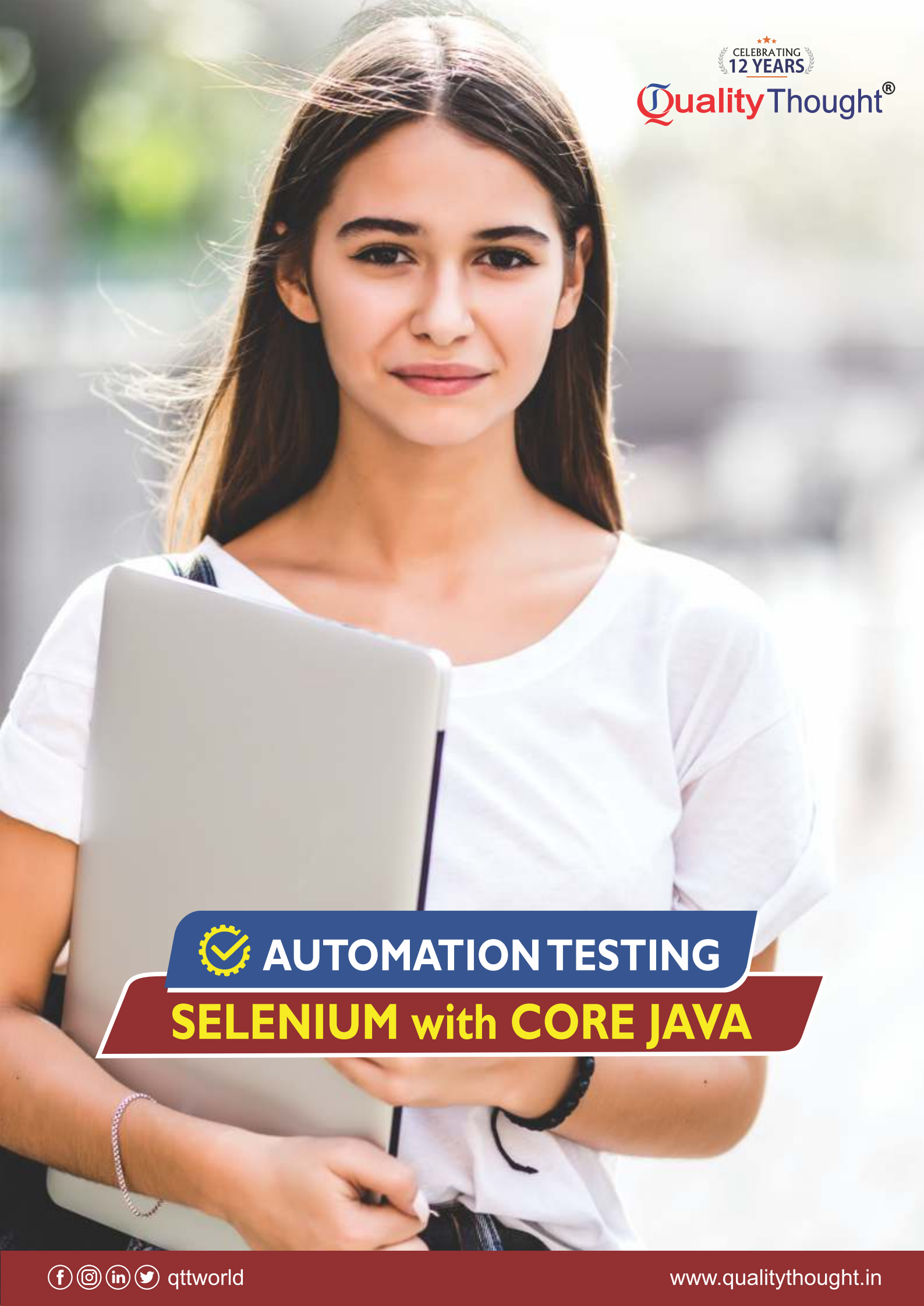
CELEBRATING
12 YEARS
QualityThought®
AUTOMATION TESTING
SELENIUM with CORE JAVA

Course Objectives:

This course is designed to train intermediate and professional testers to gain in-depth Selenium WebDriver knowledge.

After completing this course, you will be able to:

- You will be in a position to pick any website over internet and can automate it
- Implement page object design pattern, data-driven testing and Cucumber framework
- Learn to use Selenium Grid with TestNG for parallel execution
- Understand Selenium WebDriver architecture
- Set up WebDriver project in Eclipse and write test cases using TestNG
- Understand how to use Maven and Jenkins
- Running our automated tests inside a Docker container
- Execute a project from scratch by building an automation framework and automating a few test scenarios

Participants:

- Manual Testers/ fresher's
- Testers with no java programming experience looking to gain WebDriver experience

1) Automation Basics

- Fundamentals of Test Automation
- What are the advantages of automation testing?

