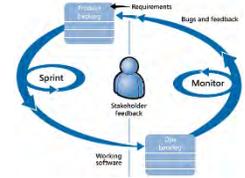# Application Lifecycle Management Using Visual Studio 2015

ALM2015 | 3 Days

This three-day "all up" course provides students with the knowledge and skills to effectively use the Application Lifecycle Management (ALM) tools found in Visual Studio 2015 and the Team Foundation Server 2015 or Visual Studio Online to plan, track, design, develop, test, and deliver business value in the form of working software. The course demonstrates to developers, testers, product owners, project managers, architects, testers, and release managers the value of the various ALM features and capabilities found throughout Visual Studio. This course can be delivered using the Scrum, Agile, or CMMI process template.

Course Objectives

At course completion, attendees will have had exposure to …

- ✓ Visual Studio 2015 ALM tools and strategy
- ✓ Visual Studio 2015 editions and capabilities
- ✓ Team Foundation Server components/architecture
- ✓ Visual Studio Online
- ✓ Planning and creating team project collections
- ✓ Planning and creating team projects
- ✓ Selecting an appropriate process template
- ✓ Managing and securing a team project
- ✓ Renaming and deleting team projects
- ✓ Creating and querying work items
- ✓ Using hierarchies to create/manage a portfolio
- ✓ Using Agile tools to plan and track work
- ✓ Creating and refining a product backlog
- ✓ Planning and tracking work in a sprint
- ✓ Obtaining stakeholder feedback
- ✓ Using Team Rooms for collaboration
- ✓ Creating storyboards in PowerPoint
- ✓ Conducting and tracking a code review
- ✓ Understanding and using version control

- ✓ Git and/or TFVC version control systems
- ✓ Basic and advanced version control workflows
- ✓ Labeling, shelving, branching, and merging
- ✓ Writing and executing .NET unit tests
- ✓ Using IntelliTest to generate unit tests
- ✓ Using code analysis and code metrics
- ✓ Using code clone analysis to find duplicate code
- ✓ Using IntelliTrace to troubleshoot and diagnose
- ✓ Using Performance Profiler
- ✓ Test case management using Test Manager (MTM)
- ✓ Planning, creating, and executing manual/UI tests
- ✓ Planning and running manual tests from the web
- ✓ Using coded UI tests to automate UI testing
- ✓ Testing web applications
- ✓ Load and performance testing
- ✓ Team Foundation Build
- ✓ Configuring build agents
- ✓ Automating the building and testing of a project
- ✓ Release Management for Visual Studio 2015

Who Should Attend

This course is intended for current software development professionals who are involved in building applications with Visual Studio. Regardless of the student's role, he or she will be able to learn and get hands-on experience with the ALM features in Visual Studio.

Prerequisites

Before attending this course, a student should have experience working on a software development team and be familiar with that team's ALM processes, practices, and tools. Additionally, students should:

- ✓ Have familiarity with their development process
- ✓ Have familiarity with distributed application design
- ✓ Be able to read and understand C# .NET code (all source code will be provided)

- ✓ Have used Visual Studio 2012, 2013, or 2015
- ✓ Be able to read and understand requirements
- ✓ Understand the Microsoft Windows operating system and security basics

Application Lifecycle Management Using Visual Studio 2015

ALM2015 | 3 Days

Modules

Module 1: Introduction to Visual Studio 2015 ALM
- ✓ Application Lifecycle Management overview
- ✓ Visual Studio 2015 ALM tools
- ✓ Team Foundation Server 2015 overview
- ✓ Features and capabilities by edition and role

Module 2: Team Projects
- ✓ The Project Administrator role
- ✓ Team project collections and team projects
- ✓ Creating a team project
- ✓ Configuring and managing a team project
- ✓ Renaming and deleting a team project

Module 3: Planning and managing work
- ✓ Process template overview
- ✓ Work item types, categories, and hierarchies
- ✓ Creating and managing work items
- ✓ Using tags to categorize work items
- ✓ Querying, charting, and reporting work items
- ✓ Managing a product backlog and sprint backlog

Module 4: Version Control
- ✓ Git version control system overview
- ✓ TFVC version control system overview
- ✓ Integration with Visual Studio
- ✓ Setting up and configuring version control
- ✓ Basic and advanced workflows
- ✓ Branching and merging
- ✓ Managing and resolving conflicts

Module 5: Collaborating as a Team
- ✓ Using the My Work window
- ✓ Suspending and resuming work
- ✓ Shelving and unshelving changes
- ✓ Creating storyboards in PowerPoint
- ✓ Reviewing code in Visual Studio
- ✓ Providing feedback using the Feedback Client
- ✓ Collaborating in a Team Room

Module 6: Writing Quality Code
- ✓ Unit testing and code coverage
- ✓ Using IntelliTest to generate unit tests
- ✓ Test-Driven Development (TDD) overview
- ✓ Code analysis and code metrics
- ✓ Code clone analysis
- ✓ Application profiling
- ✓ IntelliTrace
- ✓ CodeLens

Module 7: Testing the Application
- ✓ Visual Studio 2015 test types
- ✓ Web performance tests
- ✓ Load tests
- ✓ Microsoft Test Manager (MTM)
- ✓ Test plans, test suites, and test cases
- ✓ Manual tests
- ✓ Web-based test case management
- ✓ Coded UI tests
- ✓ Exploratory tests

Module 8: Building and Releasing
- ✓ Team Foundation Build 2015
- ✓ Build agents and types of builds
- ✓ Creating, queuing, monitoring, and managing a build
- ✓ Running tests as part of the build
- ✓ Customizing the build process

Module 9: Improving DevOps
- ✓ Development and Operations goals and schisms
- ✓ Identifying and reducing technical debt
- ✓ Improving delivery frequency
- ✓ Continuous Integration (CI)
- ✓ Release Management for Visual Studio 2015
- ✓ Continuous Delivery (CD)

Course Designer

This course was designed by Richard Hundhausen, a Visual Studio ALM MVP, Microsoft Regional Director, and an experienced software developer and trainer. To see other developer courses, visit www.accentient.com.

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