

Web Services/Rest API Testing with SoapUI

Chapter 1: Introduction to Web Services

- Introduction to the Course
- What are Web Services? - With Live example
- Types of Web Services - SoapUI and REST API
- What is Web Services Description Language (WSDL)? Importance of WSDL in Web Services
- Difference between the Web Services Description Language (WSDL) and SoapUI Protocol

Chapter 2: Exploring SoapUI Tool Basic Features

- Installing and Documenting SoapUI
- Calculator Web Service Example
- Creating Test Suites and Test Cases
- Local Web Service Installation for Practice
- Explaining Web Service Operations in Detail

Chapter 3: Web Services Testing (Manual) with SoapUI - Free Version

- Basic Assertions for Test validations
- Advanced Assertions for Validating Responses
- Strategy to Use Xpath Assertions in Tests
- Properties Access-data Driven Strategy
- Accessing Properties from Test Case, Suite, and Project Level
- How to Send Values from Response to another Request-property Transfer?

Chapter 4: Web Services Automation Testing in SoapUI - Free version

- Introduction to Groovy Script Test Step
- Importance of TestRunner and Context Variable
- TestRunner Methods for the get Property() and set Property()
- Accessing and Updating Properties through Groovy Methods
- Parsing the XML Requests and Responses with XML Holder API
- Triggering the SoapUI Requests through Groovy Code
- Automating Services - Practice Exercises
- Validating the Service Responses with Assertions

Chapter 5: REST API Testing (Manual) with SoapUI Free version

- REST API Concepts
- REST API - Types of HTTP Methods
- Practical Example on the GET and the POST
- Add Place Post HTTP Example Using SoapUI

- End-to-End Test of SoapUI Features on the Post HTTP API

Chapter 6: REST API Automation Testing with SoapUI Free version

- JSON Script Assertion Window Automation
- Parsing the JSON Responses for API Validation
- Examples of REST API Automation with JSON as a Response
- Examples of REST API Automation with XML as a Response

Chapter 7: Rest API JSON Assertions and Validations

- Flicker API Introduction
- JSON Path Extraction from Responses
- JSON Assertions on Parsed Responses
- Advance Example on JSON Assertions

Chapter 8: End-to-End Framework Design

- Framework Design Plan
- Understand Preparing API Tests from Functional Documents
- Building Rest API Project in SoapUI
- Creating Test Cases from the Defined API
- End-to-End Testing on Library API
- Install Eclipse and Java for API Automation Testing
- Creating of Java API Project for the Framework Setup
- Web Services Description Language (WSDL) Project Concepts for Java Tests Setup
- TestNG Integration to Java API Tests
- Different Combinations of Tests for Web Services Description Language (WSDL) API
- Defining TestNG.xml file for One Single Trigger Point to All Tests
- Commands to Trigger TestNG Java API Tests
- HTML Reports and Jenkins Installation
- Integrating the Framework with Jenkins

Chapter 9: SoapUI Pro Tool Extra Features

- Basics of Pro Tool - Version
- Data Source
- Data Sink
- DatGen Types
- Test Case Debugging and Breakpoints
- Reporting Techniques
- Jasper Reports and Web Recording

Chapter 10: Security Testing with SoapUI

- List of Security Threats
- Security Test Cases

Chapter 11: Database Testing with SoapUI

- Database Concepts
- Creating a Database from Scratch
- SoapUI and Java Database Connectivity (JDBC) Connection
- SQL Queries Testing with SoapUI Features
- SQL Builder - SoapUI Pro

Chapter 12: Load Testing on REST API

- Performance Testing Tool used for Testing REST API
- Putting Load on REST API Calls