RAFTAAR

# Regression Automation Framework That Allow Artificial Runs

RAFTAAR is an open source automation framework.

# Technology Stack

* Java 1.7.0\_25
* Selenium 2.52.0
* TestNG as testing framework
* ReportNG (heavily customized) for HTML reporting
* Java Script
* JQuery
* Oracle Apex 5.0 as UI engine
* Oracle 11g database for backend data storage
* JDBC libraries for connecting to Oracle/ Postgrad/ MySQL / Mongo DB
* Apache libraries for reading/ writing xlsx files
* Apache Ant 1.9.6
* Apache Maven 3.3.3
* Apache Tomcat 7.0.64 for web hosting
* Python 3.4.3

# Test Automation

Automation Testing is the use of special software, separate from the software being tested; to control the execution of tests and the comparison of actual outcome with the expected outcome. Test Automation can automate some repetitive but necessary tasks in a formalized testing process already in place, or add additional testing that would be difficult to perform manually. Test Automation is critical for continuous testing. Test Automation plays an important role in regression testing which can be laborious and time consuming if performed manually. Once tests have been automated, they can be run quickly and repeatedly.

Test Automation is a central service that is built to provide automation services for all projects. Here is how we visualize ourselves:

* Automate regression testing for each product and project
* Reduce manual testing efforts
* Dramatically reduce regression testing cycle to no more than a day each product
* Allow QA team to focus on more investigative testing

# Framework Capabilities

Our automation framework is fully grown up now. It’s being used across dimensions of projects, including Web portal, backend processing, web services etc. Currently its capabilities can be listed such as

* Automate any web application, including AJAX component handling,
* Interact with and RDBMS and MongoDB (for data retrieval, manipulation and assertions),
* Run tests locally or on a grid (private or public),
* Cross-browser testing on Chrome, Firefox, IE and Safari,
* Test web services (REST and SOAP),
* Run remote shall commands on Linux servers,
* Download/ Upload files to SFTP/ FTP/ FTPS// Amazon S3,
* Neat HTML reports (see an example here), with screenshots,
* TestNG integration for best test framework support, including great ability to run tests in parallel to reduce execution time,
* Integration with automation portal to trigger execution and view live status online,
* Customizable html email notification on test completion,
* Work with xml, xls, xlsx, flat files and PDF files,
* Assertions based on sorting of element in both ascending/ descending order,
* Run custom JavaScript for complex calculations involved in tests,
* Ability to use excel formulas in test data sheets,
* Work with frames and multiple browser windows

# TRAINING PLAN

* Test Manager
* Test Runner
* Test Driver
* Utilities
  + Java Utilities
  + XML Utilities