

Report: Website Testing and Optimization Summary

1. Test Cases Executed and Results

- **Cross-browser Testing:** Verified compatibility on Chrome, Firefox, Edge using BrowserStack.
 - Result: All browsers performed as expected. (Screen shot enclosed)
 - **Responsive Design:** Tested on various devices (mobile, tablet, and desktop).
 - Result: Fully responsive with no critical issues.
 - **Performance Audit:** Lighthouse audit conducted to assess loading speed and resource usage.
 - Result: Performance score improved from 65 to 90 after optimizations.
 - file:///C:/Users/DELL/localhost_2025-01-22_22-51-26.report.html
-

2. Performance Optimization Steps Taken

- Minified CSS and JavaScript files.
 - Implemented lazy loading for images.
 - Optimized server-side rendering for faster initial load time.
 - Reduced bundle size by tree-shaking unused dependencies.
-

3. Security Measures Implemented

- Enabled HTTPS for secure communication.
 - Validated and sanitized all form inputs to prevent XSS and SQL injection.
 - Used HTTP headers (e.g., Content-Security-Policy) to enhance security.
-

4. Challenges Faced and Resolutions

- **Issue:** Lighthouse failed to generate reports locally.
 - **Resolution:** run on cli rather running on chrome directly
- **Issue:** CSS inconsistencies on Sa chrome browser directly.
 - **Resolution:** Added browser-specific fixes using media queries.

- **Issue:** High server response time.
 - **Resolution:** Implemented caching and reduced database query load.
-