

# SELENIUM WITH C# AUTOMATION

## COURSE CURRICULUM



**ENROLL NOW**



**CALL US**  
**+91 630 171 9270**

## SELENIUM WITH C# AUTOMATION

### Module 1: Selenium Introduction

- What is Automation Testing?
- Comparison of Manual vs. Automation Testing
- Overview of Automation Tools (QTP, UFT, Selenium, etc.)
- Introduction to Selenium
- Components of Selenium:
  - Selenium IDE
  - Selenium RC (Legacy)
  - Selenium WebDriver
  - Selenium Grid
- Platform and Language Support
- Limitations of Selenium

### Module 2: HTML, CSS, and XPath

- Basics of HTML Tags & Attributes
- Introduction to CSS and CSS Selectors
- Understanding XPath:
  - XPath Syntax & Nodes
  - XPath Axes & Operators
  - Writing Dynamic XPath
- Real-time Examples for XPath and CSS

### Module 3: Selenium WebDriver

- Introduction to Selenium WebDriver
- Downloading & Configuring WebDriver with Visual Studio
- Installing Selenium WebDriver NuGet Packages
- WebDriver Architecture and Browser Drivers
- Writing Basic WebDriver Scripts
- Performing User Actions on Web Elements
- Executing Tests on IE, Firefox, Chrome
- Managing WebDriver:
  - Switching Between Windows
  - Managing Cookies
  - Handling Timeouts
- Using Custom Browser Profiles
- Debugging Selenium Scripts
- Taking Screenshots in WebDriver
- Introduction to Remote WebDriver

## Module 4: Identifying UI Elements (Locators)

- Overview of Locators in Selenium
- Using Different Locator Types:
  - By ID
  - By Name
  - By Link Text / Partial Link Text
  - By XPath
  - By CSS Selector
  - By Tag Name
  - By Class Name
- Handling UI Components:
  - Textboxes, Checkboxes, Radio Buttons
  - Dropdowns (SelectElement)
  - Web Tables
- Finding Multiple Elements
- Dealing with Complex Web Controls (Grids, 3rd Party Controls)
- Data Retrieval for Verification

## Module 5: Selenium Advanced Concepts

- Actions Class in Selenium:
  - Mouse Hover
  - Click & Hold
  - Double Click
  - Right Click
- Keyboard Operations
- Synchronization Techniques:
  - Implicit Wait
  - Explicit Wait
  - Fluent Wait
- Creating Custom Wait Extensions

INFOTEKH

## Module 6: Core C# Programming Essentials

- C# Program Structure & Syntax
- Data Types & Type Conversions
- Variables and Constants
- Operators and Expressions
- Decision Making: if, if-else, switch
- Looping: for, while, do-while, foreach
- Methods and Method Overloading
- Encapsulation and Access Modifiers
- Arrays and Strings Handling
- Structures and Enums
- Classes and Objects
- Inheritance and Polymorphism
- Operator Overloading
- Interfaces and Abstract Classes
- Namespaces and Assemblies
- Regular Expressions
- Exception Handling
- File Input/Output Operations
- Preprocessor Directives

## Module 7: Test Automation Frameworks

- Introduction to NUnit Framework
- Setting Up NUnit in Visual Studio
- Writing Test Cases with NUnit
- NUnit Features:
  - Attributes ([Test], [SetUp], [TearDown])
  - Assertions
- Test Execution and Result Analysis
- Building Page Object Model (POM):
  - Code Reusability
  - Separation of Page and Test Logic
- Directory Structure for Frameworks
- Integration with Open Source Libraries

# Thank you



**Thank You for Going Through Selenium with C# Automation Curriculum**  
**We hope this guide has provided a clear and structured learning path to**  
**strengthen your skills in Selenium with C# Automation.**

## ✦ NEXT STEPS

- Start practicing with real-world use cases and hands-on exercises
- Build personal or client-based projects for your portfolio
- Keep exploring updates and best practices in the industry
- Join discussions and stay connected with the community

 **Need Help or Guidance?**

**Feel free to contact our course support team:**  
**Course Coordinator**

**GS Infotekh**

 **contact@gsinfotekh.com**

 **www.gsinfotekh.com**

 **+91 630 171 9270**