

SELENIUM 3.0 CERTIFICATION TRAINING

About BitsBytez Technologies

BitsBytez is leading in providing live instructor-led interactive training. We can set your career on an upward move. Our incessant efforts in comprehending the possibilities of selenium in the world of IT have rendered us competent in helping interested people learn this skill set. We cater to professionals and students across the globe.

A comprehensive **Selenium Certification Training** will help you in mastering various concepts of Selenium from the scratch. Selenium Java Training by **BitsBytez** is a comprehensive, job oriented, certification based learning path for QA Professionals to transform themselves into **QA Automation Engineers**.

This program gives you a complete package to build core competencies in the field of Selenium. Anyone who completes all competencies successfully along with the project work, class work as well as homework, stands a chance to be a successful QA Automation Engineer.

60 Hours of Homework

You watch the lectures, prepare with the theory and complete pre-class work at your own pace.

26 Nano and Mini Projects

Nano projects that you do along with Home Work and apply in Mini projects in Classroom.

30 hours of Classroom Work

In class projects where you apply what you have learnt by practicing it.

1 Capstone Project

Create a project that integrates and synthesizes what they've learned. A 360 degrees learning experience.

About the Course

Selenium is the most popular tool used to automate the testing of web applications. In this Course, you will learn about *Selenium* 3.0 and its *various* components such as Selenium IDE, Selenium WebDriver and Framework. You learn to set up your environment so that you are ready to start using Selenium for testing your web applications. Browsers such as Chrome, Firefox, and IE are used to test the web applications. In addition, you will experience to work with different frameworks such as Data Driven, Keyword Driven, and Hybrid Frameworks.

Page Object Model (POM) is a design pattern that enables you to maintain reusability and readability of the automation scripts. This course introduces you to the concept of POM, and how to implement Page Classes and Page Factory to optimize the execution of automation scripts. In addition, you learn about various third

party tools such as Jenkins, TestNG, and AutoIT to optimally use them for performing various tasks in our browsers.

Module 1

Introduction to Java

Goal - Programming is not just about learning a programming language! The essence of programming is Problem Solving. The software industry is not interested in the number of programming languages you know, it is interested in your problem solving skills. This is the reason why all the technology giants like Google, Apple, and Microsoft focus their interviews more on evaluating your approach to solve problem than testing your proficiency in a programming language.

In this Module, you will Learn Java in simple and easy steps starting from basic to advanced concepts with examples. You will get introduced to Core Java, its features and why it is so popular. This course is taught in practical GOAL oriented way.

Objectives - Upon completing this Module, you should be able to: Create objects, know about the different operators and data types present in Java. You should master the essentials of object-oriented programming on the Java platform. To understand the flow of program which uses different control statements. Learn about Java collections framework (JCF) which is a set of classes and interfaces that implement commonly reusable collection data structures. You must be able to explain various aspects, tips and tricks of Java exception handling.

Topics

1. Understanding Selenium

- Introduction to Selenium
- Introduction to Java
- Why Java for Selenium
- Java Setup and configuration
- Installing Eclipse
- Writing your first Java Program
- Running first test script

2. Core Java

1. Java Fundamentals
 - History and Features of Java
 - Variables, Data Types and Operators
 - Classes, Methods and Objects
2. Arrays
3. Control Statements
 - If-else
 - Switch
 - For loop
 - While loop
 - Do While loop
4. OOPs Concepts
 - Inheritance
 - Polymorphism
 - Abstraction
 - Encapsulation
 - Interface
5. Collections
6. Exception Handling

Module 2

Manual Testing

Goal - In this Module, get introduced to Testing, the types of testing, and the purpose of automation testing. You will also get introduced to the different methodologies followed by the testers. Compare different types of software testing, such as unit testing, integration testing, functional testing, acceptance testing, and more!

Objectives - Upon completing this Module, you should be able to: Keep yourself in the shoes of End User and then go through all the Test Cases and judge the practical value of executing all your documented Test Cases. You should be familiar with QA tools and techniques, bug tracking tool, test design and execution.

