

## Selenium with C# Course Syllabus

### C# Introduction

- Installing Visual Studio
- Features Of C#
- Why C# For Selenium
- First C# Project
- First C# Program
- Concept Of Assembly File
- Datatypes In C#
- String Class
- If Statements

### Loops, Arrays and Functions

- Conditional And Concatenation Operators
- While Loop
- For Loops
- Practical Examples With Loops
- Usage Of Loops In Selenium
- Single Dimensional Arrays
- Two Dimensional Arrays
- Practical Usage Of Arrays In Selenium
- Drawbacks Of Arrays
- What Are Functions?
- Function Input Parameters
- Function Return Types

### Object Oriented Programming

- Local Variables
- Global Variables
- Static And Non-Static Variables
- Static And Non-Static Functions

- Creating Objects In C#
- Meaning Of Static
- Why Is Main Method Static?
- Object And Object References
- Call By Reference And Value
- Constructors
- Concept Of Inheritance
- Interface
- Overloading And Overriding Functions
- Example On Inheritance
- Object Class
- Usage Of Inheritance In Selenium

### Collection API/Reflection API

- Read Only Collection Class
- List And Dictionary Class
- Using List And Dictionary Of Collection API In Selenium Framework
- Reflection API Usage And Importance
- Using Reflection API To Make Keyword Driven Selenium Framework

### String Class and Functions

- Reading/Writing Text Files
- Reading Configuration File In C#
- Concept Of Assembly File
- Reading/Writing Microsoft XLS Files
- Reading Data From XML Files Using C#

### NUNIT and Reporting

- Extent Reports
- Assertions
- Parameterizing Tests
- Skipping Tests
- Parallel Execution

- Running A Test In Nunit
- Nunit Annotations
- Installing Nunit
- Why Nunit

## Selenium Web Driver

- Why Webdriver?
- Downloading Webdriver DLLs And Configuring In Visual Studio
- Architecture Of Selenium Webdriver
- Webdriver Interface In Selenium 3.0
- Drivers for Firefox, IE, Chrome, iPhone, Android Etc.
- Usage Of Webdriver Interface
- First Selenium Code
- Working With Chrome And IE
- Webdriver Desired Capabilities Class
- Proxy Settings With Webdriver/Working With Proxy Servers
- Inspecting Elements In Mozilla, Chrome And IE
- Concept Of Firefox Profile
- What Is Firefox Profile
- Why We Need Firefox Profile
- HTML Language Tags And Attributes
- Various Locator Strategies
- Web element Interface
- Identifying Web Elements Using Id, Name, Class
- Finding Xpaths To Identify
- Implicit Wait
- Absolute And Partial Xpaths
- Creating Customised Xpaths Without Firepath
- CSS Selectors
- Generating Own CSS Selectors
- Performance Of CSS Selectors As Compared To Xpaths
- What Is Class Attribute?

- Handling Dynamic Objects/Ids On The Page
- Working With Different Browsers Without Changing Code
- Managing Input Fields, Buttons
- Managing/Identifying Links With Xpaths / CSS Selectors
- Get Attribute Function
- Concept Of List
- Extracting More Than One Object From A Page
- Extracting All Links Of A Page/Bulk Extraction Of Objects
- Extracting Limited Objects From A Web Page
- Extracting Objects From A Specific Area Of A Web Page
- Finding Response Headers/ Response Code
- Finding Whether Object Is Present On Page Or Not
- Hidden Components - Isdisplayed Function
- Clicking And Checking Links
- When You Don't Have Common Xpath
- Method 1-Find The Box
- Method 2-Pattern In Xpaths
- Handling Drop Down List
- Select Class In Selenium API
- Managing Radio Buttons And Checkboxes
- Explicit Wait
- Alert Management
- Taking Screenshots Of The Web Pages
- How To Google Out Errors-Self Sufficiency
- Popup Handling
- Managing Different Windows
- Close And Quit -Difference
- Concept Of Web tables
- Dynamic Web table Handling
- Extracting Data From Web table
- Web tables And CSS Selectors

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- Building Custom Functions For Web tables
- Get row with cell data Function
- Mouse Movement With Selenium - Actions Class
- Randomly Clicking/Selecting Objects - Randomising
- Dragging Dropping By Offset
- Attaching Files With Selenium / Usage Of Autoit
- Changing Your Facebook Profile Picture By Attaching New Picture
- Handling Ajax Auto Suggests
- Handling Frames In Web Page
- Managing JavaScript Alerts
- Calendar Control
- JavaScript executor And Its Importance
- Extract Names Of All Facebook Friends
- JobServe Exercise
- Yahoo Exercises - When Xpaths Change
- Automate Login Process And Read Data From Xls File

### Database Testing With Selenium

- Installing Tomcat
- Creating Database Of CRM Application
- Downloading And Deploying The CRM Web Application On Tomcat
- Running The Web Application On Tomcat
- Running SQL command To Fire Conditional Select Query
- Validating Login Of Customer With The Database
- Validating Values Present In Drop list With That Of The Database
- Validating Whether Values Filled By User Are Getting Stored In The Database Or Not
- Using Assertions For Validations