Assignment Description

Test cases:

Below are the test cases implemented in C# using Visual studio that runs with Nunit Framework and Selenium Webdriver through Firefox web browser.

The name of the Test cases and its description are as follows:

- NavigateTo MasterPage: Test case to go to the webpage "http:todomvc.com".
- ClickOnAngularJSLink: Clicks on the AngularJS link in the Homepage.
- TestCase1: Add a To-do item.
- TestCase2: Edit the content of an existing To-do item.
- TestCase3: Complete a To-do by clicking inside the circle UI to the left of the To-do.
- TestCase4: Re-activate a completed To-do by clicking inside the circle UI.
- TestCase5: Add a second To-do.
- TestCase6: Complete all active To-dos by clicking the down arrow at the top-left of the UI.
- TestCase7: Filter the visible To-dos by Completed state.
- TestCase8: Clear a single To-do item from the list completely by clicking the close icon.
- TestCase9: Clear all completed To-do items from the list completely.

Challenges Faced:

- Understanding how to implement Selenium webdriver to do Automation testing.
- Gaining Knowledge in C#.
- Integrating Visual studio with Selenium Webdriver and Nunit Framework in order to run the test cases appropriately.
- Implementing the double click action for TestCase2.

Approach to run Test in Parallel:

Running all the test cases parallel yields a faster execution time rather than running them concurrently in cases of larger number test cases to be executed.

This can be done by the Nunit Framework and by including some Nunit properties in visual studio. The Nunit properties such as TestFixture and Parallelizable can be used before every class. For example:

Code:

```
Using Nunit.Framework;
Using OpenQA.Selenium.Firefox;

Namespace Parallel{
        [TestFixture]
        [Parallelizable]
        public class ParallelTest{
                [Test]
                public void Test1()
                {
                        var driver= new FirefoxDriver();
                        driver.Url =" http://google.com";
                        driver.close;
                }
        }
}
```

Approach to run test in Multiple Browsers:

To run test cases in multiple browsers such as Chrome, Internet explorer and safari we need include the Nunit property TestFixture along with some webdrivers apart from firefox. For Instance, the below code can open run the test in both Internet explorer and Firefox.

Code:

```
using Nunit.Framework;
using OpenQA.Selenium.Firefox;
using OpenQA.Selenium.IE;
using System.Threading;

Namespace Multiple{
        [TestFixture(typeof(FirefoxDriver))]
        [TestFixture(typeof(InternetExplorerDriver))]

        public class TestWithMultipleBrowsers<TWebDriver> where
TWebDriver : IWebDriver, new()
        {
                private IWebDriver driver;
                [SetUp]
                public void CreateDriver ()
                {
                        this.driver = new TWebDriver();
                }
                [Test]
                public void GoogleTest()
                {
```

```
                driver.Navigate().GoToUrl("http://www.google.com/");
                driver.close;
            }
        }
    }
```

Output: