**Frameworks In Automation:-**

-**Selenium Framework is a code structure that helps to make code maintenance easy.**

-There are mainly three types of frameworks created by Selenium WebDriver to automate manual test **cases:**

**1)Data-Driven Test Framework**

**2)Keyword Driven Test Framework**

**3)Hybrid Test Framework**

**1)Data-Driven Testing:-**

**-Data Driven Testing is a test automation framework that stores test data in a table or spreadsheet format. This allows automation engineers to have a single test script that can execute tests for all the test data in the table.**

**-In this Framework, input values are read from data files and are stored into a variable in test scripts. DDT(Data Driven Testing) enables building both positive and negative test cases into a single test.**

**-In Data-Driven test automation framework, input data can be stored in single or multiple data sources like xls(old) , XML(new datafolder), csv(Comma separated value in JMeter) and databases(i.e. in SQL, Oracle).**

**Data Driven Testing Framework Diagram**

Application Under Test

Data File

**Test**

Driver Script

**Data**

Test Result(Compare)

**Expected Actual**

**Output Output**

**Advantages of Data-Driven Testing:-**

**-Allows to test application with multiple sets of data values during Regression Testing.**

**-Test data and verification data can be organized in just one file, and it is separate from the test case logic.**

**-Base on the tool, it is possible to have the test scripts in a single repository (in 1 single excel sheet). This makes the texts easy to understand, maintain and manage.**

**-Actions and Functions can be reused in different tests.**

**-Some tools generate test data automatically. This is useful when large volumes of random test data are necessary, which helps to save the time.**

**-Allows developers and testers to have clear separation for the logic of their test cases/scripts from the test data.**

**2) Keyword Driven Testing(Framework):-**

**- KEYWORD-DRIVEN TESTING(FRAMEWORK) is a scripting technique that uses data files to contain the keywords related to the application being tested. These keywords describe the set of actions that is required to perform a specific step.**

**-A Keyword-driven test consists of high and low-level keywords, including the keyword arguments, which is composed to describe the action of a test case. It is also called table-driven testing or action word based testing.**

**-In Keyword Driven testing, you first identify a set of keywords and then associate an action (or function) related to these keywords. Here, every testing action like opening or closing of browser, mouse click, keystrokes etc. is described by a keyword such as openbrowser , click, typetext and so on.**

**Advantages of Keyword Driven Testing:-**

**-It allows functional testers to plan test automation before the application is ready.**

**-Tests can be developed without programming knowledge.**

**-It is not dependent on a specific programming language or tool.**

**-Compatible with any automation tools available in the market.**