

Upgrades in Selenium Framework Version 2.3

- a) Changes in POM.XML file –
 - a. Added new dependency of selenium-manager for WebDriver implementation.
 - b. Updated the Selenium-Java dependency version to latest stable version 4.14.1.
- b) Changes in TestCaseBase Util class –
 - a. Removed the DesiredCapabilities code from all the browser initialization methods except for CBT, BrowserStack and Appium methods.
 - b. Replaced WebDriverManager initializations with the selenium-manager WebDriver methods.
 - c. Changes implemented to headless methods for syntax changes in WebDriver Options' addArgument() method.
- c) Updated the Log4j2.xml for changes in syntax.
- d) Found out and implemented alternative methods in Utility classes for the Suppressed methods with Version Upgrade of Dependencies in earlier version of framework.
- e) Verified that the Zip and Email Utility is still working fine and can be used further.

Upgrades in Selenium Framework Version 2.2

- f) Changes in POM.XML file –
 - a. Updated the version number of most of the maven dependencies to their specific latest version.
 - b. Resolved the errors & update with deprecated code with new functions & libraries.
 - c. For more information related to dependency updates refer document 'Maven_Dependency_Version_Upgrade_Details_Version_2_2.xlsx' in 'docs' folder.
- g) Validated framework compatibility for JDK higher versions like JDK19.
- h) Add the Framework architecture diagram in 'docs' folder.
- i) Added Rest API Utility to framework to support API testing.
- j) Added Database Connectivity Utility along with JDBC component.

Upgrades in Selenium Framework Version 2.1

New features have been added to the Framework, some of them are mentioned below.

- a) Changes in POM.XML file –
 - 1) Updated the version number of sikulix and webdrivermanager dependency.
 - 2) Added new dependency for browserstack named browserstack-local-java.
- b) Changes in TestCaseBase Util class –
 - 1) Two methods setMobileByCBT() & setMobileByBrowserStack() were updated for integrating Mobile Device testing.
 - 2) Two new methods were introduced for Edge browser execution in traditional and headless mode.
 - 3) The name of new methods added are setUpEdgeWin32() and setUpEdgeHeadless().

Upgrades in Selenium Framework Version 2:

New features have been added in Framework, some of them are mentioned below.

- a) Elastic search (kibana Dashboard):

Elasticsearch and kibana dashboard is integrated in Selenium with Java version 2. Elasticsearch is a distributed, free and open search and analytics engine for all types of data, there are 3 classes

(ElasticListener,ElasticModel,ElasticSender) in util folder in Framework which will help you to create a dashboard for your project.

b) The framework ver2 have selenium 4 features:

Following are the features that are present in ver2 Framework

- 1) Desired capabilities: Few driver constructors have been deprecated. Capabilities objects have been replaced with Options.We have to create an Options object for the Driver class we use.
- 2) Relative locators: Relative locators (aka Friendly locators) allow us to locate the WebElements by its position by concerning other web elements such as above, below, toLeftOf, toRightOf, and near.
- 3) Actions: The Actions class is used to emulate user gestures like mouse movements, hoverings etc., In the Selenium 4, some new methods have added to the Actions class as a replacement of the classes under org.openqa.selenium.interactions package.

- 4) Implicit Wait: Implicit wait in Selenium 4, the parameters received in Waits and Timeout have changed from expecting (long time, TimeUnit unit) to expect (Duration duration) which you see a deprecation message for all our tests.
- c) Rest Assured: Rest Assured is a Java-based library that is used to test RESTful Web Services. In Framework you will find a util class with some of the methods which you can use as per your requirements.
- d) Mobile Testing: Appium feature has been added which will help in testing mobile applications.
- e) New browser related methods have been added in PageManager class. Some of them are listed below,
 - 1) implicitWait()
 - 2) leftElementClick(By actualLeftElement,By rightElement)
 - 3) rightElementClick(By actualRightElement,By leftElement)
 - 4) aboveElementClick(By actualAboveElement,By belowElement)
 - 5) belowElementClick(By actualBelowElement,By aboveElement)
 - 6) urlStatus(String url)
 - 7) rightClickByAction(WebElement element, String message)
 - 8) doubleClickByAction(WebElement element, String message)
 - 9) scrollToSpecificPixels(int x, int y)
 - 10) scrollPageUntilElementIsClickable(WebElement element)
 - 11) addCookie(String name, String value)
 - 12) setBrowsersize()
 - 13) getURLResponse(String url)
 - 14) isElementEnabled(WebElement element, String message)
 - 15) untilAvalible(WebElement element, String message)
 - 16) getEnvironment()
- f) Headless browser methods are added in ver2 framework, like “chromeHeadless”, “FirefoxHeadless”.
- g) Some parameters have been added in BeforeClass method of Testcase class, these are, environment, elasticIp,elasticPort, elasticIndex, elasticContentType, projectCode
- h) Changes made in Custom assertion Class:

Soft assertions are added every method of custom assertion. Soft Asserts are used when the test script (or test method) need not be halted when the assertion condition does not meet the expected result.

- i) Some of the features you will only find in Ver1.You won't find the utils classes and related classes in ver2 as per the requirements.

Those classes are:

- 1) Database Testing
- 2) FTP
- 3) SOAPUI

Upgrades in Selenium Framework Version 1:

Some of the important elements that are used in framework development are listed below:

- a) Java Language is used in framework creation.
- b) Maven implementation.
- c) POM – Page object Model Design pattern is used.

- d) TestNG implementation.
- e) Extent report feature for report generation.
- f) Log implementation.
- g) Zip and mail functionality.
- h) Database connectivity.
- i) XML features and FTP functionality.
- j) Excel Implementation.
- k) The Utils class which are in Framework ver1 are:
 - 1) ComplexReportFactory
 - 2) CustomAssertion
 - 3) DatabaseUtil
 - 4) ExcelReader
 - 5) FTPTransfer
 - 6) LogWebdriverEventListener
 - 7) PageManager
 - 8) PageObject
 - 9) ReadJsonObject
 - 10) SoapApiUtil
 - 11) SystemUtil
 - 12) TestCaseBase
 - 13) TestData
 - 14) XmlReader
 - 15) ZipAndMail