



# Version control



# Version control

- Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.
- Many variants
  - Centralised: subversion, cvs
  - Distributed: Git




# Use cases


- Personal
  - Keep tracks of your writing
  - Keep tracks of your coding project
- Team
  - Working in large software project




# Common terms

- **Repository:** A shared database with the complete revision history of all files under version control.

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- **Workspace** : Also known as working copy. It's a set of files on your local machine that you have retrieved from the Version Control Repository at a specific time or revision.


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- **Check-out** : This action creates a copy of the particular revision of a file [often latest] from the repository to your workspace.

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- **Update/ Pull** : Update your working copy with the latest

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- **Commit** : To make a change to the project;

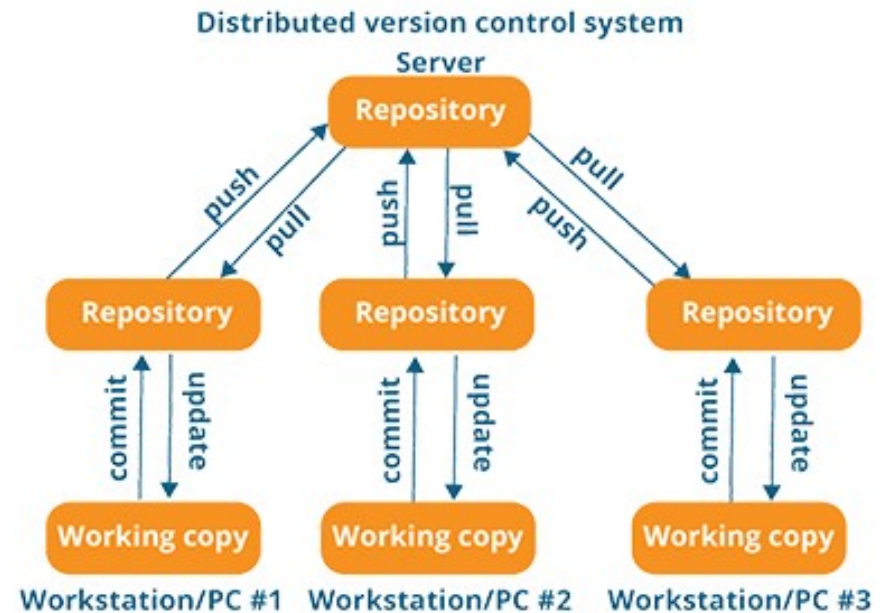
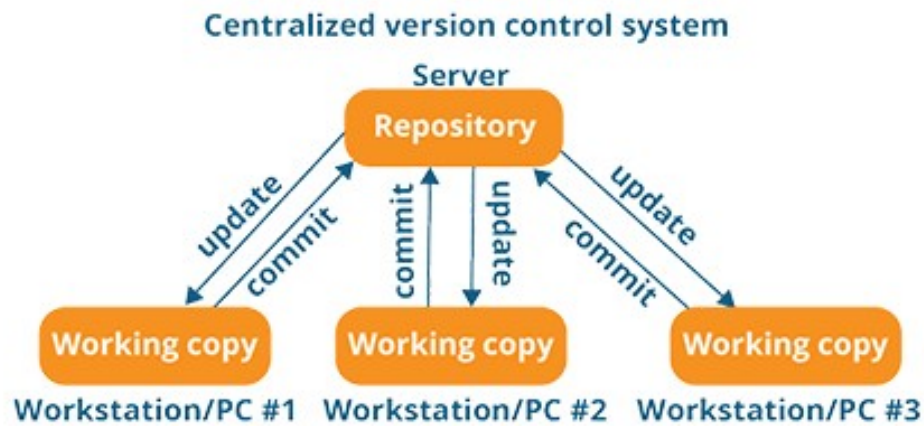


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- **Revision/Version** : A committed change in the history of a file or set of files.

