

QA Test Plan for Instagram Website

1. Project Overview

- **Project Name:** Instagram Website QA Testing
- **Purpose:** To ensure that the Instagram website functions seamlessly and provides an optimal user experience, meeting both functional and non-functional requirements.
- **Scope:** This testing will cover essential features such as post creation, user interactions, profile management, messaging, and navigation.

2. Objectives

- Verify that all features perform as expected.
- Ensure cross-browser and cross-device compatibility.
- Validate performance under varying network conditions.
- Test for data security and privacy protection.
- Ensure compliance with accessibility standards.
- Check UI/UX consistency for an intuitive user experience.

3. Testing Scope In-Scope

1. Core Features

- Post creation (photos, videos, stories)
- Direct messaging
- Account creation, login, and profile editing
- User interactions (likes, comments, follows)
- Notifications and alerts

2. UI Components

- Page layout and responsiveness
- Navigation elements and user feed
- Display of media, captions, and user tags

3. Backend APIs

- Data handling for posts and interactions
- User session management
- Notification triggers

4. **Security Testing**

- Authentication and authorization
- Data privacy compliance
- Vulnerability assessments for XSS, CSRF, SQL injection

5. **Non-Functional Requirements**

- Performance and load handling
- Accessibility and usability
- Multi-browser and device compatibility

Out of Scope

- Testing the Instagram mobile app
- Third-party API integration testing
- In-depth testing of algorithmic feeds and content personalization

4. **Testing Types**

1. **Functional Testing**

- Validate media upload options (photos, videos, stories)
- Test user profile functionalities and settings
- Assess direct messaging features
- Verify notifications and interaction features (likes, comments, tags)

2. **Usability Testing**

- Evaluate the intuitiveness of the interface
- Assess user flows for core actions (posting, messaging, profile updates)
- Check for clear, consistent UI elements and prompts

3. **Compatibility Testing**

- Test the site on major browsers (Chrome, Firefox, Safari, Edge) and devices
- Ensure responsiveness for different screen resolutions
- Cross-verify on OS versions (Windows, macOS, iOS, Android)

4. **Performance Testing**

- Conduct load and stress testing
- Simulate usage under varied network conditions (3G, 4G, Wi-Fi)

5. **Security Testing**

- Validate secure login, password recovery, and session management
- Check for vulnerabilities (XSS, CSRF, SQL injection)
- Assess data encryption and privacy handling

6. **Accessibility Testing**

- Test for screen reader support
- Validate keyboard navigation
- Ensure WCAG 2.1 compliance (contrast, alt text, etc.)

7. **Localization Testing**

- Confirm correct display of elements across supported languages
- Validate region-based date, time, and format settings

5. **Test Environment**

1. **Devices**

- Desktop: Windows 10, macOS
- Mobile: iOS, Android

2. **Browsers**

- Chrome (latest 3 versions)
- Firefox (latest 3 versions)

- Safari (latest 3 versions)
- Microsoft Edge (latest 3 versions)

3. Network Conditions

- 3G, 4G, 5G, Wi-Fi connections

4. Test Data

- Multiple user accounts (personal, business)
- Media files of different formats and sizes for upload

6. Test Execution Schedule

Phase	Activities	Timeline
Test Planning	Requirement analysis, Test case creation	Week 1
Test Setup	Environment setup, Test data creation	Week 2
Functional Testing	Execute functional test cases	Weeks 3-4
Non-Functional Testing	Usability, Performance, Security, Accessibility testing	Weeks 5-6
Compatibility Testing	Cross-browser and device testing	Week 6
Regression Testing	Re-run impacted test cases	Week 7
Final Reporting	Generate and review test reports	Week 8

7. Defect Management

- **Defect Tracking Tool:** JIRA
- **Defect Severity Levels:**
 - **Critical:** Immediate fix needed (e.g., login failure)
 - **High:** Fix required for the next release (e.g., media upload issue)
 - **Medium:** Fix within two releases (e.g., minor navigation issues)
 - **Low:** To be addressed in future updates (e.g., cosmetic UI issues)

8. Entry & Exit Criteria Entry Criteria

- Test environment setup is complete.
- Requirements and design documentation are approved.
- Test cases are ready and validated.

Exit Criteria

- All critical and high-severity defects are resolved and verified.
- 95% functional coverage is achieved.
- Non-functional testing meets performance and accessibility benchmarks.
- Cross-device and cross-browser tests are completed.
- Test summary and defect reports shared with stakeholders.

9. Deliverables

- **Test Cases:** Comprehensive test cases for all planned functionalities.
- **Test Results:** Logs of executed test cases with outcomes.
- **Defect Reports:** List of found defects, severity, and current status.
- **Final Test Report:** Summary report of testing activities and coverage.

10. **Risks and Mitigation** | Risk | Mitigation Strategy | |-----|-----| | UI updates impacting tests | Use automated scripts for static elements and update selectors | | Limited physical device availability | Use emulators and cloud testing tools | | High media data affecting load time | Optimize test scenarios with pre-populated test data |

11. Tools

- **Automation:** Selenium, Cypress
- **Bug Tracking:** JIRA
- **Performance Testing:** JMeter
- **Accessibility Testing:** Axe, WAVE
- **Cross-Browser Testing:** BrowserStack, Sauce Labs