Java Selenium Course in Chennai

Master Selenium Test Automation with Java in Chennai

Go from Core Java basics to a complete Selenium WebDriver automation framework. Build real automation skills with Core Java, Selenium WebDriver, locators and XPath, TestNG, JUnit, Cucumber BDD, Page Object Model, Maven, Git and Jenkins CI/CD, API testing with Postman, SQL and Agile, taught by working industry professionals and backed by placement support.

Your Trainers

Velmurugan — Lead Automation Testing Faculty
14+ Years Experience

Sabapathi — Senior Selenium & Gen AI Testing Faculty
12+ Years Experience

Course Curriculum

Phase 1: Core Java Foundations 4 Modules

Core Java from the fundamentals, before any Selenium.

01. Core Java Basics

- Introduction to Java, features of Java, JDK, JRE & JVM overview; installing JDK and Eclipse IDE; coding & naming standards
- Data types, variables & types of variables, operators, type conversion, upcasting & downcasting
- Conditional statements (if, if-else, switch) and loops (for, while, do-while); break, continue & return
- Scanner class, debugging with breakpoints, packages & import statements
- Logic-building programs: even/odd, factorial, Fibonacci, palindrome, Armstrong, reverse & digit sum

02. Object-Oriented Programming in Java

- Classes & objects, methods, constructors, constructor chaining & overloading
- Abstraction: interfaces & abstract classes
- Inheritance: extends & implements, super & this, aggregation & association
- Polymorphism: method overloading & overriding
- Encapsulation: POJO, getters & setters; access modifiers
- Singleton class, Factory design pattern & Builder pattern

03. Strings, Collections & Core APIs

- Strings, StringBuilder, StringTokenizer & string methods; arrays & multi-dimensional arrays
- Wrapper classes, autoboxing & unboxing; generics
- Collections framework: List, Set, Queue & Map (HashMap, LinkedHashMap, TreeMap)
- Exception handling: try, catch, throw, throws, finally & custom exceptions

- Java Regex, date & time, multi-threading basics
- Java 8 features: Lambda, functional interfaces, Streams & Optional; JVM memory management

04. File Handling & Data Formats

- File operations: FileReader, FileWriter & BufferedReader
- Serialization & deserialization
- Reading XML (DOM & SAX parser), JSON (json-simple) and CSV (OpenCSV)
- SQL basics: tables, select, insert, update, delete, joins & keys; JDBC connection

Phase 2: Selenium WebDriver Automation 4 Modules

Automate real browsers with Selenium WebDriver.

05. Introduction to Selenium & WebDriver

- Types of applications; manual vs automation testing; Selenium vs other tools
- Selenium components: IDE, WebDriver & Grid; Selenium architecture
- Launching Chrome, Firefox, Edge & other browsers; driver setup & desired capabilities
- WebDriver methods & commands: navigate, click, sendKeys, clear, close & quit

06. Locators & XPath

- Inspecting elements; id, name, className, tagName, linkText, partialLinkText & cssSelector
- XPath: relative vs absolute, contains, text(), following, preceding, ancestor, parent & sibling axes
- Dynamic locators using index, multiple attributes & sibling/ancestor concepts

07. Web Elements & Waits

- Check boxes, text boxes, radio buttons, dropdowns (Select class) & dropdowns without Select tag
- Links & broken-link validation with HTTP response codes; images & broken images
- Waits: static, implicit, explicit & fluent waits
- Tooltips, screenshots (full page & element) with random file names

08. Advanced Interactions

- Actions class: drag and drop, mouseover, right click, double click & modifier keys
- Robot class and AutoIT for file upload & download
- JavaScriptExecutor: click, scroll (by pixel, element, bottom & horizontal) & element highlighting
- Frames & nested frames, multiple windows handling using Set & List
- Web tables & dynamic web tables
- Cross-browser and cloud testing with BrowserStack and Sauce Labs

Phase 3: Frameworks, Build Tools & CI/CD 3 Modules

Turn scripts into a maintainable framework that runs in a pipeline.

09. Test Frameworks

- TestNG & JUnit frameworks: annotations, assertions, grouping & parallel execution, reports
- Data-driven testing with Apache POI: read, write & update Excel data
- Page Object Model (POM) framework
- Cucumber BDD and JBehave frameworks, keyword-driven & hybrid frameworks

10. Build Tools, Version Control & CI/CD

- Maven: dependencies, plugins, build control & release process
- Git & GitHub: local & remote work, branching, merging & rebasing, teamwork
- Jenkins: CI/CD concepts, freestyle projects, pipelines & multi-branch pipelines
- Ant, Bitbucket and Bamboo overview

11. Test Management Tools

- JIRA: test management with Zephyr, JQL, reports & JIRA Agile
- qTest and HP ALM: test plans, requirements, test cases, runs & defect management

Phase 4: Real-Time Projects & Domains 1 Module

Apply everything to real business applications.

12. Real-Time Projects

- Travel domain: ticket booking & travel management flows
- E-commerce domain: product search, cart, checkout & order management
- Other domains covered
- Real-time scenarios and work culture of a testing team

Phase 5: Manual Testing, Agile & API Testing 2 Modules

The testing fundamentals and adjacent skills employers expect.

13. Manual Testing & Agile

- Manual testing foundations: SDLC & STLC, test case design, defect lifecycle
- Agile methodologies and Scrum

14. Mobile & API Testing

- Appium for mobile testing
- API testing with Postman and SoapUI

Phase 6: AI-Assisted Test Automation 1 Module

Use Generative AI to speed up test design and maintenance.

15. Gen AI for Selenium Test Automation

- AI-assisted test case generation
- AI-generated test scenarios and automated test script creation
- Intelligent locator strategies and test maintenance with AI tools

Phase 7: Career Readiness 1 Module

Get interview-ready and placed.

16. Resume, Mock Interviews & Placement Preparation

- Resume preparation guidance session by a dedicated team
- Mock interview sessions and technical reviews

- Soft skills sessions: verbal & written communication

Projects & Hands-On Labs

E-Commerce Web Automation Suite
Automate an e-commerce application end to end: login, product search, cart management, checkout and order tracking, on a maintainable POM framework with data-driven scenarios from Excel and full test reports.

Travel Booking End-to-End Suite
Automate ticketing and travel flows: search, booking and cancellation, covering calendars, dynamic content, popups, frames and multi-window handling, written as Cucumber feature files.

Framework with CI/CD & API Testing
Build a hybrid automation framework managed with Maven and Git, executed through Jenkins pipelines, and extend it with API tests using Postman.

Enrol & Contact

Book a free demo class or a 1-on-1 counselling session.
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25 centres across Chennai, Bengaluru, Coimbatore, Trichy and Salem, plus live online batches. Curriculum may be updated by the trainer to reflect current industry practice.