

Selenium Hands-on Training – Class 10

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Recap of previous session

- Introduction to BDD, working with Cucumber framework

Last week Assignment

- Please try to implement the last week assignment test cases using given cucumber framework by writing your own Gherkin commands

Test application URL : <http://automationpractice.com/index.php>

Test case to tryout

1. Search for the any summer dress by applying search criteria in catalog and add to cart
2. Compare Faded Short Sleeve T-shirts and Printed Dress using Add to compare option, add the higher price into cart and remove the another one
3. Checkout - > register - > update address - > Select shipping mode -> use pay by check option -> Save order reference id -> go to order history -> find out status, total, tax amount -> Logout

Note : Read the user registration data from excel sheet, write the order reference, status, tax amount to the same sheet, same row. Use dummy values for registration

Agenda for the day

- Walkthrough on Automation framework components
- Selenium Grid

What is automation framework ?

- A test automation framework is a **set of components that facilitate executing tests and comprehensive reporting of test results.**
- A Test Automation Framework is a **set of guidelines** like coding standards, test-data handling, object repository treatment etc... which when followed during automation scripting produces beneficial outcomes like increased code re-usage, higher portability, reduced script maintenance cost etc. These are just guidelines and not rules.
- Automation Framework is not a single tool or process, but it is a **collection of tools and processes working together** to support automated testing of any application. It integrates various functions like libraries, test data, and various reusable modules.

Major components of automation framework

- **Utility functions / core functions** – To perform common selenium actions with proper error handling & reporting
- **Elements factory** – To handle the web elements (Page Factory)
- **Driver factory** – To initiate and handle multiple thread of drivers (capabilities, remote web driver)
- **Test Data module** – Read and Write TestData.xlsx (Test data automation)
- **Properties handler** – To work with properties file, environment parameters.
- **Test report module** – Hooks to handle reports (screenshots, word file, html handler)
- **Logger module** – To maintain console logs (debugging purpose)
- **Other modules** – DB handler, API testing modules, ALM/JIRA integration, mailer, scheduler

Types of automation framework

- Data driven framework
- Keyword driven framework
- Hybrid framework
- Behavior driven development framework
- Model driven development framework

When to use which framework ?

- Which type of application, development process ?
 - Flow based – same flow with different combination of data to be tested – data driven
 - Independent functionalities – no constraint
 - Dependent functionalities – Keyword driven / hybrid
- Which type of test suite ?
 - Functional – BDD framework
 - Regression – Hybrid framework
 - Sanity – Keyword, Data driven
- Cost involved, skill sets
- Time taken for implementation

Assignment

- Please try the selenium Grid 3 and Selenium grid 4 and execute cases in remote mode.
- Currently Selenium Grid 3 is used in production and will be updated to Grid 4. please try Grid 3 then Try grid 4
- Grid 3 – https://www.selenium.dev/documentation/legacy/selenium_3/grid_3/
- Grid 4 - <https://www.selenium.dev/documentation/grid/>

Opensource automation frameworks

<https://github.com/Infosys/Selenium-Testing-Automation-Framework>

<https://github.com/qmetry/qaf>

<https://github.com/anujkumar21/JWAF>

Below is developed using advanced Java concepts – (just for reference)

<https://github.com/WasiqB/coteafs-selenium>