Course duration

- 1 day

Course Benefits

- Download and install Maven
- Build a project
- Work with Maven's project directory structure, plugins, repositories, and more
- Understand the Project Object Model (POM)
- Build a complete web application using Maven
- Build and activate profiles
- Use Maven from Eclipse via the m2eclipse plugin

Course Outline

1. Introduction to Apache Maven
    1. Build Tools for Java
    2. History of Build Tools
    3. Traditional Scripting
    4. "make"
    5. Problems with Make
    6. Manual Build with JavaC
    7. ANT
    8. Pros and Cons of Ant
    9. Apache Maven
    10. Goals of Maven
    11. What is Apache Maven?
    12. Why Use Apache Maven?
    13. The Maven EcoSystem
    14. Consistent Easy-to-Understand Project Layout
    15. Convention Over Configuration
    16. Maven is Different
    17. Maven Projects have a Standardized Build
    18. Effect of Convention Over Configuration
    19. Importance of Plugins
    20. A Key Point on Maven!
    21. Summary - Key Features of Maven
2. Installing and Running Apache Maven
    1. Downloading Maven
    2. Installing Maven
    3. Run From Command Line

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    4. Running Inside an IDE
    5. Settings.xml
    6. Local Repository
    7. Summary
3. Getting Started With Maven
    1. Terminology and Basic Concepts
    2. Artifacts
    3. Lifecycle
    4. Default Lifecycle
    5. Plugins
    6. Running Maven - the Story So Far
    7. Running Maven from an IDE
    8. Common Goals
    9. pom.xml
    10. Example
    11. Artifact Coordinates
    12. Standard Layout for Sources
    13. Summary
4. A Web Application in Maven
    1. A More Complex Project
    2. Putting it Together With Maven
    3. Packaging the Target Artifact
    4. The Source Tree
    5. Dependencies
    6. Transitive Dependencies
    7. Dependency Scope
    8. Working With Servers
    9. Declaring and Configuring Plugins
    10. Running the Plugin
    11. Binding a Plugin Goal to the Lifecycle
    12. Archetypes
    13. Summary
5. Commonly Used Plugins
    1. Maven Plugins
    2. Declaring and Configuring Plugins
    3. Running the Plugin
    4. Binding a Plugin Goal to the Lifecycle
    5. Maven Surefire Test Plugin
    6. Failsafe Plugin
    7. Site Plugin
    8. JavaDoc Plugin
    9. PMD Plugin
    10. Code Coverage - Cobertura
    11. Summary
6. Multi-Module Builds
    1. Introduction
    2. The Reactor

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3. Reactor Sorting
4. Multi-Module Build by Example
5. Summary

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

Experience in the following *is required* for this Maven class:

- Core Java and Java web programming experience

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