Topics

1. Introduction to Testing
 - What is Testing
 - Testing Principles
2. SDLC & STLC
 - Different Models in STLC
3. Types of Testing
4. Test Strategy, Test Planning and Test Case Design

5. Defect Tracking in JIRA / Bugzilla

Module 3

Automation Testing

Goal - In this Module, get introduced to automation testing. You will also gain insight into the evolution of Selenium, get an overview of Selenium 3.0 and its components, and compare 2 different automation tools. Finally, set up your environment so that you can start working with Selenium WebDriver 3.0.

Objectives - Upon completing this Module, you should be able to: Define selenium, discuss the Evolution of Selenium from Selenium 1 to Selenium 2 and then to Selenium 3, state the current version of Selenium, discuss the different components of Selenium Suite, describe Selenium IDE, describe Selenium WebDriver, describe Selenium Grid and set up:- Java, Eclipse, Selenium WebDriver

Topics

1. What is Automation Testing and When to go for Automation Testing
2. Selenium Components
4. Selenium WebDriver
5. Locators and Locator Technique
6. Advanced Selenium
7. Synchronization

Module 4 TestNG

Goal - TestNG is an open source testing framework that provides more flexible and powerful tests with the help of Annotations, Grouping, Sequencing and Parametering. In TestNG HTML reports can be produced, Parallel testing can be performed, Test cases can be prioritized and data Parameterization is possible. Cross browser testing enables our application to work with different browsers. Learn all about TestNG in this Module.

Objectives - At the end of this Module, you should be able to: Describe the purpose of TestNG, explain reports, discuss annotations, execute scripts using TestNG, prioritize test cases, discuss cross browser testing, illustrate the need of taking screenshots in case of test failure, illustrate how to enable/disable a particular test, explain the need of executing a test multiple times.

Topics

1. Introduction
 - Installation @Eclipse/Download - Jar Dependency
 - To create and run Test Suites using TestNG
 - Annotations
 - Parallel Execution
2. Advanced TestNG Concepts
 - Printing the Log Statements in TestNG Report
 - TestNG results Output Folder walkthrough

Module 5 Page Object Model (POM)

Goal - Page Object Model is a design pattern to create object repository for web UI elements. Page object model includes page classes which finds the web elements of that web page and contains page methods that perform operations on those web elements.

Objectives - At the end of this lesson, you should be able to: identify the need for page object modelling, discuss page classes, express the concept of page factory.

Topics

Object repository and test cases

Module 6 Frameworks

Goal - Framework is a basic structure of any environment whether testing or designing. Selenium offers flexibility to create a testing framework that can be reused.

Objectives - You should be able to: define parameterization, discuss how to read data from excel sheet, describe different types of frameworks.

Topics

- Data Driven Testing Framework
- Keyword Driven Testing Framework
- Hybrid Testing Framework
- Behavior Driven Development Framework | Cucumber

Module 7

MySQL Database

Goal - MySQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications.

Objectives - At the end of this lesson, you should be able to: Fetch data using Select queries, use MySQL in-built functions, understand joins in MySQL.

Topics

Select queries, Joins and other functions

Module 8

Maven

Goal - Maven is a build automation tool used primarily for Java projects. Maven addresses two aspects of building software: first, it describes how software is built, and second, it describes its dependencies.

Objectives - At the end of this lesson, you should be able to: Use dependencies, build, and understand the test management. Using pom.xml(Maven) you should configure dependencies needed for building testing and running code.

Topics

MVN – Folder Structure, Clean / Compile / Test command line executions

Module 9

Jenkins : CI/CD Tool

Goal - Jenkins is the leading open-source continuous integration tool. It is cross-platform and can be used on Windows, Linux etc. It supports software changes, multiple VMs, Plugins and has easy installation.

Objectives - At the end of this Module, you should be able to: Discuss Jenkins for continuous integrating, schedule jobs, connect GIT and view TestNG reports.

Topics

Jenkins in Automation Testing

- Introduction
- To view TestNG results
- Scheduling of Jobs
- Connecting to GIT

Module 10

GIT

Git is a version control system for tracking changes in computer files and coordinating work on those files among multiple people. We will learn creating repositories, performing operations like pull, push, commit etc.,

Module 11

Interview Questions

MNC Interview Questions with Answers

Module 12

1 Capstone Project and Certification