

## Explanation for the Test Framework Design

In the graph of Test Framework Design, there are almost all of the tools that will be used to build the framework.

- Since the **Application Under Test** is web based framework, it should work well with different browsers like Firefox, Safari and Chrome, etc.
- **Selenium WebDriver** Test Framework tool will be used to drive these web browsers. There are a lot of languages supported by Selenium WebDriver, Java is one of the best solution, the others includes Python, Ruby, C#, etc.
- For this project **Java** will be used with the Selenium and for the test execution will be used **JUnit**.
- Version Control is always important during software development and testing process. There are a lot of **Version Control Systems** (VCS), **git** of course is one of the most popular. Svn can be another selection.
- For the project management, **maven** tool will be used because
  - it can support to easily define dependencies
  - it allows to change the Selenium version by changing the pom.xml file
  - commands can be run like maven clean test to start the test
  - different profiles can be defined to run critical tests with parameters
- After all have been built, the Test Framework can be given to Continuous Integration (CI) environment like **Jenkins** to schedule it, to triggered conditions when there are changes in the application under test, and to check if this change will bring any regression issue.

Finally, after the tests have been run, test results report will be generated for team members to view and take actions accordingly.