



SOFTWARE TESTING & QA

MANUAL . AUTOMATION . API TESTS
SELENIUM . PLAYWRIGHT . P
INTEGRATION . REPORTING .

DURATION	LEVEL	MODULES	MODE
70 Hours	Beginner to Advanced	8	Classroom · Online · Hybrid

01 COURSE OVERVIEW

A software quality course covering manual test discipline and automation across UI, API and performance layers.

Learners write test plans, cases and defect reports to professional standards, then automate the same coverage with Selenium and Playwright, test APIs with Postman and REST Assured, and run load tests with JMeter.

Automation is wired into a CI pipeline with reporting, so results are visible to the whole team.

WHO IT IS FOR

- Manual testers moving to automation
- Graduates entering QA roles
- Developers writing their own tests
- Team leads defining quality process

PREREQUISITES

Basic computer knowledge. Programming is introduced as needed for automation.

02 LEARNING OUTCOMES

01 Write test plans, cases and traceability matrices.

03 Automate browser tests with Selenium and Playwright.

05 Run load and stress tests and read the results.

07 Choose what to automate and what to test manually.

02 Report defects that developers can act on.

04 Test APIs including auth, schemas and negative cases.

06 Integrate suites into CI with reports.

03 MODULE STRUCTURE

8 MODULES

01 TESTING FUNDAMENTALS

SDLC and STLC

Test types

Entry and exit criteria

Test levels

Static vs dynamic

Quality metrics

02 MANUAL TESTING

Requirement analysis

Test data

Defect lifecycle

Test scenarios and cases

Execution

Severity and priority

LAB

TEST SUITE FOR A WEB APP

03 TEST MANAGEMENT

Test plans

Traceability

Tools

Estimation

Risk-based testing

Reporting to stakeholders

TOOLS

JIRA

TESTRAIL

ZEPHYR

04 PROGRAMMING FOR AUTOMATION

Java or Python essentials

Functions and classes

Version control basics

Data structures

Assertions

05 UI AUTOMATION

Selenium WebDriver

Waits

Playwright

Flakiness control

Locators

Page Object Model

Cross-browser runs

LAB

REGRESSION SUITE

06 API TESTING

REST concepts

Assertions

REST Assured

Mocking

Postman collections

Environments

Schema validation

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API TEST COLLECTION

07 PERFORMANCE TESTING

Load, stress and soak tests

Thresholds

Reporting

JMeter test plans

Bottleneck analysis

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LOAD TEST

08 CI AND REPORTING

TestNG and pytest structure

Jenkins or GitHub Actions integration

Quality gates

Parallel runs

Allure reports

PROJECT

AUTOMATED SUITE RUNNING IN CI

04 ASSESSMENT & CERTIFICATION

Module assignments and labs	25%
Mini projects	20%
Internal assessments	15%
Final project and review	40%

CERTIFICATION

Learners who complete all modules, submit the final project and clear the review receive a course completion certificate from Kaizen Infinities Private Limited. Project work is documented for the learner's portfolio, and interview preparation is included in the closing sessions.

05 CAREER OUTCOMES

ROLES THIS PROGRAMME PREPARES FOR

QA ENGINEER

TEST AUTOMATION ENGINEER

SDET

PERFORMANCE TEST ENGINEER

QA LEAD

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