**aXe Selenium (Java) Integration for Web Accessibility**

This project use **aXe (Open Source)** to run **web accessibility** tests in web page with the Selenium browser automation tool and Java development tools.

Selenium integration enables testing of **full pages and sites**.

**What is aXe?**

**aXe** is a free, open-source accessibility testing tool that runs right in your web browser by [Deque](https://www.deque.com/).

Deque's web and mobile accessibility testing tools have been built around our philosophy of Shift Left Accessibility. Shift Left Accessibility (or Shift Left A11y) means **introducing accessibility testing into earlier stages of your development process** - in a diagram of your development process, this would mean moving the "accessibility testing" steps to the left in your visualization.

In the past, accessibility testing and remediation almost always happened at the very end of the development process or after the product (your website, mobile app, etc.) had already shipped. This approach is unavoidable when you must remediate existing pages or applications to meet compliance goals and almost always applies to an organization's early accessibility projects. (If this sounds like you, you may want to check out our Digital Accessibility Guide to Getting Started or considering an Accessibility Assessment.).

**Why aXe?**

aXe is the third generation of accessibility rules for HTML-based user interfaces that differentiates itself from other approaches and rules repositories in the following ways:

* It works on all modern browsers,
* It supports in-memory fixtures, static fixtures, integration tests and iframes of infinite depth
* It is open source
* It is actively supported by a major accessibility vendor
* It is designed to be integrated into your existing functional/acceptance automated tests

**How it works?**

The aXe engine(JavaScript) is injected in to the testing website, which will scan the whole DOM and depending on the aXe engine’s rules, the violation result is being generated. The report will tell which HTML tag has accessibility violations and what would be the fix for it.

In this project selenium web driver is used with the testNG framework to inject the JS and to retrieve the response, by use of selenium web driver we can even interact(**TBD**) with the website while scanning the accessibility violations.