

## JMETER-CURRICULUM

### COURSE INTRODUCTION

#### PERFORMANCE TESTING BASICS

- ✓ Introduction to web application performance testing
- ✓ What is Performance testing?
- ✓ Performance testing types
  - Stress testing
  - Load Testing
  - Spike Testing
  - Endurance Testing
  - Volume Testing
- ✓ Identify Performance Parameters
  - Response time
  - Throughput
  - Latency
  - Connect time
  - Memory
  - CPU Utilization



#### INTRODUCTION TO JMETER, JMETER TESTPLAN & TEST ELEMENTS

- JMeter basics/terminology
- JMeter Download/Installation
- Test Plan
- Thread Group
- Controllers
- Samplers
- Logic Controllers
- Listeners
- Timers
- Assertions
- Configuration Elements



+44 (020) 3950 8881



+1 332-600-8899



+91 9581512555



+46 76 441 48 79



trainings@slearn.academy

- Pre-Processor Elements
- Post-Processor Elements
- Execution Order

## **BUILDING A TEST PLAN**

- Adding Virtual Users
- Adding ramp-up time
- Adding HTTP Requests
- Scheduler
- Adding Listener to View/Store Test Results
- Analyze the load test results

## **WORKING WITH HTTP PROXY SERVER & OTHER RECORDING TOOLS**

- How to use JMeter templates
- Recording steps on a website using HTTP Proxy server
- Configuring the Firefox, IE browsers for recording the test script
- Record and Playback on sample site
- Badboy Software & Recording
- Blazemeter chrome plugin and recording

## **LISTENERS**

- Introduction to Listeners
- Different types of listeners
- Aggregate Report
- Aggregate Graph
- View Results Tree
- View Results in Table
- Summary Report
- Graph Results
- Save Responses to file
- Assertion Results

## **ASSERTIONS**

- ✓ What is Assertion
- ✓ Why Assertion



+44 (020) 3950 8881



+1 332-600-8899



+91 9581512555



+46 76 441 48 79



trainings@slearn.academy

- ✓ Types of Assertions in JMeter
  - ✓ Duration Assertion
  - ✓ Size Assertion
  - ✓ XML Assertion
  - ✓ HTML Assertion
  - ✓ Response Assertion
- Running the tests and analyzing the Assertion results

## TIMERS

- ✓ What is timer?
- ✓ Use of timers in a test plan
- Introduction of various times in JMeter
  - Constant Timer
  - Gaussian Random Timer
  - Uniform Random Timer

## LOGIC CONTROLLERS

### Random Controller

- Loop Controller
- Recording Controller
- Simple Controller
- Throughput Controller
- Runtime Controller
- IF Controller
- While Controller
- For Each Controller

## TESTING WEBSERVICES WITH JMETER

- Introduction to API's
- Test Plan for API's
- RESTful API's performance testing
- SOAP APIs Performing testing

## FTP TESTING WITH JMETER

- Building a FTP Test Plan
- FTP – GET (How to test FTP download)
- FTP – POST (How to test FTP upload)
- Run the FTP Test Plan
- Analyze the FTP load tests



+44 (020) 3950 8881



+1 332-600-8899



+91 9581512555



+46 76 441 48 79



trainings@slearn.academy

- How to parameterize FTP test plan

## **TEST DATA PARAMETERIZATION**

- ✓ What is Parameterization
- ✓ Why Parameterize
- ✓ Identifying the test data on AUT
- ✓ Using the CSV Data config in JMeter Tests
- ✓ How to read data from CSV file using JMeter

## **HANDLING THE DYNAMIC SERVER VALUES**

- ✓ What is Correlation
- ✓ Why Correlation
- ✓ Regular Expressions
- ✓ Using Regular Expression Extractor in JMeter Tests

## **USING JMETER IN**

### **GUI mode**

- ✓ How to generate Graphical results
- ✓ How to generate metrics for CPU, Memory i.e., Servers Performance Monitoring

### **NON GUI mode**

- ✓ How to view results when run in Non GUI mode
- ✓ How to get & view real time results when run in Non GUI mode
  - Using Summarizer in JMeter properties file
  - Using Console Status Logger plugin
- ✓ How to generate HTML reports from command line execution in Non GUI mode
- ✓ How to generate HTML reports using existing .jtl/.log/.csv JMeter results file

## **Distributed Load Testing**

- How to build a distributed load tests
- How to use Throughput Controller to support distributed load tests

## **How to use JMeter to run scheduled & sequential execution**

- Run JMeter tests for a specified duration
- Run JMeter tests in a sequential manner i.e., thread after thread



+44 (020) 3950 8881



+1 332-600-8899



+91 9581512555



+46 76 441 48 79



trainings@slearn.academy

- Run JMeter tests in a sequential/parallel manner with start-up delay between threads

## How to use JMeter to set realistic performance test – PACING?

### JMETER-OTHER TEST ELEMENTS

- ✓ Understanding JMeter Functions & usage
- ✓ Understanding JMeter Variables & usage
- ✓ HTTP Cache Manager
  - Run the JMeter tests with ‘Clear cache each iteration’ checked
  - Run the JMeter tests with ‘Clear cache each iteration’ un-checked
  - Max number of elements in cache
- ✓ HTTP Cookie Manager
  - Run the JMeter tests without HTTP Cookie Manager added & analyze View Results Tree
  - Run the JMeter tests with HTTP Cookie Manager added & analyze View Results Tree when
    - (i). Clear Cookies each iteration is checked
    - (ii) Clear Cookies each iteration is unchecked
- ✓ HTTP Header Manager
- ✓ How to create reusable test scripts & save them as JMeter Templates
- ✓ JMeter Plugins
  - How to install/use JMeter Plug In Manager
- ✓ Pre Processor –
  - How to use HTML Link Parser
  - How to use Sample Timeout
  - How to use User Parameters
- ✓ Post Processor
  - How to use Debug Post Processor in JMeter
  - How to use Regular Expression Extractor in Jmeter
  - How to test File Uploads using JMeter
  - How to test File Downloads using JMeter
  - How to use & test SMTP Sampler in JMeter
  - How to use & test Mail Reader Sampler in JMeter



+44 (020) 3950 8881



+1 332-600-8899



+91 9581512555



+46 76 441 48 79



trainings@slearn.academy

## CASE STUDY/ASSIGNMENT

- JMeter hands on assignments against different public web application(s)

### KEY FEATURES



**Instructor-led Sessions**



**Learn from Experts**



**Assignments**



**24 x 7 Support**



**Real-time Case Studies**



**Get Certified**

### For More Info:

[www.slearn.academy](http://www.slearn.academy)

[www.linkedin.com/company/slearnacademy](https://www.linkedin.com/company/slearnacademy)

[www.facebook.com/slearnacademy](https://www.facebook.com/slearnacademy)

[www.instagram.com/slearnacademy](https://www.instagram.com/slearnacademy)



+44 (020) 3950 8881



+1 332-600-8899



+91 9581512555



+46 76 441 48 79



trainings@slearn.academy

