

Understanding and Mastering Git and Github - Beginner to Expert

Description

This course is all about Git and GitHub.

Version control system (VCS) is the center of any file based project. Whether you're a software developer, project manager, team member, student, or anyone who works on file based projects, keeping track of changes is essential to creating a great product. In this course, **Understanding and Mastering Git and Github - Beginner to Expert**, you'll learn the popular version control system Git and why it plays a significant role in creating better projects. First, you'll learn the basics of Git and how it works under the hood to create better objects. You will learn **Git objects like blobs, trees, annotated tags** etc. You will learn the internal structure of the Git repository. **Concepts of branches, merging branches, rebasing** etc are well covered in this course. You will use not just terminal and shell commands for performing Git operations. **In parallel you will also use GUI applications** that simplify routine day-by-day Git operations:

- GitHub Desktop
- SourceTree
- VisualStudio Code

Prerequisite

No formal prerequisite. Basic computer literacy is required.

Who this course is for:

- If you are involved in file based projects and are concerned about different versions of the project.
- You may know how to USE Git but you may not know HOW Git works
- If you want to learn HOW Git and GitHub work - this course is for you!

Course Content

Chapter 1 - Introduction to Version Control Systems

Chapter 2 - Introduction to Git and GitHub

Chapter 3 - Installation of Git and Configuration of Shell

Chapter 4 - Basic Shell Commands

Chapter 5 - Working of Git

Chapter 6 - Basic Git operations

Chapter 7 - Git branches and HEAD

Chapter 8 - Merging Branches

Chapter 9 - GitHub and remote repository

Chapter 10 - Cloning, exploring and modifying public repository

Chapter 11 - Git Fetch, Git pull and Git push

Chapter 12- Pull Requests

Chapter 13 - Forking and contribution to public repository

Chapter 14 - Git Tags and Rebasing

Chapter 15 - Github Issues and Labels

Chapter 15 - Watch, Star, Raw, Blame and History of file on Github

Chapter 16 - Ignoring files in Git

Chapter 17 - Detached HEAD

Chapter 18 - Advanced Git

Chapter 19 - GitHub pages

Chapter 20 - Git Hooks

Chapters 3 to 20 includes Hands-On activities

Multiple practice Git activities:

1. Initialize new Git repository
2. Make changes, add them to staging area and commit
3. Create branches, checkout branches and merge branches
4. Perform fast-forward and 3-way merges of the branches
5. Resolve merge conflicts
6. Move into detached HEAD state and make experimental commits there
7. Perform rebasing of the branches

Different GitHub features

1. Connect local and remote repositories
2. Pushing, fetching and pulling operations
3. Open Pull Request
4. Merge Pull Request
5. Add software versions using Git Tags
6. Create forks from other repositories
7. Contribute to public repositories using technique of forks and pull requests
8. Perform rebasing with squashing