



# SOFTWARE TESTING TRAINING

## MANUAL

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## JAVA SELENIUM / REST ASSURED

SINCE 2011

**A complete job-oriented Software Testing training**

Start and build your career as an Automation Test Engineer with Java-Selenium, Rest Assured and Database

## Course content

Manual Testing		
S.No.	Title	Details
1	Introduction	Understanding and importance of testing
2	Type of testing	Type of functional and non-functional testing
3	Functional testing types	various stages/types of functionals testing Importance and necessity of environments validation Understanding of Smoke, Sanity and regression testing Bug life cycle
4	Test levels	Unit testing Integration testing System testing UAT testing Stage testing Prod testing
5	Project environments	Understanding project environments Importance of environments Code deployments Releases
6	Functional testcase preparation	Understanding of user requirements/user stories Analyzing user stories Writing functional testcases Understanding of Testcase Metrics
7	understanding of Agile methodology	Understanding of Agile methodology importance and advantages Understanding sprint ceremonies like Sprint planning, Sprint retrospective meeting and backlog refinement meeting
8	Walk through on Jira tool	walk through on jira project management tool Bug creation Sprint board and workflow overview Testcase creation and maintenance
9	Work implementation	User story analysis Identifying testcases Preparing testcase Metrics Testcase executions Collecting evidences Defect reporting

Core Java		
S.No.	Title	Details
1	Introduction	Introduction to java Available versions Journey
2	JDK, JRE and JVM	Introduction and importance to JDK, JRE and JVM
3	Hello World	Sample java program using note pad
4	keywords	introduction to all available keywords in java
5	datatypes	discussion on datatypes type of datatypes (primitive and non-primitive)
6	variables	Local and global variable declaration
7	Arithmetic operators	+, -, *, /, %
8	Relational Operators	==, <=, >=, !=, &&,
9	Conditions	if if - else if - else if nested if
10	loops	for, foreach, while, do - while
11	arrays	introduction to arrays single dimensional multi dimensional
12	switch	Switch case and advantages over if else
13	class	Introduction to class and class member data
14	methods	Method declarations and definitions
15	Inheritance	single level multi-level diamond problem
16	polymorphism	compile time polymorphism runtime polymorphism
17	Abstraction	abstract methods abstract classes
18	interface	introduction to interfaces implementation of multiple inheritance with interfaces
19	access modifiers	private public protected default
20	getter and setter	Properties to access private data
21	using this keyword	Usage of this keyword and limitations

22	static	static variable static block static methods
23	final	final variable, final methods
24	Encapsulation	Implementation of encapsulation
25	collections	ArrayList, List, Map, HashMap, HashTable, LinkedHashMap
27	exception handling	Try, catch, finally blocks
28	using thread	Thread sleep usage
29	File I/O	R/W flat files R/W xml & json R/w excel sheet

Selenium		
S.No.	Title	Details
1	Evolution of Selenium	
2	Components of Selenium Suite	Selenium IDE Selenium RC Selenium WebDriver Selenium GRID
3	Selenium Vs. other tools	Benefits of selenium over other popular automation tools
4	Selenium-WebDriver	Usage of webdriver and methods
5	Selenium WebDriver Architecture	Understanding of WebDriver implementation
6	Usage of gecko, IE, chrome browser drivers	Initialization of webdriver for chrome, edge, IE, Safari browsers
7	Navigating to Web Applications	Driver initialization launching application landing page Define Browser Profiling
8	Browser Driver Commands/ Methods/ Functions	Driver In-built methods to handle browser operations
9	Introduction to Web Elements	Introduction to Web Elements Operations on Web Elements Difference Between FindElement & FindElements
10	Inspecting elements in Mozilla, Chrome	Using firebug in Mozilla inspect in chrome
11	Locators / selectors	Id, name, class, tag name, css selector, link text and XPath
12	Elements methods	In-built methods to perform actions on elements
13	What is XPath?	Introduction to xpath and types










14	Handling complex & Dynamic Web-elements in Selenium using XPath Functions	Contains () Start-with () Preceding Axes and Preceding Sibling Axes Ancestors childs
15	Waits in selenium	Types of Waits : Explicit Wait Fluent wait Implicit Wait PageLoadTimeout setScriptTimeout
16	Actions	Handling mouse actions on elements using Action class
17	JavaScriptExecutors	Usage of java script with Java script executors
18	Alerts in WebDriver: Simple Alert, Confirmation Alert, Prompt Alert	Handling java script pop ups using web driver
19	Handling Model Dialog boxes	Handling model popup using web driver
20	Methods in Window handling	GetWindowHandleCommand GetWindowHandlesCommand SwitchToWindowCommand
21	Selenium Grid	The need of Selenium Grid What is Selenium Grid? Architecture and RemoteWebDriver WorkFlow: Hub, Node Grid 1 vs Grid 2 Setting-up Selenium Grid
22	Page Object Model	Understanding of page object repository Advantage of page repository
23	TestNG unit test framework	Advantages of TestNG TestNG Features Annotations Parameterization: Using Xml file and Data Provider Parallel Testing & Cross Browser Testing
24	Automation project architecture	Development of new project from scratch using Maven, TestNG and Page Object Model Creating Base classes for Pages and Tests Adding common classes for test data, Environment data and reporting Adding page and test classes by implementing Inheritance Script executions through suite files
25	Working with Github	Introduction to Github source code management tool Understanding branching strategy Walk through on the code review check list Understanding of source code clone, commit, pull, push, pull request creation and resolving code conflict during code merge
26	Automation of functional testcases	using firebug in Mozilla inspect in chrome

27	BDD Framework and Cucumber	Introduction to Cucumber Working with feature files and step definition files Understanding of Gherkin language Understanding of test data as example and scenario steps Understanding Test runner and hooks
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API		
S.No.	Title	Details
1	Introduction of Soap UI and REST API	Understanding Soap UI and REST Api Diff. between Soap UI and REST API
2	Understanding REST API Testing	Writing testcases for REST API Preparing data driven sheet for API testcases
3	Working with POSTMAN tool	Introduction to POSTMAN Execution of API Testcases in Postman Creating Environments Passing one api response to another api request Creating collections
4	API Automation	Introduction to Rest Assured Scenario automation for GET/PUT/POST/DELETE operation
5	API with BDD Framework	BDD framework for API Automation Implementation of Data driven framework

MS SQL Server		
S.No	Title	Details
1	Introduction to database	DDL DML Conditions Clauses Joins Subqueries
2	JDBC	connecting to database executing commands on database getting data from database

Process and Framework		
S.No	Title	Details
1	Maven Build Tool	Development of automation with Maven build Understanding maven life cycles Importance of POM.xml Maven commands
2	TestNG Unit Test Framework	Introduction of Unit Test Framework Understanding of TestNG annotations Working with TestNg suites
3	Extent Report Service	Implementation of Extent reports Generating extent reports
4	Project Management with JIRA and Agile methodology	Sprint ceremonies Sprint planning with Jira board Creating and tracking defect in Jira
5	Github	Introduction to source code repository Branching strategy with Github Code merging process in Github
6	Jenkins for ContinuousIntegration	New Job creation Job Configuration for daily executions Run job and results analysis

Tools Included				
 Eclipse IDE	 Intellij	 TestNG	 Maven	 Postman
 Microsoft SQL Server	 Jira	 Git	 Github Desktop	 Jenkins

**We wish you all the success**