**Selenium Automation Tool:**

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**Advantages of selenium**

1. Selenium is pure open source, freeware and portable tool.

2. Selenium supports variety of languages that include Java, Perl, Python, C#, Ruby, Groovy, Java Script, and VB Script. etc.

3. Selenium supports many operating systems like Windows, Macintosh, Linux, Unix etc.

4. Selenium supports many browsers like Internet explorer, Chrome, Firefox, Opera, Safari etc.

5. Selenium can be integrated with ANT or Maven kind of framework for source code compilation.

6. Selenium can be integrated with TestNG testing framework for testing our applications and generating reports.

7. Selenium can be integrated with Jenkins or Hudson for continuous integration.

8. Selenium can be integrated with other open source tools for supporting other features.

9. Selenium can be used for Android, IPhone, Blackberry etc. based application testing.

10. Selenium supports very less CPU and RAM consumption for script execution.

**Disadvantages of selenium**

1. Selenium needs very much expertise resources. The resource should also be very well versed in framework architecture.

2. Selenium only supports web based application and does not support windows based application.

3. It is difficult to test Image based application.

4. Selenium need outside support for report generation activity like dependence on TestNG or Jenkins.

5. Selenium does not support built in add-ins support.

6. Selenium user lacks online support for the problems they face.

7. Selenium does not provide any built in IDE for script generation and it need other IDE like Eclipse for writing scripts.

8. Selenium script creation time is bit high.

9. Selenium does not support file upload facility.

10. Selenium partially supports for Dialog boxes.

**Selection Criteria :**

**1. selenium works on web based applications**

**2. selenium can be worked to many languages like java, python, c#**

**3. implementation is not quite difficult.**

**Application :**

**Testing on simple calculator**

folders:



files insides the folders:



**code of the simple calculator which we tested:**



**Using selenium Python automation tool, we tested the simple calculaor using unittest library:**



**sample output/ execution of test cases:**



**Test Report:**



We test on the basis of unit testing and test the top 4 functionalities of calculator in one code

add, sub, div, mult are the functions we tested.