TOSCA

Duration: 6 Days

**Prerequisites:**

* **Basic Understanding of Software Testing Concepts:** Familiarity with testing life cycles, types of testing, and test case creation.

**Hardware Requirements**

1. **Processor:**
   * **Minimum: i5 processor**
2. **RAM:**
   * **Minimum: 16 GB**
   * **Recommended: 32 GB or more for larger projects**
3. **Disk Space:**
   * **Minimum: 100 GB free space (SSD is recommended for better performance)**
   * **Actual space required may vary based on the projects and data.**
4. **Display:**
   * **Minimum: 1280x800 resolution**
   * **Recommended: 1920x1080 or higher**

**Software Requirements**

1. **Operating System:**
   * **Microsoft Windows 10 (64-bit) or later editions**
2. **.NET Framework:**
   * **Required: .NET Framework 8 or higher**
3. **Browsers:**
   * **Latest versions of Chrome, Firefox, or Microsoft Edge for web testing**
4. **Database System:**
   * **Mysql Community Server 8 and Workbench**
   * **Mongodb 7**
   * Microsoft SQL Server
5. **Docker Desktop with Kubernetes**
6. **Java Runtime Environment:**
   * **JDK 21**
   * **Intellij Ultimate**
7. **Additional Software:**
   * **Depending on your testing needs, additional software (like specific drivers for applications, etc.) might be necessary.**

**Day 1: Introduction to Tosca and API Testing**

* **Introduction to APIs:**
  + REST API, SOAP services and Micro Services.
* **Introduction Databases:**
  + Hands On SQL Queries (Mysql and Mongodb).
* **Introduction to Agile Methodology:**
  + Hands on JIRA and Agile Process.
* **Introduction to Programming Skills:**
  + Hands on Java script and Groovy
* **Understanding of CI/CD Pipelines:**
  + Introduction to Continuous Integration and Continuous Deployment concepts.
  + Jenkins Hands On

**Day 2: Introduction to Tosca:**

* + Overview of Tosca features and architecture.
  + Tosca Commander and its UI components.
* **Creating Test Scripts for API Tests:**
  + Understanding API testing in Tosca.
  + Setting up API testing projects.
  + Creating and executing basic API test cases.
  + Advanced API testing features in Tosca.
* **Tosca Requirements Linking**
  + Covering all HTML controls
* **Hands-on Lab:**
  + Create and execute API tests using Tosca.

**Day 3: Database Connectivity and Data-Driven Testing**

* **Connecting to Databases with Tosca:**
  + Overview of database connection options in Tosca.
  + Configuring database connections.
  + Retrieving data from databases.
* **Data-Driven Testing in Tosca:**
  + Creating data-driven test cases.
  + Using Excel, CSV, and database as data sources.
  + Parameterizing test cases.
* **Hands-on Lab:**
  + Configure database connections and create data-driven test cases.

**Day 4: Advanced Tosca Features**

* **Multiuser Environment with Tosca Commander:**
  + Setting up a multiuser environment.
  + Working collaboratively in a team using Tosca.
  + Managing test assets in a shared environment.
* **Setting up DokuSnapper for Test Evidence:**
  + Introduction to DokuSnapper.
  + Configuring DokuSnapper in Tosca.
  + Capturing test evidence during execution.
* **Hands-on Lab:**
  + Implementing a multiuser environment and setting up DokuSnapper.

**Day 5: Tosca Integration and CI/CD Pipeline**

* **Integrating Tosca with Agile (AzDo):**
  + Overview of Tosca and AzDo integration.
  + Creating and managing test cases in AzDo.
  + Synchronizing Tosca with AzDo work items.
* **CI/CD Pipeline Configuration with Tosca:**
  + Introduction to CI/CD pipeline concepts.
  + Integrating Tosca tests in a CI/CD pipeline.
  + Configuring Tosca for automated execution in a CI/CD environment.
* **Hands-on Lab:**
  + Set up Tosca with AzDo and configure a basic CI/CD pipeline.

**Day 6: Tosca DI, TDS, and Notepad++ Integration**

* **Tosca Distributed Execution (DI) and Installation:**
  + Overview of Tosca DI concepts.
  + Installing and configuring Tosca DI.
  + Setting up and managing Non-DI agents.
* **Test Data Service (TDS) in Tosca:**
  + Introduction to Tosca TDS.
  + Setting up and using TDS for test data management.
  + Implementing TDS in real-world scenarios.
* **Working with Notepad++:**
  + Customizing Notepad++ for Tosca.
  + Using Notepad++ for scripting and data manipulation in Tosca.
* **Hands-on Lab:**
  + Configure Tosca DI and TDS, and integrate with Notepad++.

**Conclusion:**

* **Recap and Q&A:**
  + Review of the key concepts covered during the course.
  + Open discussion and Q&A session.
* **Final Hands-on Project:**
  + Implementing a full test scenario incorporating all the concepts learned during the course.

This 6-days course is structured to build from foundational concepts to advanced features, ensuring that participants gain a comprehensive understanding of Tosca’s capabilities and how to use them effectively in their projects.