# SDET

# WHAT YOU GET

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

# WHAT YOU’LL LEARN

**BASIC AUTOMATION COURSE (6 WEEKS)**

Module 1: Overview on Automation

Module 2: Java Programming for Selenium

Module 3: Java Object Oriented Programming

Module 4: Selenium WebDriver

Module 5: TestNG

Module 6: Extent Reports, Page Object Model & Page Factory

Module 7: Maven Integration with Selenium

Module 8: Automation Frameworks

Module 9: Continuous Integration (CI) - Maven, Jenkins, GIT & Github

**ADVANCED AUTOMATION COURSE (2 WEEKS)**

Module-10: Cucumber BDD Framework

Module-11: API/Webservices Testing using Postman & Rest Assured API

Module 12: Appium for Mobile App Testing

# DURATION

* 8 Weeks (Monday-Friday) / 2 Hours/Session (Total: 80 Hours)

# AUTOMATION TESTING (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

**​Module 2: Java Programming for Selenium**

* 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

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**Module 3: Java Object Oriented Programming**

* 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

**​Module 4: 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 5: 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

​**Module 6: Extent Reports, Page Object Model & Page Factory**

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

**Module 7: 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

​**Module 8: 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

​**Module 9: Continuous Integration (CI) - Maven, Jenkins & GIT**

* 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

# AUTOMATION TESTING (ADVANCED COURSE)

**Module-10: Cucumber BDD Framework**

* Cucumber Introduction
* TDD (Test Driven Development) Vs BDD (Behavior Driven Development)
* Set Up Cucumber with Eclipse
* Install Cucumber Eclipse Plugin
* Download Cucumber JVM for Eclipse
* Cucumber Selenium Java Test
* Cucumber Environment
* Setting Up Cucumber with Selenium
* Cucumber Gherkins languages
* 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**

* Basics of API & Web services Testing
* What is Client and Server?
* Client Server architecture
* Presentation, Business & Database Layer
* What is Request & Response
* What is API Testing
* API Testing VS Unit Testing
* What is Web Service
* Difference between API & Web service
* Components of Web services (WSDL & UDDI)
* SOAP VS Rest services
* API/Web service testing challenges
* Web Service API testing tools
* Web services API Testing process
* HTTP Methods (GET/POST/PUT/DELETE)
* Status Codes
* Examples of Web service API's

**Postman**

* Download and Install Postman
* Creating Requests and Analyzing Response
* Request Parameters in Postman
* Postman Collections
* End to End test case (GET, POST, PUT, DELETE)
* Test and Collection Runner in Postman
* Workflows in Postman
* Variables in POSTMAN
* Environment/Global variables
* How to share collections in workspaces
* Data Driven testing using Json & CSV files
* Run Postman tests in command Line
* Generating Reports in Postman
* How to handle SOAP Web service Requests in Postman

**Rest Assured API**

* Introduction to HTTP methods
* REST Assured Setting up environment (Eclipse, Maven & TestNG)
* Send GET request using REST-Assured
* Send POST request using REST-Assured
* Send PUT request using REST-Assured
* Send DELETE request using REST-Assured
* REST-Assured Extracting values from the response.
* Validating Response codes and status line
* JSON Schema Validation
* Validating Headers
* Rest Assured End-to-End Test Cases
* Data Driven test cases
* How to run API tests using Maven CLI
* Generating reports
* 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