2) Introduction to Selenium

- What Selenium is and How it is Used in Real time
- Features of Selenium

3) Selenium IDE

- Installing IDE
- Building Test Scripts
- Running Test Scripts
- Locating Elements on the web page
- Limitations of Selenium IDE

4) WebDriver Basics - I

- Selenium Web Driver Overview
- Configuring WebDriver in eclipse
- WebDriver Architecture

- Web Driver Drivers
- Locating Elements in Web Driver
- Handling Web elements
- Running test in multiple browsers
- Synchronization
- Handling AJAX controls
- Handling JavaScript alerts, prompts and confirmations

5) WebDriver Basics - II

- Handling Multiple frames
- Handling Multiple windows
- Capturing screenshots
- Browser navigation
- Handling Keyboard and Mouse Events
- Handling Autosuggestions
- Handling Web Tables
- Finding Broken Links
- File upload and Download using AutoIt

6) TestNG

- How to Install TestNG plug-in in Eclipse
- Various Annotations
- Assertions
- Writing Selenium test script from scratch
- Reports using TestNG

7) Project Details

- Application overview
  - ✓ Bank project overview
  - ✓ Project Description
  - ✓ Tools used in the project (Jenkins, Maven, GitHub, Docker and AutoIt)
  - ✓ Roles and Responsibilities
- Automation process
  - ✓ Automation life cycle
  - ✓ Identify test cases what to be automated
  - ✓ Authoring the scripts
  - ✓ Executing the scripts
  - ✓ Analyze the reports

8) WebDriver - Framework

- Introduction to Various Frameworks
- Data-Driven Tests Using POI
- Reading, Writing data into Excel
- Database Connection (JDBC)

- Reading, Writing data into MySQL
- Page Object Model Framework (POM)
- Writing scripts Using page Object Model

9) TestNG

- Configuring Test Suites
- Passing Parameters to Tests
- Parallel Test Execution Capability
- Re-run failed test scripts
- Attributes of @Test
- Running TestNG suites from command prompt

10) Build Automation Tool (Maven)

- Creating Maven project
- Understanding of POM .xml
- Maven Integration with TestNG
- Executing Scripts Using Maven build tool

11) Cucumber Framework

- Overview of BDD, TDD
- Cucumber Project Setup
- Gherkin Keywords
- Working with simple scenario
- Cucumber options
- Generating Cucumber Reports
- Cucumber Advanced Features
  - ✓ Working with Data table
  - ✓ Page Object Model in Cucumber
  - ✓ Background and Hooks examples in Cucumber

12) Continuous Integration Tool (Jenkins)

- Configuring Jenkins
- Executing the windows commands in Jenkins Free Style project
- Creating Maven Job
- Manage Plug-ins
- Scheduling the Jobs

13) GitHub

- What is Version Control System
- What is GitHub
- Git commands
- Pushing Our Project Into GitHub
- Git vs. GitHub

14) Selenium GRID

- What is Selenium Grid?
- Setting up Grid - Hub and Nodes?
- Running Test Scripts on Selenium Grid

15) Docker

- Docker Basics & Installation
- Integrate Selenium Grid with Docker
- Running our automated tests inside a Docker container

AUTOMATION TESTING

SELENIUM with CORE JAVA

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Core Java

1. Basics of Java

- What is Java?
- Variable and Data type in Java
- Operators in java
- Control statements Strings and Arrays

2. OOPs Concepts

- Advantage of OOPs
- Classes and objects – concepts of classes, objects, Methods
- Constructors
- Package
- This keyword
- Static keyword
- Overloading methods and constructors
- Inheritance, Benefits of inheritance
- Types of Inheritance
- Method overriding, super uses
- Polymorphism
- Encapsulation
- Abstract class
- Interface
- Final Keyword
- Access Modifiers

3. Exception Handling

- Exception
- Types of Exception
- Use of try-catch block in Exception handling
- Multiple catch block
- finally block
- throw keyword
- throws keyword

4. Java Collection Framework

- Hierarchy of Collection Framework
- ArrayList class
- LinkedList class
- List Interface
- HashSet class
- HashMap and HashTable class

5. New Java Features

- Lambda Expression
- Method References
- Functional interfaces
- Streams
- Stream filter

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