Test Automation with Selenium

Build maintainable Selenium WebDriver test suites in Java with TestNG, POM and CI.

DURATION	FORMAT	LEVEL	LABS
45 hours	Onsite, online or hybrid	Intermediate	Cloud sandbox included

About this programme

Takes testers from Java fundamentals to production-grade web UI automation: Selenium WebDriver, TestNG and JUnit, Page Object Model and hybrid frameworks, BDD with Cucumber, Selenium Grid and CI with Jenkins.

Who it is for: Manual testers, QA engineers and developers moving into test automation

What your team will be able to do

- Write Java for automation: OOP, collections, exceptions and file handling
- Locate and interact with web elements reliably, including dynamic ones
- Structure suites with TestNG, data providers and parallel execution
- Build a hybrid framework using the Page Object Model and Page Factory
- Run tests across browsers with Selenium Grid and Jenkins

Before you start

- Manual testing experience
- Basic programming helps; Java is taught from the start

Course outline

1. Selenium and Java for testers

- Selenium and its components: IDE, WebDriver and Grid
- Setting up the JDK and Eclipse
- Java fundamentals and OOP concepts
- Exceptions, collections, and Excel and property files

2. Selenium WebDriver

- WebDriver architecture and configuration
- Locators: ID, name, class name, XPath and CSS selectors
- Interacting with buttons, text boxes, links, dropdowns and tables
- Dynamic elements and implicit and explicit waits
- Cross-browser testing

3. Advanced interactions

- Mouse and keyboard events with the Actions class
- Alerts, frames and multiple windows
- Screenshots
- File upload and download with AutoIt or the Robot class

4. Testing frameworks

- Setting up TestNG and JUnit with Selenium
- Annotations, data providers and assertions
- Test suites and parallel execution
- Test reports

5. Automation frameworks and tooling

- Modular, keyword-driven, data-driven and hybrid frameworks
- Page Object Model and Page Factory
- Maven, Git and Jenkins integration
- BDD with Cucumber

6. Advanced topics

- Selenium Grid for parallel and cross-browser runs
- Database and API testing alongside UI tests
- Mobile testing with Appium
- Debugging and troubleshooting tests

Sample schedule

6 days onsite, or 12 half-day sessions online. We fit days and session lengths to your team's calendar.

Day 1	8 h	Selenium and Java for testers; Selenium WebDriver
Day 2	8 h	Selenium WebDriver (continued)
Day 3	8 h	Advanced interactions; Testing frameworks
Day 4	8 h	Testing frameworks (continued); Automation frameworks and tooling
Day 5	8 h	Automation frameworks and tooling (continued); Advanced topics
Day 6	5 h	Advanced topics (continued)

Assessment and certification

How learning is checked

- A short knowledge check on day one and again at the end, so you can see each person's progress
- Graded hands-on labs in every module, reviewed by the trainer
- A final exercise that applies the programme to a problem like your team's own

Certificate and exams

- Participants who complete the programme receive a Cognitive Networks AI certificate of completion.

Formats and cohort size

- Onsite: At your office or a venue you choose, in full days.
- Online, live: Instructor-led over video, usually in half-day sessions so people can keep up with work.
- Hybrid: Some days in a room together, the rest online. Useful when a team works across cities.

Cohort size: 15 to 25 people per trainer. Larger teams run as parallel cohorts on the same outline, so everyone learns the same thing.

Pricing: We quote per cohort, based on duration, format and number of cohorts. There is no per-seat price list: tell us your team and we send a proposal within one business day.

Bring this programme to your team

Request a proposal at cognitivenetworks.ai/contact?programme=test-automation-selenium

reachus@cognitivenetworks.ai · Bangalore +91 72043 05303 · Dallas +1 (303) 827-7415