

API Automation Testing Training Syllabus

Session 1

1. Introduction of API and Web Services:
 - a. What is API & Why API?
 - b. What is Web Service?
 - c. What is Backend Architecture?
 - d. Rest vs SOAP APIs
 - e. What is CRUD operation
 - f. What are different HTTP Calls – GET/POST/PUT/Delete

Deliverable after Session 1 - Video, Notes and Reader Documentation

Session 2

2. Postman:
 - a. Introduction & Installation of Postman
 - b. How to call Rest API in Postman?
 - c. How to pass path parameter in Request?
 - d. How to pass query parameter in Request?
 - e. How to set Headers in Postman?
 - f. How to pass JSON/XML Payload?
 - g. How to check response status code?
 - h. How to check JSON/XML response message?
 - i. What is response header?

Deliverable after Session 2 - Video, postman exe, Notes and Reader Documentation

Session 3

3. Rest Client and Advance Rest Client:
 - a. Introduction, Download & Installation of Rest Assured Library?
 - b. How to Configure Eclipse with Rest-Assured?
 - c. REST API Connectivity Test using Rest Assured Library
 - d. Validate Response Status using Rest Assured Library
 - e. Validate Response Header using Rest Assured Library
 - f. Read JSON Response Body using Rest Assured Library

Deliverable after Session 3 - Video, codebase, Rest Assured Lib, Notes and Reader Documentation

Session 4

4. Developer tools & HTTP Response Codes:
 - a. How to check Backend services – APIs running behind?
 - b. What is developer tool in Chrome & how to use?
 - c. How to check request/response of any API in Firefox/Chrome browsers?
 - d. Response Validation for 100 series with Java Implementation
 - e. Response Validation for 200 series with Java Implementation
 - f. Response Validation for 300 series with Java Implementation
 - g. Response Validation for 400 series with Java Implementation
 - h. Response Validation for 500 series with Java Implementation

Deliverable after Session 4 - Video, codebase, Notes and Reader Documentation

Session 5

5. Learn HTTP & Rest Assured Client API:
 - a. All CRUD – GET/POST/PUT/Delete with Java Implementation
 - b. How to send Request with Rest Assured API?
 - c. Rest Assured methods: GET/POST/PUT/Delete?
 - d. What is JSON?
 - e. How to write JSONPath & Write Query JSON using JSONPath
 - f. Different Types of Expressions in JSONPath
 - g. 1st Base implementation for Framework - Common Utilities in Framework
 - h. Logging – Pass, Fail, Info, Warning, Error, Exception in Rest Assured.

Deliverable after Session 5 - Video, codebase, Notes and Reader Documentation

Session 6

6. Java OOP's:
 - a. Class, Object & Instance
 - b. Inheritance
 - c. Polymorphism
 - d. Encapsulation
 - e. Abstraction
 - f. Interface

Deliverable after Session 6 - Video, codebase, Notes and Reader Documentation. Additional 20 more Java videos with detail explanation of each concept (Data Types, Array, Variable Type, Static, Non Static, String Manipulation, Constructor, Exception handling, Access Specifiers etc.)

Session 7

7. TestNG Framework:
 - a. Why TestNG?
 - b. What is TestNG?
 - c. Advantages of TestNG over Junit

- d. How to install TestNG Setup.
- e. Different types of Annotations & execution hierarchy.
- f. Different types of attributes in TestNG
- g. Converting Project to TestNG framework
- h. Generating reports and creating BAT file & execute multiple test with suite.

Deliverable after Session 7 - Video, codebase, Notes and Reader Documentation

Session 8

8. Reporting:

- i. Extent Report
 - 1. Extent Report implementation with library
 - 2. Advantages of extent report – Generate Graphical Report
 - 3. Execute Single Test with multiple Steps
 - 4. Execute Multiple Test with Multiple Steps
 - 5. Execute multiple Classes with Multiple Test
 - 6. Log – Error, Info, Warning, Pass, Fail in HTML Report
- ii. TestNG Report
 - 1. Advantages of extent report – Generate Graphical Report
 - 2. Execute Single Test with multiple Steps
 - 3. Execute Multiple Test with Multiple Steps
 - 4. Execute multiple Classes with Multiple Test

Deliverable after Session 8 - Video, codebase, Notes and Reader Documentation

Session 9

- 9. Deserialization using POJO classes with rest Assured
 - a. What is Serialization and Deserialization in Rest Assure dB.
 - b. Libraries needed to support Serialization in Rest Assured
 - c. Strategies in Parsing Complex nested Json using POJO classes
 - d. Creating POJO classes for the real time Nested Array Json
 - e. End to end Automation examples using POJO Deserialization
 - f. Create Service Get Handler Solving Complex Queries from Json with simple POJO methods
 - g. Solving Complex Queries from Json with simple POJO methods

Deliverable after Session 9 - Video, codebase, Notes and Reader Documentation

Session 10

- 10. BDD & Cucumber basic
 - a. Introduction to BDD & Cucumber
 - b. What is Gherkin syntax and how it works?
 - c. Understand the Cucumber Scenarios Usage?
 - d. Feature files and Step Definition Importance in Cucumber
 - e. cucumber project creation template

- f. Understanding cucumber dependencies
- g. Understand the Terminologies of Automation
- h. Mapping step definition to feature file
- i. Running the Tests with testRunner
- j. Importance of regular expressions in feature files
- k. How to reuse functions with different data

Deliverable after Session 10 - Video, codebase, Notes and Reader Documentation

Session 11

11. Cucumber BDD API Framework Development from Scratch – 1

- a. Cucumber & Rest Assured Integration
- b. Building Cucumber Feature file for Rest Assured API Tests
- c. Building Test Runner and Step Definition files for Add Place API Feature Test
- d. Implementing Real code in Step Definition files with reusable components
- e. Running the Test in Cucumber Standards with necessary Configuration changes
- f. Building Utility Files and Implement Logging feature in Framework
- g. Implement Mechanism to drive Global property values from Properties file
- h. Data Driven Testing Mechanism for API Tests using Cucumber example feature
- i. Build End to End Test case with CRUD operation with Cucumber.
- j. How to reuse/access existing Step Definitions – reusability in cucumber
- k. Importance of Cucumber Hooks in setting up Preconditions for API Tests
- l. Optimizing the Framework Tests with all necessary validations
- m. Reporting:
 - i. Generate Excellent Cucumber HTML reporting with additional Plugins
 - ii. Graphical Report
 - iii. Detail explanation

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Session 12

12. Cucumber BDD API Framework Development from Scratch – 2

- a. Build Complex Framework Architecture with BDD/Cucumber/Rest-Assured
- b. Build Core Engine of Framework
 - i. Build Common Functions
 - ii. Build Common Components
 - iii. Build Test Data Utility
 - iv. Build Reporter Management
 - v. Build Logging Utility
- c. Build Cucumber Set to communicate to Core Engine
- d. Introduction to Jenkins CI tool
- e. Integrating the API Framework into Jenkins and triggering with New job setup
- f. Setting up Parameterized Jenkin Job for API Framework with multiple Tags

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Session 13

13. Interview Preparation and Guidance

- a. Live Interviews
- b. Guidance on Interview to crack
- c. Guidance on resume creation.

Deliverable after Session 13 - Video, Notes and Reader Documentation

***Note – Your membership is valid for 2 years from the batch you joined. You can come and coordinate with us any time. We have,**

- 24/7 Support team
- 100% Job Assistance

Let's Automate...