Testing – Manual & Automation

Basic

Duration – 40 Hours

Program Description

The Basic Level Testing program is designed to build a solid foundation in software testing. It introduces learners to manual testing concepts, the software development lifecycle (SDLC), test case design techniques, defect lifecycle, and test execution practices. The course is ideal for freshers or professionals transitioning into QA roles.

Learning Goals

- Understand the role of testing in the software development lifecycle.
- Learn various types of testing such as functional, regression, and smoke testing.
- Write effective test cases and execute them manually.
- Identify and report defects using standard tools.
- Gain familiarity with testing tools like Jira or TestLink.

Course Topics

- Introduction to Software Testing & SDLC
- STLC – Software Testing Life Cycle
- Types of Testing: Functional, Regression, Smoke, Sanity
- Test Case Design Techniques: Equivalence Partitioning, Boundary Value Analysis
- Defect Lifecycle and Bug Reporting
- Test Plan, Test Case, and Test Scenario Writing
- Manual Test Execution and Reporting
- Introduction to Test Management Tools (Jira, TestLink, Bugzilla)

Intermediate

Duration – 60 Hours

Program Description

The Intermediate Testing program introduces automation fundamentals using Selenium and scripting in Python or Java. Learners will explore the basics of web automation, test frameworks, element identification, and page object modeling. They'll also handle data-driven testing and integrate automation suites with test management tools.

Learning Goals

- Learn web automation using Selenium WebDriver.
- Understand DOM structure and element locators (XPath, CSS).
- Develop test scripts using Python or Java.
- Build test frameworks with modular and reusable code.
- Automate form inputs, validations, and error checks.
- Integrate automation with reporting and version control tools.

Course Topics

- Introduction to Automation Testing and Selenium Architecture
- Setting up Selenium with Java/Python and IDE (Eclipse/PyCharm)
- Locators: XPath, CSS Selectors, ID, Name, LinkText
- Handling Forms, Alerts, Frames, and Dropdowns
- Waits in Selenium: Implicit and Explicit
- Page Object Model and TestNG (or PyTest for Python)
- Data-Driven Testing with Excel/CSV
- Automation Reporting with Extent Reports/Allure
- Git Basics and Integration with Test Frameworks

Advanced

Duration – 80 Hours

Program Description

The Advanced Testing program is designed for professionals aiming to master enterprise-level automation and test strategy. It includes advanced frameworks like BDD with Cucumber, REST API testing with tools like Postman and RestAssured, CI/CD pipeline integration, and performance testing using JMeter. Learners also cover security and accessibility testing fundamentals.

Learning Goals

- Implement Behavior Driven Development using Cucumber or Behave.
- Test REST APIs using Postman and RestAssured.
- Build and maintain robust, scalable automation frameworks.
- Integrate test suites with CI/CD tools (Jenkins, GitHub Actions).
- Perform performance testing and interpret load test results.
- Understand the basics of security and accessibility testing.

Course Topics

- BDD with Cucumber (Java) / Behave (Python)
- API Testing: Postman, REST, JSON Schema Validation
- RestAssured for Automated API Testing
- Jenkins for Continuous Integration and Automated Test Runs
- Parameterization and Configuration Management
- Performance Testing with JMeter: Threads, Load, Assertions
- Accessibility Testing Basics (AXE, Lighthouse)
- Introduction to Security Testing (OWASP Top 10)
- Real-World Automation Project & Test Strategy Document

Modules can be customized to suit client's specific needs and duration accordingly