

**Git and Bitbucket Fundamentals**

**Course Number:** GIT-116  
**Duration:** 1 day

**Overview**

This live, private Git and Bitbucket Fundamentals training teaches attendees how to use Git and leverage Bitbucket as their repository hosting platform. Students learn the ins & outs of the pull request workflow, code reviews, and other best practices when collaborating as a team.

**Note:** The 1-day course can be taught over 2 half-days.

**Prerequisites**

No prior experience with Git or Bitbucket is presumed. Prior experience with other version control systems is helpful but not required.

**Materials**

All attendees receive comprehensive course materials.

**Software Needed on Each Student PC**

* Windows, Mac OS X, Linux, or Solaris, ideally on a machine with dual core or faster processor and 4GB RAM or higher
* Git 2.x or later (earlier versions taught upon request)
* Internet access for all attendees and the instructor
* Related software that Accelebrate would provide
* For classes delivered online, all participants need either dual monitors or a separate device logged into the online session so that they can do their work on one screen and watch the instructor on the other. A separate computer connected to a projector or large screen TV would be another way for students to see the instructor's screen simultaneously while working on their own.
* Students should register on Bitbucket.org prior to joining the class

**Objectives**

* Understand Git and Git fundamentals
* Review and edit the commit history
* Improve your daily workflow
* Branch, merge, and use remote repositories
* Learn collaboration best practices as a team leveraging Bitbucket
* Become comfortable with the Pull Request workflow

**Outline**

* Introduction to Source Code Management
  + The Core Principles of Change Management
  + The Power to Undo Changes
  + Audit Trails and Investigations
  + Reproducible Software
* Git Introduction and Basics
  + Introduction to Git
  + Trees and Commits
  + Configuring Git
  + Adding, Renaming, and Removing Files
* Reviewing and Editing the Commit History
  + Reviewing the Commit History
  + Revision Shortcuts
  + Fixing Mistakes
* Improving Your Daily Workflow
  + Simplifying Common Commands with Aliases
  + Ignoring Build Artifacts
  + Saving Changes for Later Use (Stashing)
* Branching
  + Branching Basics
  + Listing Differences Between Branches
  + Visualizing Branches
  + Deleting Branches
  + Tagging
* Merging
  + Merging Basics
  + Merge Conflicts
  + Merging Remote Branches
* Remote Repositories
  + Remote Repositories
  + Synchronizing Objects with Remotes
  + Tracking Branches
* Centralizing and Controlling Access
  + Introduction to Remotes (Bitbucket)
  + Hosting your Git Repositories
  + The Git Flow
  + Collaborating as a team
  + Pushing & Pulling branches
  + Leveraging pull requests and code reviews
  + Resolving remote conflicts
  + Releasing via Bitbucket
* Workflows/Best Practices
  + Branch strategies
  + Remote strategies
  + Tagging strategies
* Conclusion