



**Course Contents**

**Selenium & BDD with Cucumber**

**Testing Overview**

**Introduction to Selenium**

* Selenium overview
* Selenium Fundamentals
* Selenium components - IDE, Server, Grid
* Basic structure of an IDE Test as HTML Table
* Selenium IDE Test Cases and Test Suites
* Concept of DOM and Webtables
* Locator and DOM related tools
* Selenium Locator Strategies
* Using Regular expressions in tests
* Actions, Assertions and Accesors in Selenese
* Handling JavaScript alerts, confirmation and prompts
* Handling alerts, model windows and iframes
* Handling AJAX and Test Synchronization
* Structure dependant and attributes based locators
* Selenium Servers
* Concept of WebDriver, WebDriverBacked and RC
* Difference Between RC and WebDriver
* Using WebDriverBacked from Selenium migration projects
* Installing and Configuring Selenium WebDriver in Eclipse
* Group test automation project execution
* Testing Frameworks for Selenium
* What is Junit and TestNG? Similarities and Differences
* Junit Test Suites
* TestNG Test Suites
* Using TestNG to

1) Selectively run tests,

2) Run tests in parallel on different browsers

3) Grouping & prioritizing tests

4) Using data provider with excel integration to read data for data parameters in tests

* Test Fixtures and Annotations
* Taking screenshots and trigger on error

* WebDriver in various scenarios
* Handling common objects such as Checkbox, Radio buttons, Dropdown, Autocomplete
* Dealing with mouse hover in WebDriver
* Controlling browser attributes and navigation
* Validating on CSS attributes of objects
* Handling Cookies, Find broken images/links in website
* Reporting the test execution (TestNG Report, Allure Report)
* Using Extent reports for reporting results including writing test step results to the report
* JavaScript action for scroll

* Implicit, Explicit and Fluent wait
* Various flavors Chrome, IE and Firefox
* WebDriver user defined actions and keyboard entries
* Data Driven frameworks for Excel
* Headless execution of Tests
* Reading test related variables from properties file
* Data Driven using CSV and Databases
* Page object model framework
* Page Factory and POM for better maintenance and reusability
* Combing Page Factory with Data driven test
* Updating the existing tests in POM model
* Selenium Grid
* Setup the Hub server
* Register the WebDriver Nodes and legacy RC nodes to the Hub server
* Parameterize the tests to run on various nodes
* Override the default parameters on the nodes
* CP-SAT Mock Exam
* Selenium in CI/CD
* Automating the Automation
* Understanding Testing tasks in Jenkins
* Installing Maven and dependencies using pom.xml
* Using Maven for Jenkins Selenium testing tasks
* Discussion on Mock Exam submissions to help improve on practical aspects
* Hybrid Framework concepts
* Difference between Keyword driven and Hybrid Frameworks
* Java Reflection Class
* Reporting results back to the framework

**Cucumber**

* What is Cucumber Testing Tool
* Downloading & Installing cucumber
* What is Feature File & Step Defination
* What is Gherkin & write Gherkin Test in Cucumber
* Writing Cucumber Script
* Selenium Integration with Cucumber BDD
* Passing Parameters in cucumber Scripts
* Performing Data-Driven Testing in Cucumber-Selenium

**API Testing:**

* Introduction to Web Service & API
* Tools available for API Testing
* Postman
* Download & Install PostMan
* Postman Navigation
* Create Requests in Postman
* Passing Parameters in PostMan
* Basic Authentication in PostMan
* Environment Variables & Collections in PostMan
* How to debug & Run from command Line
* Rest Assured
* Configuring Eclipse with Rest-Assured
* Making Simple Get Requests
* Validate Response status code, Header, & Body using Rest Assured
* Making Post Request using Rest Assured
* Authentication & Authorization
* JSON basic

**JIRA**

* Introduction to Jira & How to use Jira on Cloud
* How to Create Project & How to add users in Jira
* How to create Epic & User stories
* Create Sprint in JIRA & Adding User stories to sprint
* Create Test Cycles, Update Test Cases & checking Test Reports