**TEST STRATEGY  
.**  
Challenging DOM

# Summary:

The purpose of this document is to define the testing approach of the Challenging DOM webpage.

<https://the-internet.herokuapp.com/challenging_dom>

This webpage was created to challenge Testers in identifying web elements, given the lack of good coding practices followed during the development of the site (such as elements having no unique identifiable properties, dynamically generated id’s etc).

### Version Control:

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Updates** | **Author** | **Date Issued** |
| V0.1 | Initial Draft | David Donaghy | 23/08/2022 |
| V0.2 | Final Draft | David Donaghy | 26/08/2022 |

# Graphical user interface, application, table Description automatically generatedSolution Overview:

The hardest part in automated web testing is finding the best locators (e.g., ones that well named, unique, and unlikely to change). It's more often than not that the application you're testing was not built with this concept in mind.

This example demonstrates that with unique IDs, a table with no helpful locators, and a canvas element.

### Components in Scope:

1. Chrome Web browser
2. Firefox we browser
3. HTML Elements

# High Level Approach:

The following will be tested by the automation team:

* Front end functionality of the “Challenging DOM” website

Including but not limited to:

* + Unit test each of the element categories
    - Large Buttons (Validate ID changes)
      * RED
      * GREEN
      * BLUE
    - Headings (Validate Static text is as expected)
    - Page Titles (Validate Static text is as expected)
    - Table Data (Validate Static text is as expected)
    - Table Buttons (Validate URL is updated)
      * Edit
      * Delete

The Following will be out of scope for this document:

* Accessibility testing
* Performance Testing
* Penetration Testing
* UAT Testing
* OAT Testing

# Legacy Impacted Features:

N/A

# Perf Approach:

Out of scope for this document.

# PEN Approach:

Out of scope for this document.

# Environment usage:

### Browser Testing Scope

|  |  |  |
| --- | --- | --- |
| Browser | Version | Platform |
| Chrome | 103.0.5060.134 (Official Build) | Mac OS – ARM |
| Firefox | 104 | Mac OS – ARM |

### tools

* Visual Studio IDE (Mac OS)
* Visual Studio Code IDE
* Chrome browser
* Firefox browser
* Selenium

For full list of dependencies, please see “Dependencies” section of this document.

# Resources & Responsibilities

|  |  |
| --- | --- |
| Resource Name | Responsibility |
| David Donaghy | Lead QA |

# RAIDS:

### RISKS:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Risks # | Risks Definition | Probability H/M/L | Impact  H/M/L | Mitigation |
| R1 | Website may go down during testing | L | H | Testers will wait and intermittently refresh page. |
| R2 | Website may be modified during automation runs, rendering results invalid | L | M | Testers will run browser in ‘headless’ mode, preventing human interaction |

### Assumptions:

|  |  |  |  |
| --- | --- | --- | --- |
| Assumption # | Assumption Definition | Associated Risk | Assumption Owner |
| A1 | Website will be available for duration of exercise | R1 | Server Host |
| A2 | All dependencies will be met | - | David Donaghy |
| A3 | Edit button on website only updates URL, no other functionality implemented | - | David Donaghy |
| A3 | Delete button on website only updates URL, no other functionality implemented | - | David Donaghy |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

### Issues:

|  |  |  |  |
| --- | --- | --- | --- |
| Issue # | Current Issue Description | Impact: H/M/L | Mitigation |
| I1 | Some features of visual studio not implemented in the mac os version (such as test grouping) | L | Use VS Code to access functionality |
| I2 |  |  |  |
| I3 |  |  |  |

### Dependencies:

|  |  |  |  |
| --- | --- | --- | --- |
| Dependency # | Dependency Description | Associated Risk | Dependency Owner |
| D1 | NuGet Package:  DotNetSeleniumExtras.PageObjects | - | David Donaghy |
| D2 | NuGet Package:  DotNetSeleniumExtras.WaitHelpers | - | David Donaghy |
| D3 | NuGet Package:  EPPlus | - | David Donaghy |
| D4 | NuGet Package:  ExtentReports | - | David Donaghy |
| D5 | NuGet Package:  Microsoft.NET.Test.Sdk | - | David Donaghy |
| D6 | NuGet Package:  NUnit | - | David Donaghy |
| D7 | NuGet Package:  Nunit3TestAdapter | - | David Donaghy |
| D8 | NuGet Package:  Selenium.Support | - | David Donaghy |
| D9 | NuGet Package:  Selenium.WebDriver | - | David Donaghy |
| D10 | NuGet Package:  Selenium.GeckoDriver | - | David Donaghy |
| D11 | NuGet Package:  Selenium.ChromeDriver | - | David Donaghy |
| D12 | System Framework: Microsoft.NETCore.APP | - | David Donaghy |

# Deliverables

* Test Plan
* Solution code
* Video Demo and Walkthrough

VIDEO SCRIPT

**INTRO**

dotNet Core Application

Using Nunit as test framework

Selenium as the driver (Gecko/Chrome)

Extent reports as main reporting framework

GitHub Actions as the CI/CD Pipeline

++ few NuGet packages to make life easier

**CLASS OVERVIEW**

PAGE OBJECT MODEL

OBJECTS

IMPLEMENTATION

**UTILITIES / HELPERS OVERVIEW**

**APP PROPERTIES**

AssemblyInfo.cs

appSettings.JSON

**TESTS**

BASE Test

Challenge.DOM Suite

**REPORTS**

Local

Index.html

**CI PIPELINE**

YML OVERVIEW  
 GH Pages

**DEMO**

LOCAL DEMO

PASS

FAIL

PARALLEL EXECUTION

PUSH DEMO

PASS

FAIL

**FINAL THOUGHTS / IMPROVEMENTS**