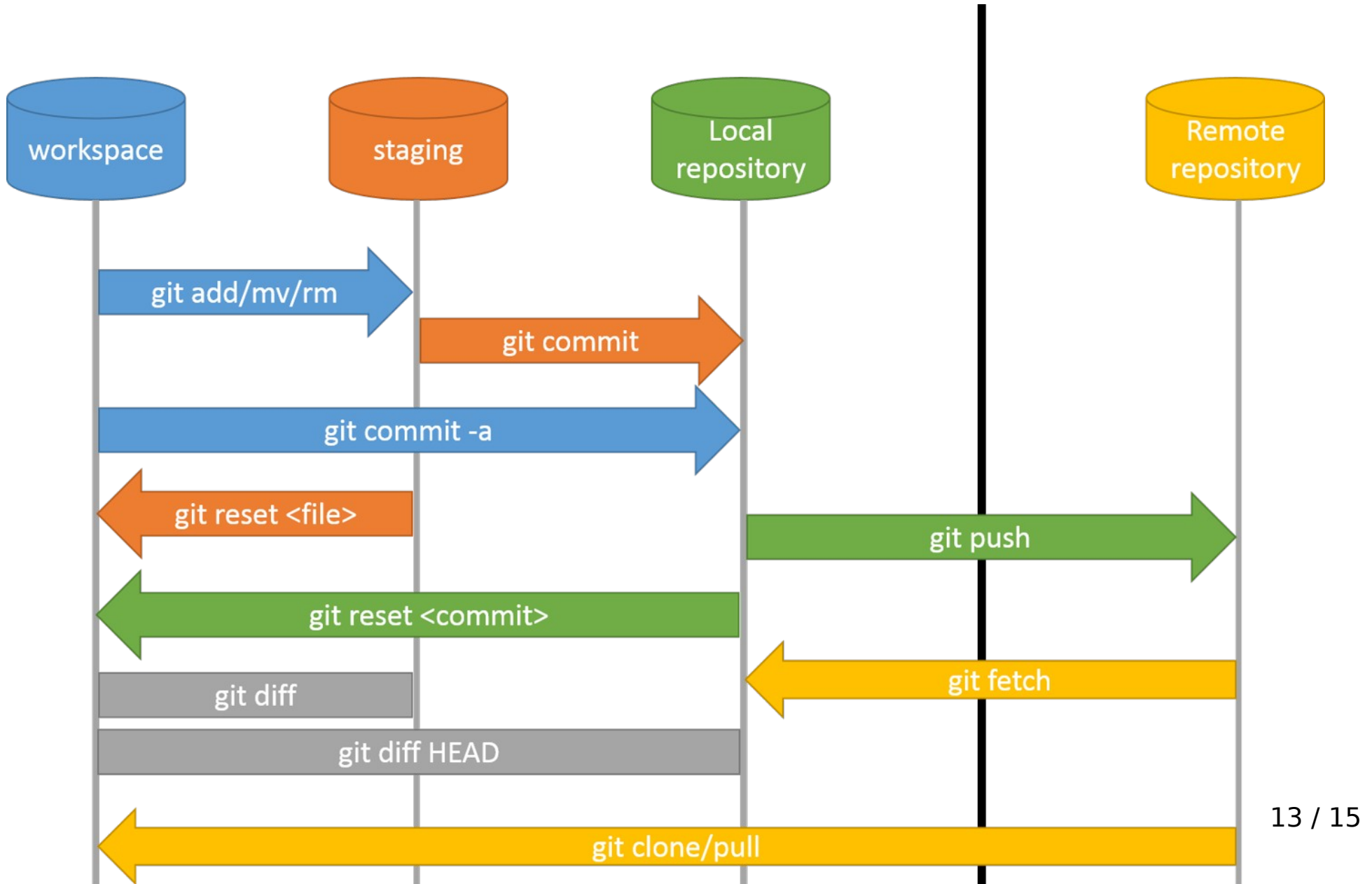
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- **Conflict** : The situation when two members are trying to commit changes that affect the same region of the same file.

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- **Merge** : Combining multiple changes made to different working copies of the same files in the source repository

# Centralised vs distributed



# Git





# Built for developers

GitHub is a development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside 40 million developers.

**Username**

**Email**

**Password**

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more.](#)

Sign up for GitHub

By clicking "Sign up for GitHub", you agree to our [Terms of Service](#) and [Privacy Statement](#). We'll occasionally send you account related emails.



- About
- Documentation
- Downloads

GUI Clients  
Logos

Community

The entire **Pro Git book** written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

# GUI Clients

Git comes with built-in GUI tools for committing ([git-gui](#)) and browsing ([gitk](#)), but there are several third-party tools for users looking for platform-specific experience.

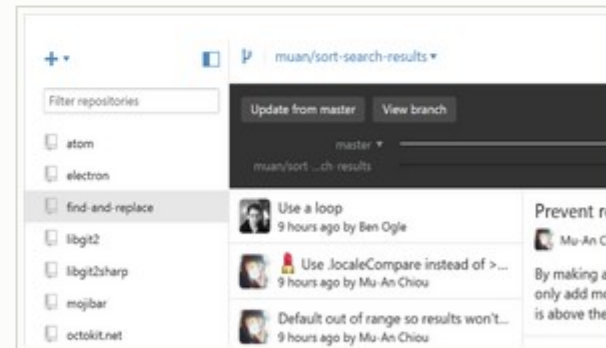
If you want to add another GUI tool to this list, just [follow the instructions](#).

- All
- Windows
- Mac
- Linux
- Android
- iOS

24 Windows GUIs are shown below ↓



**SourceTree**  
Platforms: Mac, Windows  
Price: Free  
License: Proprietary



**GitHub Desktop**  
Platforms: Mac, Windows  
Price: Free  
License: MIT