

# Selenium Java, GenAI, AI in Testing, Prompt Engineering, Automation Training Syllabus

## **JAVA**

- Introduction to Java
- JDK, JRE, JVM
- Naming Conventions
- Eclipse IDE
- Data Types
- Variables (Local, Global, Static, Non-Static)
- Functions / Methods
- Operators & Loops
- Conditional Statements
- Arrays
- OOPS Concept
- Constructor
- Interface
- Access Specifiers
- Keywords
- Exception Handling
- Collections (HashMap / Hash-Table)
- Break Statement

## **SELENIUM**

- Automation Testing Overview
- Selenium IDE, WebDriver, Grid
- WebDriver Jars Setup
- Chrome Driver
- Selectors Hub Utility
- XPath Strategies
- Handling Checkbox & Radio Buttons
- Dropdowns

- Waits (Implicit & Explicit)
- Dynamic Web Tables
- Scrolling
- Cookies Handling
- Mouse & Keyboard Simulation
- Pop-ups, Tabs, Windows

## TESTNG

- Plugin & Jars Setup
- Annotations
- Dependent Test Scripts
- Reports Generation
- Multiple Script Execution
- Fail Test Case Handling & Screenshots

## MAVEN

- Maven Setup
- Integration with Selenium & TestNG
- Plugins
- Pom.xml

## GENAI IN TESTING

- Introduction to AI & Generative AI
- AI vs ML vs DL vs GenAI
- LLMs Overview
- How ChatGPT Works (High-level)
- testRigor Basics

## AI IN TESTING AND LLM'S

- Understanding tokens
- Generate Test plan using AI
- Test cases using AI
- Test Strategy using AI
- Copilot extension for fixing issues tips

- Build Automation AI Agent with MCP (Model Context Protocol) Servers
- Multi agent, Agentic AI
- Build AI Agent for automation workflow

### **PROMPT ENGINEERING**

- What is Prompt Engineering?
- Why Testers Need It
- Structure of a Good Prompt
- Advanced Prompt Engineering for Testers
- Writing Prompts for Test Case Generation
- Writing Prompts for Automation Script Generation
- Writing Prompts for Bug Report Creation
- Controlling Tone & Output Format
- Prompt Optimization Techniques
- Reducing Hallucinations

### **USING AI IN AUTOMATION FRAMEWORK AND AI TESTING PROJECT (MINI PROJECT)**

### **ADDITIONAL CONTENTS**

- JIRA
- Agile Model
- Manual Testing
- POM Framework

### **API TESTING USING POSTMAN**

- Introduction to API Testing
- Configurations
- Test Execution & Results

### **J-METER**

- Downloading & Configuring
- Execute Test
- Results

- Performance Testing

#### **GIT – VERSIONING TOOL**

- Git Configuration
- Pull, Push, Commit, Merge

#### **KEY POINTS**

- Practice on a live website
- Magical Naukri Profile Session
- Customized Notes
- Interview Preparation
- Resume Writing Assistance
- Recorded Sessions Provided

#### **BATCH DETAILS**

- Batch Timing: **9:30 PM – 11:00 PM (Weekdays)**
- Duration: **3 Months**
- Fees: **Rs 7500/-**
- Contact: **+91 9380874255 — Amit Belgi**