

## Day - 1

- **What is Git?**

- Understanding version control
- The history of Git
- About distributed version control
- Who should use Git?

- **Installing Git**

- Installing Git on a Mac
- Installing Git on Windows
- Installing Git on Linux
- Configuring Git
- Exploring Git auto-completion
- Using Git help

- **Getting Started**

- o Initializing a repository
- o Understanding where Git files are stored
- o Performing your first commit
- o Writing commit messages
- o Viewing the commit log

- **Git Concepts and Architecture**

- o Exploring the three-trees architecture
- o The Git workflow
- o Using hash values (SHA-1)
- o Working with the HEAD pointer

- **Making Changes to Files**

- o Adding files
- o Editing files
- o Viewing changes with diff
- o Viewing only staged changes
- o Deleting files
- o Moving and renaming files
- o Using Git with a Real Project
- o Introducing the Explore California web site
- o Initializing Git
- o Editing the support phone number  
Editing the backpack file name and links

- **Undoing Changes**

- o Undoing working directory changes
- o Unstaging files
- o Amending commits
- o Retrieving old versions
- o Reverting a commit
- o Using reset to undo commits
- o Demonstrating a soft reset
- o Demonstrating a mixed reset
- o Demonstrating a hard reset
- o Removing untracked files

## Day - 2

- **Ignoring Files**

- o Using .gitignore files
- o Understanding what to ignore
- o Ignoring files globally
- o Ignoring tracked files
- o Tracking empty directories

- **Navigating the Commit Tree**

- o Referencing commits
- o Exploring tree listings
- o Getting more from the commit log
- o Viewing commits
- o Comparing commits

- **Branching**

- o Branching overview
- o Viewing and creating branches
- o Switching branches
- o Creating and switching branches
- o Switching branches with uncommitted changes
- o Comparing branches
- o Renaming branches
- o Deleting branches

- **Merging Branches**

- o Merging code
- o Using fast-forward merge vs. true merge
- o Merging conflicts
- o Resolving merge conflicts
- o Exploring strategies to reduce merge conflicts
- o Fast Forward Merge
- o Three way Merge
- o Rebasing

- **Stashing Changes**

- o Saving changes in the stash
- o Viewing stashed changes
- o Retrieving stashed changes
- o Deleting stashed changes

- **Remotes**

- o Using local and remote repositories
- o Adding a remote repository
- o Creating a remote branch
- o Cloning a remote repository
- o Tracking remote branches
- o Pushing changes to a remote repository
- o Fetching changes from a remote repository
- o Merging in fetched changes
- o Checking out remote branches
- o Pushing to an updated remote branch
- o Deleting a remote branch
- o Enabling collaboration
- o A collaboration workflow