**Selenium:**

Selenium invented in 2004. And 2006 selenium web driver launch in google.

In 2008 Selenium decided to merge selenium WebDriver with selenium RC in order to form more power tool name as Selenium 2.0

Selenium is a collection of software tools to automate web browsers. It’s an open source application which is mainly use for functional and regression test automation. [UFT is a competitor of selenium]

**Selenium support only web based application**

**Selenium tools:**

* Selenium IDE(Support only Mozilla Firefox)
* Selenium RC (out dated)
* Selenium web Driver
* Selenium Grid

Type of selenium :

1. Selenium 1

(selenium IDE + selenium RC + selenium Grid)

1. Selenium 2

(selenium IDE + selenium RC + Selenium WebDriver + selenium Grid)

[We use selenium 2.0 ]

Selenium support various operating environment

1)MS windows

2)Linux

3)Mac etc..

Selenium support various web browsers. But you need to browser driver. For example it has different browser and different driver

* Mozilla Firefox
* IE
* Google chrome
* Safari
* Opera etc.…

**[NOTE: Selenium IDE Supports Mozilla Firefox only. ]**

Selenium supports various programming environments to write test script(Programs)

For example: Java, C#, Python, Perl, Rubi, PHP

**Selenium IDE:**

It’s a Firefox Browser plugins which use to create and execute test cases. Selenium only support Firefox browser.

Features of Selenium IDE:

* Create test cases, test suites(environments)[we can record test or type steps using elements locator]
* Edit test cases.
* Execute test cases one by one.
* Debug test cases .(steps by steps execution)
* Enhance test cases.
* Export test cases using any supported environments( java, ruby etc.)

**[NOTE: selenium IDE test case default format is .html]**

Drawbacks of selenium IDE:

* It support Mozilla Firefox only.
* It does not support programming logic / features test cases.
* It does not data driven testing.
* It is not suitable for complex test case design.

**Selenium WebDriver:**

=>It is a programming interface to create and execute test cases.

=>Selenium WebDriver does not have IDE.

Feature of Selenium WebDriver:

* Selenium WebDriver support (Java, C#, Perl, Python, Ruby, PHP)
* Using elements / objects locators or properties and WebDriver methods we can create and execute test cases. Selenium WebDriver support various browsers to create test or execute test cases.
* It support MS Windows, Linux, Mac etc.

**[NOTE: Browser driver varies one from another. For use just download the WebDriver and copy the path to the test cases]**

Drawback of WebDriver:

* It does not generate detail test report only summary(Pass or Fail)
* No centralized maintenance of objects.

**Selenium Grid:**

Selenium Grid only use for test execution. It use for multiple browsers, operating environments and machines which execution in parallel.