

API Testing Course

Course Duration: 32 Hrs.

Course Code: API-TC-01

Course Overview

The **API Testing Course** is designed for software testers, QA engineers, and developers who want to master testing of Application Programming Interfaces (APIs). APIs are the backbone of modern software applications, and ensuring their reliability, security, and performance is critical. This course covers key concepts of API testing, various testing techniques, tools, and best practices for validating functional and non-functional aspects of APIs in real-world scenarios.

What You'll Learn?

By completing this course, you will be able to:

- Understand what APIs are and their role in software systems
- Perform functional, integration, performance, and security testing of APIs
- Use popular API testing tools like Postman, SoapUI, or REST-assured
- Automate API tests and integrate them into CI/CD pipelines
- Validate responses, error codes, and data formats
- Understand best practices and challenges in API testing

Target Audience

This course is ideal for:

- Manual and automation testers
- QA engineers and test analysts

- Software developers and SDETs
- DevOps engineers involved in testing pipelines
- Professionals seeking expertise in API validation and testing

Pre-Requisites

Participants should have:

- Basic knowledge of software testing fundamentals
- Understanding of HTTP, JSON, XML, and web services concepts
- Familiarity with REST and SOAP APIs is beneficial
- Some programming knowledge (for automation) is recommended but not mandatory

Course Content

Module 1: Introduction to API Testing

- What is an API and how it works
- Types of APIs: REST, SOAP, GraphQL
- Importance of API testing in modern applications

Module 2: Functional API Testing

- Validating endpoints and HTTP methods
- Checking request and response structures
- Status codes and error handling

Module 3: Tools for API Testing

- Postman, SoapUI, and REST-assured overview
- Test execution, collections, and scripts

- Automating API tests

Module 4: API Test Automation

- Writing automated tests using REST-assured or other tools
- Integration with CI/CD pipelines
- Parameterization and data-driven testing

Module 5: Non-Functional API Testing

- Performance and load testing of APIs
- Security testing and authentication
- Reliability and scalability testing

Module 6: Best Practices and Real-World Scenarios

- API versioning and backward compatibility
- Handling dependencies and mocking services
- Reporting and defect management