**Design Selenium Framework from Scratch**

* Why Framework? Its advantages
* Create **Maven** Structured Framework with all necessary Automation

Dependencies

* Select Sample Ecommerce Application to Automate the end-to-end flow
* Implement **Page object Model** mechanism to drive the locators from

respective classes

* Drive object creation within Page object classes **encapsulating** it from Tests
* Create Base Test which sets browser configuration details and **Global properties**
* Decide the **Test Strategy**, how tests should be clubbed & distributed with appropriate annotations
* Create **TestNG runner** file to trigger the tests with one Single point of execution control
* Introduce **Grouping in TestNG.xml** to categorize tests with different tags of execution
* Implement **Data driven testing & Parameterization** using TestNG Data provider HashMap & Json File readers
* Implement **TestNG Listeners** to capture Screenshot on automatic test failures and logging
* Create Extent Report wrapper to generate **excellent HTML reports** for the application
* Make Framework necessary changes to support **Parallel execution** with Thread safe mechanism.
* Implement **TestNG retry** mechanism to rerun the failed flaky tests in the application
* Run the Framework tests with Maven commands with TestNG **Maven integration plugin**
* implement **Maven Run time variables** to replace global parameters of test data at run time.
* Integrate the Framework with **Jenkins** with Parameterized Build Pipeline Jobs & Schedule the jobs on specific time frames.
* Add **Cucumber Wrapper** to existing framework with Cucumber TestNG Runner
* Create **Feature files & Step** definitions to support Cucumber execution of Selenium Tests
* Understand how **cucumber tags, Data driven & Parameterization** works in running the tests