**Class1 – 13-Aug-2018**

**Introduction**

* What is automation testing?

In software testing, test automation is the use of special software[Tool] to control the execution of tests and the comparison of actual outcomes with predicted outcomes.

* What is the use of automation testing?
* What do we need to Automate?
* What is Selenium and how it got that name?

Selenium is a open source automated testing suite for web applications across different browsers and platforms

Selenium is not just a single tool but a suite of software's, each catering to different testing needs of an organization. **It has four components.**

* Selenium Integrated Development Environment (IDE)
* Selenium Remote Control (RC)
* WebDriver
* Selenium Grid
* Advantages of Selenium?
* What is the difference between Selenium and QTP?

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| --- | --- |
| **Selenium** | **QTP** |
| **Open source**, **free to use**, and **free of charge.** | **Commercial**. |
| **Highly extensible** | Limited add-ons |
| Can run tests across **different browsers** | Can only run tests in **Firefox**, **Internet Explorer** and **Chrome** |
| Supports **various operating systems** | Can only be used in **Windows** |
| Supports **mobile devices** | QTP Supports Mobile app test automation (iOS & Android) using HP solution called - HP Mobile Center |
| Can execute tests **while**the **browser is minimized** | Needs to have the application under test to be visible on the desktop |
| Can execute tests **in parallel**. | Can only execute in parallel but using Quality Center which is again a paid product. |

Though clearly,[QTP](https://www.guru99.com/quick-test-professional-qtp-tutorial.html)has more advanced capabilities, Selenium outweighs QTP in three main areas:

* **Cost**(because Selenium is completely free)
* **Flexibility**(because of a number of programming languages, browsers, and platforms it can support)
* **Parallel testing**(something that QTP is capable of but only with use of Quality Center)

### Different flavors**of Selenium**

* IDE
* Selenium RC
* Selenium Web Driver/Selenium 3.0
* Selenium-Grid

The entire Selenium Tool Suite is comprised of four components:

* **Selenium IDE**, a Firefox add-on that you can only use in creating relatively simple test cases and test suites.
* **Selenium Remote Control**, also known as **Selenium 1**, which is the first Selenium tool that allowed users to use programming languages in creating complex tests.
* **WebDriver**, the newer breakthrough that allows your test scripts to communicate directly to the browser, thereby controlling it from the OS level.
* **Selenium Grid** is also a tool that is used with Selenium RC to execute parallel tests across different browsers and operating systems.
* Selenium RC and WebDriver was merged to form **Selenium 2**.
* Selenium is more advantageous than QTP in terms of **costs and flexibility**. It also allows you to **run tests in parallel**, unlike in QTP where you are only allowed to run tests sequentially.

Class2 – 14-Aug-2018

### Locators and Object Identification

* Tools to identify elements/objects
* Firebug – Firefox – now not exists for latest version of FF
* IE Developer tools - IE
* Google Chrome Developer tools - Google

The different types of Locators in Selenium IDE

* ID
* Name
* Link Text
* CSS Selector
* Tag and ID
* Tag and class
* Tag and attribute
* Tag, class, and attribute
* Inner text
* DOM (Document Object Model)
* getElementById
* getElementsByName
* dom:name
* dom: index
* XPath
* partialLinkText
* tagName