

Testing is an essential part of a software development process. While testing intermediate versions of products/projects being developed, testing team needs to execute a number of test cases. In addition, prior to release every new version, it is mandatory that the version is passed through a set of “regression” and “smoke” tests. Most of all such tests are standard for every new version of product/project, and therefore can be automated in order to save human resources and time for executing them.

#### **Environment Specifications:**

1. Selenium Webdriver (Supports all major browsers, we use Mozilla, chrome and IE)
2. Eclipse IDE
3. Java
4. TestNG
5. AutoIT Tool (Used to handle Windows popups for Document Uploads and Downloads.)
6. JExcel or Apache POI to perform operations with excel like read, write and update the excel sheet

#### **This Framework has the following tools:**

**1. Selenium** - Selenium is a well know open source testing framework, which is widely used for testing Web-based applications. It has different components and in that Webdriver has rendered the Selenium Remote Control obsolete, and is commonly referred to as Selenium 2.0.

**2. Eclipse IDE:** Eclipse is an integrated development environment (IDE) for Java. The Eclipse IDE is the most known product of the Eclipse Open Source project.

**3. TestNG** - Is a testing framework inspired from JUnit and NUnit. It has extended new functionalities which made it more powerful and easier than the other testing frameworks. It supports ReportNG (simple HTML reporting plug-in) and XLST (Graphical / Pictorial reports) plug-ins to customize or extend the default TestNG reporting style. TestNG also provides ability to implement 'IReporter' an interface which can be implemented to generate a Customized TestNG report by users. It has 'generateReport()' method which will be invoked after all the suite has completed its execution and gives the report into the specified output directory.

**4. AutoIT** - AutoIT v3 is a freeware BASIC-like scripting language designed for automating the Windows GUI and general scripting. It uses a combination of simulated keystrokes, mouse movement and window/control manipulation in order to automate tasks which is not possible with selenium.

You can also refer the other frameworks available here [Keyword Driven Framework](#) and [Page Object Model Framework](#)

#### **File Formats Used in the Framework:**

1. Properties file – We use properties file to store and retrieve the UI elements of an application or a website and data set file paths. It contains id of the elements, name, xpath or Css selector etc.
2. Excel files – Excel files are used to pass multiple sets of data to the application.
3. Xml file – Is used to execute the test scripts. Based on the package or classes or Tests mentioned in the xml file scripts will be executed.