

Test Plan for xkcd.com About Page

Introduction

- **Purpose of the Test Plan:** The purpose of this test plan is to ensure that the web page <https://xkcd.com/about/> functions as intended and meets the requirements and expectations of the stakeholders.
- **Assumptions:** It is assumed that the web page is in a stable and functional state at the beginning of testing.
- **Dependencies:** Testing of the web page is dependent on the availability of the necessary hardware, software, and internet connection.

Test Objectives:

- **Business Objectives:** The business objectives of the testing are to ensure that the web page <https://xkcd.com/about/> provides accurate and up-to-date information about the xkcd web comic and its creators, and to ensure a positive user experience for visitors to the page.
- **Testing Objectives:** The testing objectives are to ensure that the web page functions as intended, that all links and buttons work as expected, and that the page is accessible and user-friendly.

Test Approach:

- **Test Phases:** The testing will be conducted in two phases: manual testing and automated testing.
- **Test Types:** The test types include functional testing and non-functional testing
- **Testing Techniques:** The testing techniques used will include manual testing and automated testing
- **Testing Tools:** The testing tools used will include Playwright for UI testing and Locust for Performance testing. The framework language will be Python

Scope:

- This test plan covers the "about" page on xkcd.com, accessible at <https://xkcd.com/about/>.

- The purpose of this test plan is to ensure that the "about" page meets the functional and non-functional
- The test plan does not cover any other pages on the xkcd website, except for the "about" page.
- The test plan does not cover any third-party resources linked from the "about" page.

Test Environment:

Latest versions of Chrome, Firefox, Safari, and Edge browsers on Windows, Mac OS and Real Mobile Devices using Browserstack

Functional Test Cases:

Test Case F1: Verify that the "about" page is accessible from the main navigation menu on xkcd.com

Steps:

1. Open xkcd.com in a browser
2. Look for the "about" page link in the main navigation menu at the top left of the page
3. Click on the "about" page link

Expected Result:

- The "about" page should load in the same tab as the main xkcd page
- The URL of the "about" page should be "https://xkcd.com/about/"
- The "about" page should display the correct content and formatting

Test Case F2: Verify that all links on the "about" page are functional

Steps:

1. Open the "about" page on xkcd.com
2. Click on all links present on the page
3. Observe the behavior of the links

Expected Result:

- All links on the "about" page should be functional
- Clicking on a link should redirect to the appropriate page

Test Case F3: Verify that the "about" page provides a brief overview of the xkcd website, its creator, and its history

Steps:

1. Open the "about" page on xkcd.com

2. Read through the content of the page
3. Observe all sections

Expected Result:

- The "about" page should provide a brief overview of the xkcd website, its creator, and its history
- The content should be accurate and all expected sections should be visible – such as “Who are you?”, “What else do you do?”, “Who else are you?”

Test Case F4: Verify that the “Back to main” button/link bottom on the "about" page redirects to the main page

Steps:

1. Open the "about" page on xkcd.com
2. Scroll to the bottom of the page
3. Click on the button/link to go back to the main page

Expected Result:

- The link should redirect to the main page
- The main page should load successfully

Test Case F5: Verify that the “xkcd.com” button/link bottom on the "about" page redirects to the main page

Steps:

4. Open the "about" page on xkcd.com
5. Click on the link xkcd.com to go back to the main page

Expected Result:

- The link should redirect to the main page
- The main page should load successfully

Test Case F6: Verify that the "about" page can be accessed directly via the URL link

Steps:

1. Enter the URL https://xkcd.com/about/ in the web browser
2. Press Enter or click the "Go" button

Expected Result:

- The "about" page should be loaded successfully without any errors or redirects
- The page content and design should be consistent with the "about" page accessed from the main navigation menu

Non-Functional Test Cases:

Why Performance testing is important:

<https://testguild.com/front-end-performance-guide/>

Performance - Load testing:

Test Case L1: Verify that the "About" page remains responsive and functional when accessed by the expected maximum number of concurrent users.

Steps:

1. Utilize a performance testing tool, such as JMeter or Locust, to simulate a number of simultaneous users accessing the "About" page that exceeds the expected upper limit.

Expected Result:

- Verify that the "About" page is responsive and all functionalities, including links and media, work as intended and load successfully within an acceptable timeframe
- The "About" page should continue to be responsive and load successfully within an acceptable timeframe
- All functionalities should be working correctly without any issues, such as broken links or media that do not load.

Performance - Stress testing:

Test Case S1: Verify that the "About" page remains responsive, functional and properly handles errors occurring when unable to respond to a number of users that exceeds the expected upper limit

Steps:

1. Utilize a performance testing tool, such as JMeter or Locust, to simulate a high number of concurrent users accessing the "About" page, which is beyond the expected upper limit

Expected Result:

- Monitor the server response time and ensure that the page is loaded successfully within a reasonable timeframe.
- The "About" page should continue to be responsive and load successfully within an acceptable timeframe
- If failures occurred due to high load the page should also present the user with clear, informative error messages that provide meaningful information about the failure that occurred

Compatibility testing:

Test Case C1: Ensure that the "About" page loads successfully on all supported browsers and mobile devices.

Steps:

1. Open the "About" page on a desktop/laptop computer using the link on the left-hand side menu.
2. Repeat step 2 on each major browser listed as supported for the "About" page.
3. Open the "About" page on a real mobile device using Device Cloud Farm (Browserstack)
4. Repeat step 4 on each major browser listed as supported for the "About" page on a mobile device.

Expected Result:

- The "About" page should load successfully on all supported browsers and mobile devices, without any layout issues, errors, or display problems.