  |
| **Title:** [P0/P1/P2] Brief issue description |  |  |
| **Steps:** Exact steps to reproduce |  |  |
| **Expected vs. Actual:** Screenshot/video |  |  |
| **Environment:** Browser/OS/Device |  |  |
|  |  |  |
| **6. Risks & Mitigation** |  |  |
| **Risk** | **Impact** | **Mitigation** |
| Browser-specific bugs | High | Test early on BrowserStack |
| Performance lag under load | Medium | Optimize API calls & CDN |
| Security vulnerabilities | Critical | Penetration testing pre-release |