

API Testing

Duration: 32 Hours (4 Days)

Overview

The API Testing course is a comprehensive program designed to equip learners with the skills needed to conduct thorough testing of Application Programming Interfaces (APIs), which serve as the backbone of modern web and mobile applications. The course starts with the API Testing Basic module, introducing participants to fundamental concepts such as Client-server architecture, different layers of software development, and the essentials of APIs and API testing. Learners will understand the differences between API testing and unit testing, get an introduction to web services, and learn about HTTP structure, XML, JSON, URIs, URLs, and the tools used for API testing. Throughout the course, participants will gain hands-on experience with tools like Postman and REST Assured, and explore RESTful web services, including the difference between REST and SOAP services. The program covers both basic and advanced topics, ensuring a thorough understanding of API testing techniques, challenges, and best practices. By obtaining an api testing certification, learners will validate their expertise and expand their job opportunities in a market that increasingly demands API testing proficiency. The course also provides a list of api testing certification options for further professional development.

Audience Profile

The API Testing course is designed for IT professionals who want to specialize in software testing and ensure quality in web services.

- Software Testers
- QA Engineers
- Automation Testers
- Software Developers interested in testing
- Test Managers
- API Developers
- Performance Test Engineers
- Technical Project Managers
- Full Stack Developers
- DevOps Engineers
- IT Professionals who want to learn API testing
- Quality Analysts
- System Integrators

Course Syllabus

Module 1: Java Basics

- Setting up Java
- Data Types and Operators
- Control Statements
- Arrays and Strings
- OOPS- Class , Object, Method and Constructors
- “this” Keyword
- “static” Keyword

- “super” Keyword
- “final” Keyword
- Inheritance and Interfaces
- Exception Handling
- Java Array Lists and HashMap

Module 2: Overview of API Testing

- Client Server Architecture
- What is API and API Testing?
- Difference between API Testing and Unit Testing
- Overview of Web Services
- HTTP Structure
- HTTP Methods
- Status Codes

Module 3: Testing API's using Postman Tool

- Overview of Postman Tool
- Setup and Installation
- Basic HTTP requests in Postman
- Create Dummy API's
- Basic of JSON and JSON Path
- Validating Responses in Postman and JavaScripting
- Postman Scripts and Variables
- Chaining Requests
- Data Driven Testing Using JSON and CSV Files
- File Upload and Download API
- Authorization Types
- cURL
- Validating XML Response
- Converting XML Resposne to JSON
- Documentation and Publishing

Module 4: Web Services Testing with SOAP UI and Ready API Tools

- Introduction to SOAP UI
- Installation of SOAP UI
- SOAP UI Features
- Assertations in SOAP UI
- SOAP UI Properties
- Property Transfer
- Data-Driven Testing
- Data Driven Testing using Multiple Data Sources in SOAP UI Pro (Ready API)

Module 5: API Testing using Rest Assured

- Environment Setup and Http Methods
- Create Request PayLoad(Request Body)
- Types of Parameters, Headers , Cookies and Logging
- Parsing JSON Responses
- Parsing XML Response

- File Upload and Download API
- JSON & XML Schema Validations
- Serialization and DE-Serialization
- Authentication Types
- API Chaining