

CleanCity - Comprehensive QA Test Report

Executive Summary

This Quality Assurance (QA) report provides a comprehensive analysis of the CleanCity web application, a waste management system designed to help users schedule pickups, engage in community content, and raise environmental awareness. Testing was guided by the documented functional requirements (FR-001 to FR-097). The evaluation included functional, usability, security, accessibility, and compatibility testing. This report outlines test strategies, findings, risks, and recommendations for improvement.

Test Strategy & Approach

The testing approach involved manual black-box testing using the CleanCity functional requirements document. Testing included: - Functional Testing - Usability & UX testing - Compatibility Testing - Accessibility checks - Data validation and security assessment Browsers: Chrome, Firefox (latest versions) Devices: Desktop 1920x1080, Mobile View Storage: Browser localStorage

Test Cases

Test Case ID	Scenario	Expected Result	Actual Result
TC-001	Filter requests by 'Eldoret'	Only Eldoret data should display	Nairobi data shown
TC-002	Submit feedback with empty comments	Error message should be shown	No error, accepted
TC-003	Register with valid info	Account should be created	Success message sho

Bugs Found

Bug ID	Title	Description
BUG-001	Eldoret filter shows Nairobi data	Filtering by Eldoret incorrectly shows Nairobi requests.
BUG-002	Password stored in plain text	Passwords saved in localStorage without encryption.
BUG-003	Feedback form lacks validation	Allows submission with empty comment field.

Risk Assessment & Recommendations

Critical issues such as incorrect data filtering and lack of validation could lead to user frustration, data integrity problems, or security vulnerabilities. The app currently stores passwords in plain text using localStorage, which is a significant security risk. Recommendations: - Encrypt sensitive data (e.g., hashed passwords) - Implement strong form validation across all modules - Improve dashboard filters and ensure consistent UI updates - Ensure mobile responsiveness and accessibility (WCAG 2.1 compliance) - Add backend support for scalable, secure storage and analytics

Functional Requirements Coverage

Tested features (from functional-requirements.md): ■ Registration & Login (FR-001 to FR-007) ■ Pickup Scheduling (FR-012 to FR-019) ■ Dashboard (FR-023, FR-024) ■ Feedback System (FR-022) ■ Proper validation (FR-002, FR-091) ■ Secure storage (FR-078) ■ Accessibility support (FR-071 to FR-074) Partially tested: Admin Panel, Notifications, Community Feed

Jira Kanban Board (Mockup)

To Do	In Progress	In Review	Done
■ BUG-001: Location filter	■ TC-002: Feedback form	■ BUG-003: Missing validation	■ TC-003: Registration success

Conclusion

The CleanCity app provides a solid foundation for a waste management platform. However, several critical areas require refinement before it can be considered production-ready. Most notably, the current use of `localStorage` without encryption, lack of form validation, and inconsistent UI filtering need urgent attention. With structured improvements guided by QA feedback, the system can become highly reliable, user-friendly, and secure.