# FULL STACK AUTOMATION (SDET)

# WHAT YOU GET

* 6 weeks of Basic + 2 weeks of Advanced Automation Course training
* 10 hours weekly training
* 5 days online access to teacher
* Online Training with a Live Instructor
* Life time access on Recorded class videos
* Required Automation Testing software’s will be provided

# WHAT YOU’LL LEARN

BASIC COURSE: (6 WEEKS)

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Module 1: Overview on Software Testing & Automation

Module 2: Java Programming

Module 3: Selenium WebDriver

Module 4: TestNG

Module 5: Extent Reports, Page Object Model & Log4J2

Module 6: Maven

Module 7: Automation Frameworks

Module 8: Jenkins, GIT & Github

Module 9: Docker & Zalenium (Recorded videos)

ADVANCED COURSE (2 WEEKS)

Module 10: Cucumber

Module 11: API Testing using Rest Assured

Module 12: Appium (Recorded videos)

# BASIC COURSE

**Module 1: Overview on Software Testing & Automation**

* What is Software testing?
* Ways of Software Testing
* Challenges in Manual testing
* Use of automation Testing
* Tools for Automation Testing
* What is Selenium?
* Features of Selenium
* Limitations in Selenium

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**Module 2: Java Programming**

* Download and install Java
* Setup Java Environment
* How to use Eclipse/IntelliJ IDEA
* Basic Java Program
* Compile and run a Java program
* Understanding console output
* Java Variables and Data Types
* Java Operators
* Conditional statements
* Looping statements
* Single Dimensional array
* Double Dimensional array
* Object class
* String Class
* String methods
* ​​Classes and Objects
* Java methods
* Passing parameters to the methods
* Call by value and call by reference
* Java Constructor
* Method Overloading
* Constructor Overloading
* this, final keywords
* Static variables and methods
* Java Inheritance
* Method Overriding
* Java Interfaces
* Access Modifiers
* Java Packages
* Exception Handling
* Array List
* Hash Map
* JDBC

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**Module 3: Selenium WebDriver**

* Download WebDriver API
* Create WebDriver Project in Eclipse
* Create WebDriver test case
* Execute test case on multiple browsers
* Locators
  + What are locators?
  + Types of Locators
  + Capturing XPath in different ways
  + How to use ChroPath in Chrome
  + Types XPath
  + Writing XPath
  + Built-in functions in XPath
  + Handling Dynamic elements using XPath
* WebDriver commands
  + Browser commands
  + Get commands
  + Switching commands
  + Navigation commands
  + Conditional commands
  + Implicit, Explicit and Fluent Waits
* Handling Web Elements
  + Textbox/Input box
  + Links
  + Radio Button/Checkbox
  + Dropdown box/Combo box
  + Multi Select dropdown
  + List box
  + Calendar/Date Picker
  + Web Links
  + HTML frames/Iframes
  + Web/HTML Tables
* Mouse actions using Actions class
  + Mouseover
  + Mouse double click
  + Mouse right clicks
  + Drag and Drop
  + Handling Slider/scroll bar
  + Resizing
  + Handling Tooltips
* Keyboard actions
* Working with Robot Class
* Working with Sikuli
* How to use JavaScript Executor
* Browser profiles
* Desired Capabilities
* Handling cookies
* Headless browser testing
* Capturing Screenshots
* Data Driven Testing in Selenium
  + What is data driven testing?
  + Apache POI API
  + Data Driven Tests using multiple sources
    - Excel/csv files
    - Java HashMap
    - Databases
    - Text files
* Log4j for logging

**Module 4: TestNG**

* What is TestNG? Features of TestNG
* Install TestNG in Eclipse
* How to write TestNG Test case
* Annotations in TestNG
* Understanding testng.xml
* TestNG html Report
* Prioritizing tests
* dependsOnMethods
* Skipping tests
* Grouping methods
* Parameterization
* Passing parameters using xml
* Parallel testing
* Data Provider
* Invocation methods
* TestNG Listeners

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**Module 5: Extent Reports, Page Object Model & Page Factory**

* Generating Extent Reports
* Page Object Model - Creating Page objects
* Page Factory – @FindBy annotation

