

Software Project Testing Course (QA) Online Training with Banking, Insurance and e-Commerce Projects

Selenium with Java Contents (Selenium WebDriver 4.0)

Module-1: Introduction to test automation & Selenium

- Meaning of Testing? Types of Software Testing?
- Limitations in Manual testing
- How Automation Testing challenges Manual Testing?
- Automation tool work process?
- Role of programming in test automation
- What is Selenium? What are the components of Selenium?
- What are the Features & Limitations of Selenium Web Driver?

Module-2: Essentials components of JAVA for Selenium

- JAVA, Eclipse IDE Environment setup
- Write Basic Java programs?
- Java Variables, JAVA Data Types and Java Operators
- Conditional Controls Statements - if, if else, switch case
- Looping Control Statements – for, while, do while
- Jumping statement – break and continue
- JAVA Arrays
- JAVA String Class

Module-3: Java Programming OOPS

- Classes and Objects
- Java methods
- Passing parameters to the methods
- Call by value and call by reference
- Java Constructor

- Encapsulation
- Polymorphism
- Overloading Methods
- Overloading Constructors
- this keyword
- Static variables and methods
- Inheritance
- Types of Inheritance
- Method Overriding
- super keyword
- final keyword
- Abstract Class
- Java Interface
- Java Packages
- Access Modifiers
- Reading Input from keyboard
- Exception Handling
- Java Collections

Module-4: Selenium WebDriver

- Introduction to WebDriver and Architecture
- Environment Setup & WebDriver Configuration
- How to Create Automated test case in WebDriver?
- Execute test case on multiple browsers.
- Basic Locators – Name, ID, LinkText, PartialLinkText
- Advanced Locators – CSS, XPath
- Working with SelectorsHub
- WebDriver Commands
- Get Commands
- Conditional Commands
- Navigation Commands
- Waits – Implicit, Explicit and Fluent Waits
- Browser Commands – close() and quit()
- Working with Web Elements
- Input box, Checkbox & Radio buttons
- Dropdowns – Select Class, JQuery & Bootstrap Drop Downs
- Links & BrokenLinks
- Alerts/Popups

- Iframes
- Working with BrowserWindows
- getWindowHandle()
- getWindowHandles()
- How to Handle Date Picker
- How to Handle Web Tables
- How to Handle Mouse Actions – Actions class
- How to Handle Keyboard Actions
- How to Handle Upload & Download Files
- How to Scroll Web page
- How to Capture Screenshots

Module-5: TestNG Framework

- What is TestNg
- What is Difference between TestNg and Junit
- Installing TestNg in Eclipse
- TestNg annotations
- Understanding usage of annotations
- Running a Test in TestNg
- Batch Running of tests in TestNg
- Priority setting in TestNg
- Skipping Tests
- parameterizing Tests – Data Provider
- Assertions
- TestNg Reports
- Grouping test

Module-6: Log4j (Logging Utility)

- What is logging utility?
- How To Generate Extent Reports
- Log4j2 for logging

Module-7: Maven integrating with Selenium

- Define Maven repository?
- Installing and Configuring Maven
- Creating Maven Project

Module-8: Implementing Hybrid Framework with Page Object Model

- Automation Framework & Types of Frameworks
- Designing Framework
- Selecting test cases for automation
- Implementation of Hybrid Driven Framework
- Creating Maven Project
- Update pom.xml with dependencies
- Creating page objects and Object repository
- Creating utilities
- Setting up configuration files

Module-9: Continuous Integration (GitHub & Jenkins)

- What is Continuous Integration?
- Git & GitHub
- Jenkins Overview
- Maven integration with Jenkins
- Running Selenium test scripts through Jenkins

Module-10: Cucumber Framework Basics

- Introduction to Behavior Driven Development
- Cucumber Environment setup
- Basics of Cucumber

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- Mock Interviews
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