Agile Test Automation

- Discover how to implement test automation as stories are implemented
- Confidently deliver shippable product increments each sprint using automation
- Understand how to collaborate with business analysts, programmers, and customers to integrate automation into your team's workflow
- Work without the need of separate, independent test automation teams
- Explore how complex non-functional testing can be automated in a sprint
- Discover how tools such as mind mappers, recorders, and note takers generate defensible evidence of regulatory compliant testing

Most agile teams deliver potentially shippable software at the end of each iteration (one to four weeks), but some agile teams even ship working software every day. Regression confidence can be achieved with the help of automated tests, which many teams struggle with. This class will teach automation techniques to improve regression testing, story and feature testing, and enhancement of exploratory testing. Test Driven Development techniques, precise test and tool selection, appropriate automation design, and team collaboration can be combined to fully integrate testing into Agile delivery teams and provide the efficiency necessary for project success.

Explore the many ways automation supports agile testing activities. Test automation purpose, theory, and principles are reviewed. We look at how test automation is implemented in diverse organizations. The course presents many types of automation illustrated with example test descriptions, source code samples, and example test scripts.

This course will provide real-world, vendor-neutral examples of Agile Test Automation approaches and tools. Examples of automated tests for Test Driven Development (TDD), Acceptance Test Driven Development (ATDD), and Behavior Driven Development (BDD) will be given.

Who Should Attend
This course is for agile team members involved in testing, programming, business analysis, software construction, and deployment. Product owners, managers, and other development professionals will gain important insights into the benefits and trade-offs related to agile test automation. No specific prerequisites are assumed, and any technical concepts will be explained; however, attendees are expected to have some software and agile knowledge or experience.

Looking for Certification?
For teams and individuals seeking professional certification in test automation, we recommendFundamentals of Test Automation—ICAgile Certification [1] for developer and testing roles who need to learn automation or improve their existing automation knowledge, and Advanced Tester Certification—Test Automation Engineer[2] for test professionals who hold the ISTQB® Certified Tester—Foundation Level (CTFL) certification.

Course Outline

Test Automation Strategy
Where test automation fits in
How much test automation
What not to automate

Automation Pyramid
Presentation
Application
Structural

Static Code Analysis/Metrics
Code metrics
Changing complexity and risk
Security risks
Maintainability risks

Automating Story and Feature Testing
Defining acceptance tests
Cross story testing

Planning for Automation
Skills
Tools
Workflows

Automation Frameworks
Unit Test Harness
Acceptance Test Frameworks for ATDD and BDD
Traditional capture playback test frameworks

Selecting Tests for Automation
Structural regression
Business facing regression
Repetitive operations
Improve ability to control and observer

Supporting Process
Roles and Responsibilities for test automation
Test Driven Development
Acceptance Test Driven Development
Behavior Driven Development
Design Driven Testing
Legacy automation

Testing and Continuous Integration
Build environments
Structure regression
Business facing regression
Static analysis

Automated Test Cycles (Continuous Testing)
Flow of implementing a story
Grooming and test automation
Programming and test automation
In sprint testing activities
Non-functional testing activities
Dynamic analysis

Data driven testing
Keyword driven testing
Scripting

Mapping Tests to Automation
Acceptance tests to automate
Unit tests to automate
Regression coverage

ATDD and BDD Testing Frameworks
Fitnesse
Cucumber

UI Testing Frameworks
Capture playback test generalization
Open source frameworks
Commercial frameworks

Automation Support for Integration and System Testing
End-to-end transaction testing
Continuous integration

Data Setup and Tear Down and Data Within Automation
Self contained test models
Data independent models
Mocking

Tools to Support Exploratory Testing
Scripting
Note taking
Mind Mapping
Screen capture

Tools for Performing Non-Functional Testing
Performance testing tools
Stress testing tools
Usability testing tools
Security testing tools

Virtualization
Virtual unit test environments
Virtual business facing test environments
Locale variations
Reset systems to a controlled state

Price: $1495