**Module 6: Maven Integration with Selenium**

* What is Maven and Why Maven?
* Installing/Configuring Maven
* Creating Maven Project
* Importing Maven Project into Eclipse
* What is POM.xml?
* Adding Dependencies to POM.xml

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**Module 7: Automation Frameworks**

* What is Framework?
* Various Types of Frameworks
* Implementation of Hybrid Driven Framework from the scratch
  + Creating Maven Project
  + Update pom.xml with dependencies
  + Creating page objects and Object repository
  + Creating utility files
  + Setting up configuration files
  + Creating automation test scripts
  + Creating data driven test scripts
  + Generating extent reports
  + Generating logs using log4j
  + Execute test scripts
  + Emailing test reports
  + Execute test scripts through Maven
  + Execute test scripts using bat file

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**Module 8: Jenkins, GIT & GitHub**

* What is Continues Integration?
* Continuous Integration Tools
* Download and install Jenkins
* Maven integration with Jenkins
* Run selenium test scripts through Jenkins
* Downloading and Installing GIT
* Installing GIT and GITHUB plug-ins for Jenkins
* Git commands
* Uploading project to Github

**Module 9: Docker with Selenium Grid & Zalenium**

* What is Virtualization?
* What is Containerization/Container management?
* What is Docker, Docker Container & Docker Image?
* What is Docker Hub?
* Docker Container Life Cycle
* Virtualization Vs docker
* How Docker helps in Automation?
* Docker Terminology
* Docker Commands
* Run Selenium Tests on Docker Containers
* Selenium Grid on Docker
* Run Selenium Tests on Cloud Platforms (Sauce Labs & Browser Stack)

# ADVANCED COURSE

**Module-10: Cucumber**

* Cucumber Introduction
* TDD (Test Driven Development) Vs BDD (Behavior Driven Development)
* Set Up Cucumber with Eclipse & IntelliJ IDE’s
* Install Cucumber Plugins in Eclipse & IntelliJ IDE’s
* Cucumber Environment
* Setting Up Cucumber with Selenium
* Maven dependencies for Cucumber
* Cucumber Selenium Java Test
* Cucumber Gherkins Keywords
* Cucumber – Features file
* Cucumber – Scenarios
* Cucumber – Annotations
* Cucumber - Scenario Outline
* Cucumber – Tag
* Cucumber - Data Tables
* Parameterization in Cucumber
* Cucumber - Comments
* Cucumber - Hooks
* Cucumber - Command Line Options
* Cucumber - JUnit Runner
* Cucumber – Reports generation both Html report and Json report

**Module-11: API/Webservices Testing using RestAssured**

* Basics of API’s & Webservices
* API Testing using Postman Tool
* REST Assured Setting up environment (Eclipse, Maven, TestNG & Rest Assured)
* Keywords used in BDD Approach
* How to send GET Request
* How to send POST Request
* How to send PUT Request
* How to send DELETE Request
* Validating Headers
* Authorization parameters
* Validations on JSON Response
* Validations on XML Response
* How to rooPath & detachRootPath in RestAssured
* Different ways of Reading Response
* Working with Response Headers
* Working with Response Cookies
* Handling Authentication types
* Types Parameters and working with Parameters
* How to use Request Specification Builder & Response Specification Builder
* Logging
* Serialization & De-Serialization JSON
* serialization & De-Serialization XML
* Rest Assured End-to-End Test Case
* RestAssured Automation Framework development
* How to run API tests using Maven CLI
* Run Rest Assured tests in Jenkins

**Module-12: Appium**

* Introduction to Mobile Testing and Appium
* Importance of Mobile Phones
* Types of Mobile Apps
* Available Mobile Testing Tools
* Why Appium?
* Advantages & Limitations of Appium
* What is an Appium
* Appium Architecture
* Environment setup
* APK File, Simulators, Emulators and real devices
* What are Desired Capabilities?
* How to get locators in the App
* Invoking Android APP using .apk file – First Automation test script
* How to use UIAutomatorViewer Tool – Locate Elements in the App
* How to use XPath, ID, ClassName and multiple objects of App with Index
* How to use AndroidUIAutomator to identify objects
* Working with Native, Web & Hybrid Apps on Android