**Hybrid Framework :**

A framework **is** a set of assumptions or concepts that need to be followed.

**Components of Framework or Modules of Framework :**

* Test Case Standardization – we use Page Object Model for creating Hybrid Framework.
* Logging standardization
* Test Data and Configuration Utility
* Helper / Utility Library – we can create library for screenshots.
* Test Execution Engine
* Reporting Utility

Minimum time to design a framework is 3 – 4 weeks at learning stage.

Things to be known before creating a hybrid framework :

* How to read or write excel
* How to read a property file
* What is Page Object Model
* What is Maven
* What is Jenkins

Creating a Framework :

Create a Maven Project

For a maven project we need some dependencies. Search for Selenium Maven dependency, and add the dependency (https://docs.seleniumhq.org/download/maven.jsp) as a dependency in pom.xml file of the maven project under <dependencies></dependencies> tag. Similarly add testing maven dependency (<http://testng.org/doc/maven.html>), add extentreports dependency (<http://extentreports.relevantcodes.com/java/#maven>) or(https://mvnrepository.com/artifact/com.aventstack/extentreports/3.0.0), we need two things for apache poi(https://mvnrepository.com/artifact/org.apache.poi/poi/4.0.0) and apache poi-ooxml (<https://mvnrepository.com/artifact/org.apache.poi/poi-ooxml/4.0.0>). Once the dependencies are added we observe that all the library files are downloaded.

We have src/test/java folder where we create all the packages that are needed for our projects.

* We create five package for testCases, pages, dataProvider, utility and four folders for screenshots, reports, testdata, configuration, factory package which provides objects of the classes inside it.

Creating Excel Library and Configuration Library ;

Create an Excel file(AppData.xlsx) in ApplicationTestData folder and mention the file path in the ExcelProvider Class to read the details from excel.

Create a file with the extension .properties(config.properties) in Configuration folder and mention the file path in ConfigDataProvider Class to read the properties from the file. This file consists of url and driver details.It can also contain the login details.