



# Selenium 3.0 Training

simplilearn

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## Program Overview:

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Simplilearn's Selenium 3.0 certification training course helps you gain an in-depth knowledge of concepts such as WebDriver, TestNG, Wait, Locating Techniques, AutoIT, Sikuli, Page Object Design Pattern, mobile testing, and Selenium Grid. This Selenium 3.0 certification features real-world examples to train you to use Selenium WebDriver effectively.

## Program Features:

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- > 36 hours of instructor-led online training
- > Two real-life, industry-based projects

## Delivery Mode:

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**Blended** Learning

## Prerequisites:

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Basic knowledge of Core Java. This course starts with a refresher on Core Java, where basic concepts are explained.

## Target Audience:

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- > Test managers
- > Test engineers
- > Test leads
- > Test analysts
- > Quality assurance engineers
- > Software developers

## Key Learning Outcomes:

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This course will enable you to:

- Revise the Core Java concepts that are essential for learning Selenium WebDriver
- Understand the scope of test automation in DevOps and fundamentals of test automation
- Create Test Cases using Selenium IDE – Record and Playback tool
- Understand Selenium WebDriver architecture and various layers of interaction
- Set up WebDriver project in Eclipse and write test cases using TestNG
- Locate elements using various locating techniques
- Work with various WebDriver commands to drive web browser and WebElement commands to deal with various web components
- Learn to handle various possible scenarios regarding pop-ups, multiple windows, frames, and taking screenshots
- Implement page object design pattern and data-driven testing
- Understand how to use Maven, ANT, AutoIT, Sikuli, log4j, and listeners
- Learn to use Selenium Grid with TestNG for parallel execution
- Execute a project from scratch by building an automation framework and automating a few test scenarios

## Certification Details and Criteria:

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### Online Classroom:

- Attend one complete batch
- Submit at least one completed project
- Successful evaluation in any one of the course-end assessments with a minimum score of at least 60 percent

### Online Self-Learning:

- Complete at least 85 percent of the course
- Submit at least one completed project
- Successful evaluation in any one of the course-end assessments with a minimum score of at least 60 percent

# Course Curriculum:

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## Lesson 01 - Core Java Refresher

- > Keywords and Syntax
- > Variables, Operators, and Control Flows
- > OOPs Overview from Java Context
- > Exception Handling, File and DB handling
- > Collections Overview, and ArrayList example

## Lesson 02 - Automation Basics

- > Fundamentals of Test Automation
- > ROI in Automation
- > Automation Framework
- > Various Tools and Comparison with Selenium

## Lesson 03 - Introduction to Selenium WebDriver

- > What Selenium is and How it is Used in the Industry
- > Features of Selenium
- > Selenium IDE - Overview with a Couple of Examples
- > WebDriver Architecture
- > Installation of Selenium and Supporting Tools/Frameworks

## Lesson 04 - Locating Techniques

- > Simple WebDriver Program Demonstration
- > Basics of HTML Page, Tags, Attributes, and Visible Texts
- > Importance of Attributes in Locating Elements
- > Installation of Firebug and Firepath in Firefox Browser
- > Locators and Eight Locating Techniques
- > Creating Robust Locators Using CSS and XPath

## Lesson 05 - WebDriver Basics - I

- > Execute Tests in Firefox, Chrome, and Internet Explorer
- > WebDriver Commands: Driving Browsers and Handling Cookies
- > WebElement Commands
- > Handling Various WebElements
- > WebDriver Timeout Methods

## Lesson 06 - WebDriver Basics - II

- › Handling Multiple Elements Using findElements Method
- › Handling Alerts, Pop-ups, and Frames
- › Limitation of Implicit Wait and How Explicit Wait Helps
- › Advanced User Interactions
- › Taking Screenshots
- › Working with Firefox Profiles
- › Handling File Uploads Using AutoIT
- › Introduction to Flash Application Testing using Selenium WebDriver

## Lesson 07 - TestNG

- › Arranging Tests in 3-As format
- › F.I.R.S.T Principles and SRP
- › Various Annotations in TestNG
- › TestNG Configuration File
- › Configuration Annotations
- › Attributes of @Test
- › Parallel Test Execution Capability
- › Assertion APIs
- › Passing Parameters to Tests
- › Configuring Test Suites
- › Reports Using TestNG
- › Reports Using ReportNG

## Lesson 08 - WebDriver - Framework

- › Introduction to Various Frameworks
- › Page Object Design Pattern
- › Data-Driven Tests Using TestNG and POI
- › Introduction to Maven and ANT
- › Use of Log4j
- › Use of Listeners
- › Typical Components of a Framework
- › Overview of BDD, TDD
- › Overview of Sikuli Tool for UI Testing
- › Introduction to Jenkins
- › Configuring Jenkins to Invoke Selenium Tests

## Lesson 09 - Selenium Grid

- > What is Selenium Grid?
- > When to Use Selenium Grid
- > Setting up Grid - Hub and Nodes?
- > Configuring TestNG.xml to Run Tests on Grid

## Lesson 10 - Project Execution

- > Automate an eCommerce Application
- > Test Automation Requirements Description
- > What Next? How to Start?
- > High-Level Framework
- > Configurability—No To Hard-Coding
- > Modularity—Re-Use And DRY
- > Test Data Management
- > Logging And Reporting

## Lesson 11 - Mobile App Test Automation Using Appium

- > Introduction Mobile App Test Automation
- > Introduction to Appium
- > UIAutomator with Appium
- > Locating Elements - UIAutomator Framework
- > DesiredCapabilities for Android

## Course End Projects:

### Project 1: Ethnic Store Project 1

Create an application that hosts a range of products from different manufacturers. This app needs to provide customers the ability to register and purchase various products.

### Project 1: Ethnic Store Project 2

In this project, you will work on implementing the most common e-commerce application features that are typically found on any e-commerce website.

## About Us:

Simplilearn is the world's #1 online bootcamp provider that enables learners through rigorous and highly specialized training. We focus on emerging technologies and processes that are transforming the digital world, at a fraction of the cost and time as traditional approaches. Over one million professionals and 2000 corporate training organizations have harnessed our award-winning programs to achieve their career and business goals.

For more information, please visit our website:

<https://www.simplilearn.com/selenium-certification-training>



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Simplilearn is the world's #1 online bootcamp for digital economy skills training focused on helping people acquire the skills they need to thrive in the digital economy. Simplilearn provides outcome-based online training across technologies and applications in Data Science, AI and Machine Learning, Cloud Computing, Cyber Security, Digital Marketing, DevOps, Project Management, and other critical digital disciplines.

Through individual courses, comprehensive certification programs, and partnerships with world-renowned universities, Simplilearn provides millions of professionals and thousands of corporate training organizations with the work-ready skills they need to excel in their careers. Based in San Francisco, CA, and Bangalore, India, Simplilearn has helped more than one million professionals and 2,000 companies across 150 countries get trained, acquire certifications, and reach their business and career goals. With over 1,000 live classes each month, real-world projects, and more, professionals learn by doing at Simplilearn. Ongoing industry recognition for the company includes the 2020 Aegis Graham Bell Award for Innovation in EdTech and the 2020 Stevie® Gold Award for Customer Service Success.

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