Automation Testing Program

Duration of the training: 177.5 Hours
(142 Hours Content + 35.5 Hours Q&A)

MODULE 01: ↗

Manual Testing
(25 Hours + 6 Hours Q&A)

- Introduction to software testing
- Software development process
- Levels and types of testing
- Testing techniques
- Testing process and test case writing
- Bug reporting, Test metrics, RTM, and test environment
- Web testing, DB testing, and cloud testing

PRACTICAL INCLUDES: ↗

- Understanding of given requirements and Test Plan document
- Preparing Test Scenarios in Excel
- Preparing Test cases along with Test Data in Excel
- Test Case Execution and Report generation in Excel
- Understanding Jira for Test Case Management
- Understanding Jira for Defect logging and tracking

MODULE 02: ↗

Java
(25 Hours + 6.5 Hours Q&A)

- Introduction to Java
- Data handling and functions
- Object-oriented programming in Java
- Inheritance
- Encapsulation
- Polymorphism
- Data Abstraction
- Packages
- Collection Framework
- List Interface with Array List, LinkedList, Vector
- Set Interface with HashSet, Tree Set, LinkedHashSet
- Map Interface with HashMap
- File handling

PRACTICAL INCLUDES: ↗

- Create a workspace and Java project
- Write your first program in Java
- Write a program on Operations like
- Addition, Multiplication, Subtraction, Division
- Control Flow Statements
- Write a program to understand Classes, Objects, Inheritance
- Methods, Constructor, Modifiers

- Understand the Collections with List, Array List, LinkedHashSet
- Set and Map Interface, HashSet, HashMap
- Exception handling in Java program

MODULE 03: ↗

WebDriver
(38 Hours + 9.5 Hours Q&A)

- Selenium and its Components
- Selenium WebDriver and Locators
- Interacting with Web Elements Part-I and Waits in Selenium
- Interacting with Web Elements Part-II
- Interacting with Web Elements Part-III
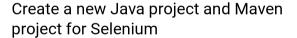- Robot Class to handle window operations
- TestNG Framework
- Automation Frameworks-I
- Automation Frameworks-II
- Page Object Model
- BDD Framework with Cucumber and Selenium Grid

PRACTICAL INCLUDES: ↗

- Create a new Java project and Maven project for Selenium
- Write a program to launch the browser and different applications
- Write a script for Verification of Page Title and Closing Browser
- Understand various Navigation commands like Back, Forward, Refresh
- Understanding different web Elements and Locators to identify textbox, link, button, dropdown
- Write automation script for alerts, frame and multiple window handling

- Handling mouse and keyboard actions Preparing Page Object Model for application
- Automation script for cross browser Test
- Automation script for capturing screenshots
- Understanding TestNG Script and TestNG Reports
- Generating Extent Report
- Understanding Cucumber Scenarios using Gherkin language
- Preparing automation script in cucumber with hooks and tags
- Preparing cucumber Extent Reports

MODULE 04: ↗

API (10 Hours + 2.5 Hours Q&A)	Fundamentals of web services
	Introduction to API testing
	Postman basics
	Postman advanced topics
	Postman Newman
	REST assured basics
	REST API testing
	JSON manipulation
	REST framework

PRACTICAL INCLUDES: ↗

Generate GET, POST, PUT, DELETE Request in Postman

Generate Test script using Chai library in Postman

Executing collections in Postman

Generating reports in Postman

Setup Rest Assured library in Maven project

Automate GET, POST, PUT, DELETE request

Validate JSON Response

Understand Authentication in Rest API

MODULE 05: ↗

Appium
(10 Hours + 2.5 Hours Q&A)

Introduction To Mobile Testing

Introduction To Appium

Automating the Application Management Actions and Synchronization

Automating the Gestures and Key Events Handling using Appium

Network Management and Performance Analysis using Appium

Automating Hybrid and Native Apps

PRACTICAL INCLUDES: ↗

Installing Appium on Windows/Mac

Preparing Appium's first script for the Android application

Handling Mobile elements using Appium Inspector

Handling alerts, toggle Wi-Fi, toggle data and airplane mode

Handling Mobile gestures and key event

Reports generation in Appium

MODULE 06: ↗

JavaScript For Tester

(10 Hours + 2.5 Q&A)

Introduction to Javascript, DOM and writing JavaScript Program

JavaSCript Variables,Data Types and Operator

Conditional Statements: If-else, Switch case

Looping statements: While, Dowhile and For loop

Functions in JavaScript

Working with Objects in JavaScript

Arrays in JavaScript

Strings and Numbers in JavaScript

OOP Concepts in JavaScript

Prototypes

Converting JSON Object to JavaScript

MODULE 07: ↗

Cypress
(10 Hours + 2. 5 Hour Q&A)

What is cypress

Understanding cypress architecture and benefits

Selenium vs Cypress -Comparison

Downloading and Installing Cypress

Quick tour of Cypress Test Runner and configuration files

What is Cypress Test Runner

Write your first Cypress Test

Electron Difference between Cypress and cy

Cypress locator strategies and how to construct them

Cypress inbuilt plugin in test Runner to generate locators

Basic Assertion in writing the tests with Cypress

Interacting with Elements , Radio Buttons and checkboxes

Interacting with Dropdown – Use of Select class, Auto-suggest option

MODULE 08: ↗

Playwright
(10 Hours + 2.5 Hour Q&A)

What is Playwright

How To Install Playwright

How To Write First Playwright Test Case With Assertion

How To Write Login Test In Playwright | Interact With Web Element In Playwright

How To Get Text In Playwright | Verify Text In Playwright

How To Maximize Browser Window In playwright | Viewport In Playwright

How To Take Screenshots | Videos | Trace Files in Playwright

How To Record And Play Scripts In Playwright | Playwright Test Generator| Codegen Playwright

Handle Dropdown In Playwright And Verify Dropdown Values

MODULE 09: ↗

Capstone Projects
(4 Hours + 1 Hour Q&A)

Capstone Project using Selenium, Maven, and TestNG Framework ---> E-commerce Application domain

Capstone project using Selenium, Maven, and TestNG Framework ---> Human Resource Management domain

Capstone project using Selenium, Maven, TestNG, and REST Assured Framework ---> Telecom doma

DEVOPS
(Online Self Learning)

"Self-Learning" module videos are available on the LMS dashboard throughout the training course, allowing you to learn at your own pace and convenience.

> Overview of DevOps
>
> Version Control with Git
>
> Continuous Integration with Jenkins
>
> Introduction to Docker

PRACTICAL INCLUDES:

- Create your GitHub account
- Integrating GIT with Eclipse
- Perform various operations (Commit, Push, Pull Stash, etc.) in GIT
- Working with Git branch
- Setup Jenkins instance in your local machine
- Install plug-ins in Jenkins
- Create and execute the jobs
- Integration of Eclipse git and Jenkins

SQL
(Online Self Learning)

"Self-Learning" module videos are available on the LMS dashboard throughout the training course, allowing you to learn at your own pace and convenience.

Introduction to SQL

DML

Create Database

Drop Database

Select Database

Create Table

Insert Query

Select Query

Delete Query

Joins

Retrieve data from multiple tables

Inbuilt functions in SQL

Create advanced database objects

PRACTICAL INCLUDES: ↗

Installing MySQL on Machine

Create table and insert records in table

Perform CRUD Operation in SQL

Join two tables using inner join, outer join

Understanding keys in SQL

Understanding functions Math, String, Date and Aggregate Functions

Understanding triggers and constraints, store procedures

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