Git and Github for Source Code Control

Category: Software Development & Programming | **Vendor:** Various

Duration: 32.00 hours (4 days) **26.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This course teaches the student how to use Git and Github for tracking, branching, merging, and managing code revisions. Through a series of lectures and workshops, this course takes the student from Git fundamentals to advanced techniques and provides direction for navigating the many functions of this open-source version control system.

About This Course

This course teaches the student how to use Git and Github for tracking, branching, merging, and managing code revisions. Through a series of lectures and workshops, this course takes the student from Git fundamentals to advanced techniques and provides direction for navigating the many functions of this open-source version control system.

Who Should Attend

This course has been designed for programmers who want to make use of Git and Github for source code control.

Prerequisites & Entry Requirements

General Prerequisites:

Delegates should have programming experience.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

At the end of this course, students will be able to:

- Understand how to use source code control
- Install Git and Github
- Use the Git command line
- Commit source code
- Use Branches, Diffs, and Merges
- Work with Repositories
- Combine projects
- Work with submodules
- Create and manage Github repositories

Detailed Course Outline

Course Content

The Big Picture

- Background
- The Birth of Git
- Precedents
- Timeline
- What's in a Name?

Installing Git

- Using Binary Distributions
- Obtaining a Source Release
- Building and Installing
- Installing Git on Windows

Getting Started

- The Git Command Line
- Quick Introduction to Using Git
- Configuration Files
- Inquiry
- View Sample

Basic Git Concepts

- View Sample
- Basic Concepts
- View Sample
- Object Store Pictures
- View Sample
- Git Concepts at Work

File Management and the Index

- It's All About the Index
- File Classifications in Git
- Using git add
- Some Notes on Using git commit
- Using git rm
- Using git mv
- A Note on Tracking Renames
- The .gitignore File
- A Detailed View of Git's Object Model and Files

Commits

- Atomic Changesets
- Identifying Commits
- Commit History
- Finding Commits

Branches

- Reasons for Using Branches
- Branch Names
- Using Branches
- Creating Branches
- Listing Branch Names
- Viewing Branches
- Checking out Branches
- Deleting Branches

Diffs

- Forms of the git diff Command
- Simple git diff Example
- git diff and Commit Ranges
- git diff with Path Limiting
- Comparing How Subversion and Git Derive diffs

Merges

- Merge Examples
- Working with Merge Conflicts
- Merge Strategies
- How Git Thinks About Merges

Altering Commits

- Caution About Altering History
- Using git reset
- Using git cherry-pick
- Using git revert
- reset, revert, and checkout
- Changing the Top Commit
- Rebasing Commits

Remote Repositories

- Repository Concepts
- Referencing Other Repositories
- Example Using Remote Repositories
- Remote Repository Development Cycle in Pictures
- Remote Configuration
- Working with Tracking Branches
- Adding and Deleting Remote Branches
- Bare Repositories and git push

Repository Management

- A Word About Servers
- Publishing Repositories
- Repository Publishing Advice
- Repository Structure
- Living with Distributed Development
- Knowing Your Place
- Working with Multiple Repositories

Patches

- Why Use Patches?
- Generating Patches
- Mailing Patches
- Applying Patches
- Bad Patches
- Patching Versus Merging

Hooks

- Installing Hooks
- Available Hooks

Combining Projects

- The Old Solution: Partial Checkouts
- The Obvious Solution: Import the Code into Your Project
- The Automated Solution: Checking out Subprojects Using Custom Scripts
- The Native Solution: gitlinks and git submodule

Submodule Best Practices

- Submodule Commands
- Why Submodules?
- Submodules Preparation
- Why Read Only?
- Why Not Read Only?
- Examining the Hashes of Submodule Commits
- Credential Reuse
- Use Cases
- Multilevel Nesting of Repos
- Submodules on the Horizon

Using Git with Subversion Repositories

- A Shallow Clone of a Single Branch
- Pushing, Pulling, Branching, and Merging with git svn
- Miscellaneous Notes on Working with Subversion

Advanced Manipulations

- Using git filter-branch
- rev-list
- Interactive Hunk Staging
- Recovering a Lost Commit

Tips, Tricks, and Techniques

- Interactive Rebase with a Dirty Working Directory
- Remove Left-Over Editor Files
- Garbage Collection
- Split a Repository
- Tips for Recovering Commits
- Subversion Conversion Tips
- Manipulating Branches from Two Repositories
- Recovering from an Upstream Rebase
- Make Your Own Git Command
- Quick Overview of Changes
- Cleaning Up
- Using git-grep to Search a Repository
- Updating and Deleting refs
- Following Files that Moved
- Keep, But Don't Track, This File
- Have You Been Here Before?

Git and GitHub

- Repo for Public Code
- Creating a GitHub Repository
- Social Coding on Open Source
- Watchers
- News Feed
- Forks
- Creating Pull Requests
- Managing Pull Requests
- Notifications
- Finding Users, Projects, and Code
- Wikis
- GitHub Pages (Git for Websites)
- In-Page Code Editor
- Subversion Bridge
- Tags Automatically Becoming Archives
- Organizations
- REST API
- Social Coding on Closed Source
- Eventual Open Sourcing
- Coding Models
- GitHub Enterprise
- GitHub in Sum

Additional Course Details

Nexus Humans Git and Github for Source Code Control training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Git and Github for Source Code Control course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Git and Github for Source Code Control?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 4-day Git and Github for Source Code Control course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Git and Github for Source Code Control training?

The training takes place over 4 day(s), with each day lasting approximately 32.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Git and Github for Source Code Control?

Yes, we provide corporate training, dedicated training, and closed classes for Git and Github for Source Code Control. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for Git and Github for Source Code Control?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Git and Github for Source Code Control training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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