

Quality Analyst



CURRICULUM

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ONLINE COURSE

COURSE FEATURES :

1. **Course Duration:** 40-45 Hours (approx.)
2. **Category:** Scrum, SDLC, Software Testing and Quality Control, STLC
3. **Available Modes:** Online (Batch or One on One)
4. **Certificate:** Yes
5. **Location:** Online – Live Sessions
6. **Language:** English
7. **Sessions:** Weekday and Weekend
8. **Prerequisites:** No
9. **Skill Level:** Beginner
10. **Course Capacity:** 20
11. **Start Course:** To be announced

Description :

This Quality Analysis course with Selenium provides an in-depth understanding of automated testing using Selenium. Students will learn how to design and implement automated test scripts to ensure the quality of web applications. The course comprises topics such as test planning, test case design, test automation framework, and report generation. Through hands-on projects, students will gain practical experience in applying these techniques to real-world web applications. Graduates of the course can expect to find employment as Quality Assurance Engineers, Automation Testers, or Software Development Engineers in Test (SDET) in a range of industries such as technology, e-commerce, finance, or healthcare.

Course Content:

1.Introduction

- Definition What is Quality
- Quality principles
- Why testing is important

2.SDLC

- Phases
- Stakeholders at each phase

3. STLC

- Test planning.
- Test case design.
- Test execution.
 - Unit testing.
 - Integration testing
 - System testing.
 - UAT.
- Types of testing. Terminology.
- Defect reporting and tracking. Test closure

4.Software Development Models

- Waterfall Model.
- V Model.
- Agile Model.

Selenium Test Automation

5.Selenium Test Automation

- What is automation testing. When to go for Automation.
- Different Automation Tools (vendor & open source tools). Advantages of Automation.
- Criteria for Automation.
- Difference between Manual Testing & Automation Testing Process.

6. Introduction to Selenium

- What is a selenium Tool?
- Use of selenium tool in automation
- Features of the Selenium tool
- Differences between Selenium and other Tools

7. Selenium Components

- Selenium IDE / Katalon IDE
- Selenium WebDriver
- Selenium Grid

8. Configuration of Katalon IDE & Dev. Scripts

- Recording the scripts in IDE
- Running the scripts
- Saving the scripts and using them again
- Understanding of the object identification(id, name)
- Difference between Test case and test suit
- Languages supported while recording
- Synchronization in Katalon IDE (wait commands)
- Testing Vs Katalon IDE
- When to use Katalon IDE
- Learning commands in IDE
- How to put validations (assert, verify)
- How to read text/values from webpage(store commands)
- How to handle mouse, and keyboard events
- Limitations of IDE

9. Configuring Eclipse IDE for Java & Selenium

- How to Create a New Java Project
- How to create a new Java class
- Running java class
- Viewing the results of java program

10. Software Testing Learning Java

- Introduction to Java programming
- Data Types in Java
- Primitive Data types
- Wrapper Classes
- Declaring Variables
- Writing java program and running

11. Conditional Statements

- If condition
- If else condition
- If else if condition(nested if)
- Switch case statement
- Examples for all the above conditions

12. Loop Statements

- While loop
- Do while
- For loop
- For each loop
- Examples for all the above loops

13. Array

- How to declare an array
- How to store values in the array
- Reading values in array

14. Exception, error handling

- What are exceptions, errors
- How to handle exceptions in the program
- Using try-and-catch blocks
- Types of Exceptions
- Using of throws
- Throw
- Throwable

15. Object Oriented Programming Class

- What is class
- What are the fields and methods
- How to create an object for the class
- How to access fields and methods in the class
- Constructors
- What is an abstract, final class
- Variable Types (instance, local, static)

16. Polymorphism

- What is polymorphism
- Method overloading
- Constructor overloading
- Passing arguments to methods
- Calling methods in the class
- Return values from a method
- Return objects from the method
- Method arguments call by value, call by reference

17. Inheritance

- Why to do Inheritance
- How to reuse the fields and methods of the parent class
- Overriding fields and methods of the parent class
- Single Inheritance
- Multi-level Inheritance
- Using super keyword
- Composition / Aggregation
- Difference between Inheritance and Composition

18. Interfaces

- What is Interface
- Difference between class and interface
- When to use Interfaces
- Abstract class

19. Encapsulation and abstraction

- What is hiding data
- Using access specifiers public, private, protected, default
- Accessing the public methods outside the class
- Difference in accessing in same package / different package

20. Package

- What is package
- How to create a package
- How to import a package into a different class

21. Collections

- Use of collections
- Advantage of collection using Array
- How to add, remove, and insert value/elements into collections
- Using the collections like List, Set, ArrayList, HashTable
- Linked List

22. Miscellaneous

- Dynamic binding
- Upcasing, downcasting
- Autoboxing, unboxing

23. Web Driver

- Introduction to Web Driver
- Configure Eclipse IDE (Adding Selenium Libraries)
- Using Firefox Driver API
- Working with Different Elements and programming
- Edit boxes
- Checkbox, Radio Buttons
- Buttons
- Links
- Selecting values from a Dropdown
- Understanding xpath to locate elements in the webpage
- Working with Table Elements
- Reading data from Table
- Using Actions class
- Handling keyboard, mouse events

24. Data Driven Testing

- What is Data Driven Testing
- How to parameterize the data to the script using Excel

25. Debug Scripts in Eclipse

- Understanding Debug
- Using Breakpoints
- Verify the values during debug
- Using step over, step into Handling Windows
- How to handle multiple browser
- Handling alerts
- Handling windows alerts using (Auto it / Sikuli)
- Handling Frames

26. Recognizing elements in webpage

- Using xpath, DOM, CSS
- Running java scripts in WebDriver
- Recognizing duplicate elements
- Recognizing dynamically changing elements
- Using Regular expressions

27. Configuring other Browsers

- Configure IE browser
- Configure Chrome browser
- Running scripts on different browsers

28. TestNG Framework

- What is TestNG
- Create TestNG.xml file
- Integrate the Selenium Scripts
- Reporting Results & Analyze
- Run Scripts from Multiple Browsers
- TestNG Annotations
- Tags in TestNG xml file
- Groups
- Reporting Result

29. Selenium Grid

- Introduction
- Remote WebDriver
- Configuring hub
- Configuring node
- Running scripts on remote computer

30. Automation Life Cycle

- What is a Framework
- Types of Frameworks
- Modular framework
- Data Driven framework
- Keyword driven framework
- Hybrid framework
- Use of Framework
- How to develop a framework
- Integration of the framework
- How to execute the scripts from framework

31. Page Object Model Framework

- Creating Repository class
- Using properties file
- Generating Log files (log4j)

32. ANT / MAVEN

- Creating Maven project
- Creating build file
- Running the build

33. Web Services Testing

- What is a web service?
- Webservice architecture
- What testing we have to do in webservice
- Introduction to Rest Assured
- Testing Web Services using Rest Assured

34. Software Testing Appium (Mobile Apps Automation)

- Configure Android Device
- Running scripts on Android Device

35. Cucumber

- Understand Cucumber Framework
- Writing Feature Files
- Integration of Scripts & Feature Files
- Generating Reports
- Learn Gherkin Lang.

36. Code Management Tool

- Understand usage of Code management Tools
- How to manage code in common location
- Understand Version Control
- Check in / checkout mechanism
- Checking the Histories.

Thank You