**Test Automation and coding standards:**

## Follow a Uniform Directory Structure as defined already in the project

1. Follow page object model which makes code more readable and easily maintainable, this also helps to declare the Web Elements once only in whole framework and it also reduces the redundancy.
2. Avoid Blocking Sleep Calls

Thread. Sleep(5000)

1. Must avoid hard waits, use instead implicit or explicit waits.

## Name the Test Cases & Test Script Appropriately

## Choose the Best-Suited Locator to identify element, Prefer any unique property id, name or Xpath.

## Use Data-Driven Testing for Parameterization, use Scenario outline.

1. Avoid Test Dependency - Write test scenarios independent of each other
2. Package names should be in all lower case

             com.gmail.webui

1. Class names always begin with a capital letter. And if there are multiple words in the class name then each word must also begin with a capital letter

              class FirstTestCase  
             {  
                   …..  
              }

1. Method names should begin with lowercase and if there are multiple words in the name, then you need to use Uppercase for starting letters for the words except for the starting word

                firstMethod()  
              {  
                     …..  
               }

1. Naming conventions for elements must be as below,  
                 for buttons:  btn\_Cancel  
                 for links: lnk\_HomePage  
                 for textbox/input box: txtBox\_UserName  
                 for images: img\_Logo
2. Variable names:

             noOfRows, driver, excelWorkbook  
            If variable name represents a constant  
             NUMBER\_OF\_ROWS, NUMBER\_OF\_HOURS\_IN\_A\_DAY  
             Boolean variables  
              isSet, isPresent  
             Variables in class should not be declared as public.

             It’s better to declare the variables before you use them, may be beginning

             of the block.

             WebElement variables could be named as:  
             btn\_Cancel, lnk\_HomePage, txtBox\_UserName, img\_Logo, txt\_Message

1. Give as much as comments to the variables, methods which creates interest for others and makes more maintainability.

              /\*  
                 ….  
                 ….  
             \*/

OR

//

1. Create methods for every action (click on link, input text etc)
2. Create as many as common methods so you can reuse them. Like,

          Login

          Logout

          Register account

          Common navigation (settings page, theme page, menu options)

          Printing application reports

1. Use as much as oops concept.
2. Create separate package as Utility for

           excel operation,

           opening browser(give option to choose browser and URL)

           taking screenshot

           Logging reports

           Wait implementation (pass Web Element to this method)

1. Avoid Code Duplication - “Duplication is the primary enemy of a well-designed system.”

Avoiding code duplication must be the primary concern on anyone’s list

**[TestMethod]**

**[Description("Validate that user is able to fill out the form successfully using valid data.")]**

**public void Test1()**

{

Driver = GetChromeDriver();

SampleAppPage = new SampleApplicationPage(Driver);

TheTestUser = new TestUser();

TheTestUser.FirstName = "Nikolay";

TheTestUser.LastName = "BLahzah";

EmergencyContactUser.FirstName = "Emergency First Name";

SampleAppPage.FillOutEmergencyContactForm(EmergencyContactUser);

AssertPageVisible(ultimateQAHomePage);

}

**[TestMethod]**

**[Description("User validation - Duplicate")]**

**public void PretendTestNumber2()**

{

Driver = GetChromeDriver();

SampleAppPage = new SampleApplicationPage(Driver);

TheTestUser = new TestUser();

TheTestUser.FirstName = "Nikolay";

TheTestUser.LastName = "BLahzah";

EmergencyContactUser.FirstName = "Emergency First Name";

SampleAppPage.FillOutEmergencyContactForm(EmergencyContactUser);

AssertPageVisibleVariation2(ultimateQAHomePage);

}

1. Do not edit/change the existing common code.
2. Do not keep any unwanted commented lines of code . – clean it up.

          /\*  
TheTestUser.FirstName = "Nikolay";

EmergencyContactUser.FirstName = "Emergency First Name";

SampleAppPage.FillOutEmergencyContactForm(EmergencyContactUser);

AssertPageVisible(ultimateQAHomePage);

 \*/

1. Internal/peer review must be done before code merge to master project.
2. Dry run must be completed before code merge.