

API Testing - Postman

(20 Hr)

1.Introduction

This course is designed to cover all aspects of **API Testing & Postman** tool and also to provide users with the knowledge required to work with Postman tool at a professional level. This course addresses planning and performing API tests, developing the pre-test & post-test scripts using Postman, executing the API tests and generating HTML reports using different tools like Newman.

The course covers real-world best practices for effective use of Postman tool for API testing with practical examples demonstrated. An assessment is included with the course and is a 30 minutes exam, 20 questions, multiple-choice exam which takes place on the final day of the training program.

2.API Introduction

In this module, you will learn about

- Introduction to web application architecture
- Introduction to APIs
- Introduction to Web-Services
- How does an API works
- What is API testing?
 1. What does API Testing involve
 2. Validation techniques used in API Testing
 3. API Testing Steps
 4. Understanding URI, End points, Resources, Http verbs
 5. GUI tools available for API Testing
 6. Command-line tools available for API Testing
 7. Best Practices for API Testing
- Advantages of API
- API vs Web-Services
- Introduction to API architecture, REST API, SOAP API
- Understanding how REST API architecture works

- Understanding how SOAP API architecture works
- Understanding the HTTP methods GET, POST, PUT, DELETE, PATCH, OPTIONS, HEAD, and Few more

3.Introduction to Postman API Testing Tool

- What is Postman tool
- Installation of Native Postman tool
- Installation of Postman tool as Chrome Add-on
- Introduction to Postman landscape
- Introduction to Postman Settings

4.API Testing using Postman

- Creating First API request using Postman
- Functional Testing of Web Services
- Understanding History
- Setting up Test Project with REST APIs
- Validating responses with Postman client
- Validating the body of the first JSON response
- Examples of validating response headers and status codes
- Understanding query parameters on sending request
- Validating status code
- Validating Response time
- How to debug & troubleshoot
- How to create and manage Workspaces
- Importing request from your browser
- Cookies
- Saving Responses
- Creating collections in Postman tool

- Importing/Exporting collections using Postman tool
- Run Collections Remotely with URL
- Creating variables at different scope levels and how to refer them
- How to set and get variables through scripting
- Creating Environments
- How to setup different URLs using environments
- How to create quick scripts
- Pre-request scripts
- Test scripts/Assertions
- Make the requests dynamic by taking advantage of variables
- Generating code snippets in Postman tool

5. Advanced Topics + API Automation Framework

Postman API Automation: Part 1

- Collection Runner
- Postman monitors
- Automating with Newman tool
- Basic introduction to NPM tool & NodeJS
- Installing NodeJS
- Installing Newman tool
- Running a collection with Newman tool
- Specifying environments in Newman tool
- Creating an HTML report using Newman tool
- Using Authentication/Authorization in Postman tool
- Introducing delays for scheduled or continuous load API testing

Postman API Automation: Part 2

- Automating POST request with payload
- Grabbing the response body into the string for advance validations
- Data-Driven testing using CSV and JSON
- Scheduling the API testing periodically
- Load testing of API testing in Postman tool
- Running and analyzing Load Test results
- Shortcut methods to convert Raw data to XML/JSON
- Logging feature to debug automation scripts
- Using Postman to Create a Reusable API Framework
- Testing Workflow with Twitter API

6.Installation & Configuration

Java Installation : JDK / JRE

IDE Installation: Eclipse/ IntelliJ / NetBeans

Maven Installation & Configuration

7.Project setup for Rest-Assured

Build a Maven project, the configuration of Rest-Assured
Restful API Automation scripting: Rest-Assured using Java.