OVERVIEW

Training Name	API Testing with Mockito service virtualization
Instructor-	Naveen
Duration	3 Days
Training Objective	1. Understand the testing on the API at code level with Rest Assured (As Java as client) and Postman automated the same with large volume of data and complex data Know the need of mocking and mock for the microservices. Understand Mockito as Framework to simplify the development of a test by mocking external dependencies and use them in the test code. 3.Know why Test First Approach is followed across and is better than develop and test 4. Know how to handle edge cases in testing and why it's important to look for edge cases
Pre-requisites for Participants	• Understanding of Web Services, Rest Calls, and the need of automation testing • Should have programming knowledge on Java
Pre-requisites for LAB	The list of softwares needed for API testing. 1. download and install - https://www.postman.com/downloads/ 2. download and install - https://www.eclipse.org/downloads/ 3. Download and install jdk 11 for your respective OS(Mac/Win/Linux) - https://www.oracle.com/in/java/technologies/javase/jdk11-archive-downloads.htm 4. https://nodejs.org/en/download

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Day -1	JUNIT o What is JUnit? o Features o JUnit test case o Getting started o Using JUnit within Eclipse o Test methods: testMethod or @Test method o Assertions in TestCase o Testing for exceptions o Testing isolations o Creating and organizing test fixtures with setUp/tearDown and @Before/@After MOCKITO o Mockito for mocking objects o Using Mockito o Limitations o Configuring the mock objects o Verify the calls on the mock objects. o Mocking Service Layer, DB o Working with Spy o Introduction to Exception Handling o Working with custom exception o Using Custom Exception while mocking o Handling data with profiling with (txt/csv) with Java inbuild classes o Creating workflow for edge cases (+-) cases
Day- 2	Introduction to Web services Data Models • What are Data models and why do we need? • Different type of Data Model o XML o JSON • XML Data Model • JSON Data Model XML Introduction • XML Schema Introduction • XML Schema Types o String, Number, Boolean and Null o Simple Type and Complex Type JSON in Depth • JSON - Syntax • Data Types o String, Number, Boolean and Null o Object Data Type o Array • JSON – Schema Mocking With SpringBoot • Creating CRUD Operation • Test CRUD • Mocking CRUD
Day-3	HTTP Basic Authentication, Digest Parameters

Post Man and Rest Assured
POSTMAN APP Walkthrough
Parameters, Response Handling in Postman
Generating code snippets in POSTMAN
Creating pre-script
Creating Collections in POSTMAN
IMPORT / EXPORT Collections in POSTMAN
Collection Runner
Creating Documentation for API's
Importing Data in POSTMAN
Creating Environments, local, global variables in POSTMAN
Scripting Environment in POSTMAN
Environment, Global Variable functions in POSTMAN
Request, Response properties in POSTMAN

Rest Assured
• Rest Architectural Elements
REST ASSURED – Basics
• Configure Eclipse with Rest-Assured
• REST API Test using Rest Assured
• Validate Response Status using Rest Assured
• Validate Response Header using Rest Assured
• Read JSON Response Body using Rest Assured
• POST, PUT and PATCH Request using Rest Assured
• Authentication and Authorization in REST Web Services
• Sample automation framework design using REST ASSURED