**Selenium IDE**

It is a one of the flavours of selenium. It is an integrated development environment.

We can create testcases and test suites in selenium IDE

**Why we select IDE**: -

It is a GUI. Basically uses Firefox plugins.

Perform cross browser testing.

Edit the test cases easily.

Convert the test cases to any other languages.

**Selenese**: -

Set of commands used to perform certain actions on web applications.

Selenium commands: -

Command which tells what to do

1.Actions: -Which action must be performed

Click ()----click on some link

Select some options etc.

2.Accessors: -

It check the state of application and stores the application state in a variable.

3.Assertions: -

These are the checkpoints in automation.

Which compares the values actual and expected.

a. assert

b. Verify

C. Wait

Drawbacks: -

Can’t be used for big data.

All the possible cases are not possible like file upload, screenshot etc.

Can’t handle multiple windows.

**Selenium Grid**: -

It is one of the selenium flavours.

It will run the testcases parallelly and it execute diff testcases on diff machines at a time.

It saves lot of time and effort.

**Cross Browser Testing**: -

Cross Browser testing is nothing but to test the same application testcases on multiple browsers like chrome, internet explorer and on different OS.

Due to this testing customer will get the required app even though testing on different browser.

How to perform: -

1.Manual—re-run the same testcases on diff browsers. So, it is hard to test on all browsers.

2.Automation-it is easy because it may take less time to test.

**Data Provider in TestNG**: -

It is a method which returns an array of objects[] []

It is annotated with @DataProvider.

To test the Same testcases having multiple set of data.

To providing the data with the help of data provider.

//@Test(DataProvider=”data”).

FRAME WORKS: -

Grouping of all the requirements in a single place is called framework.

The main objective is to be fixing a bug in a million line code.

To make the automation simple and efficient and easily.

**Benefits**: -

Code re usability

Code readability is easy.

Reduced Script maintenance.

There are 3 frameworks commonly used in selenium.

1.Data Driven framework

2.Keyword driven framework

3.Hybrid framework.

**Data Driven framework: -**

It is nothing but to test the same test script with different data sets.

Data should be taken from excel file.

By using of **Apache** poi, we can read the data from excel sheets in selenium.

**Keyword driven Framework: -**

In this framework we can send the data to excel sheet.

To write the data we need file input stream and output stream as well.

Hybrid Framework: -

It is the combination of both data driven and keyword driven frameworks.

**Cucumber Framework**: -

It is also called behavioural driven development (BDD).

It is a tool which used to write the test cases to easily understandable.

Here simple English language is used to write the test cases called Grekin’s language.

**@then, @given, @when, @and**

The reports should be generated that how many test cases should be passed and failed and skipped.

--whatever wants to test we need to write in feature file.

**Page Object model**: -

The main object is to find the elements in one page and implementation is done in another page is called page object model.

For code reusability we are using page object model.