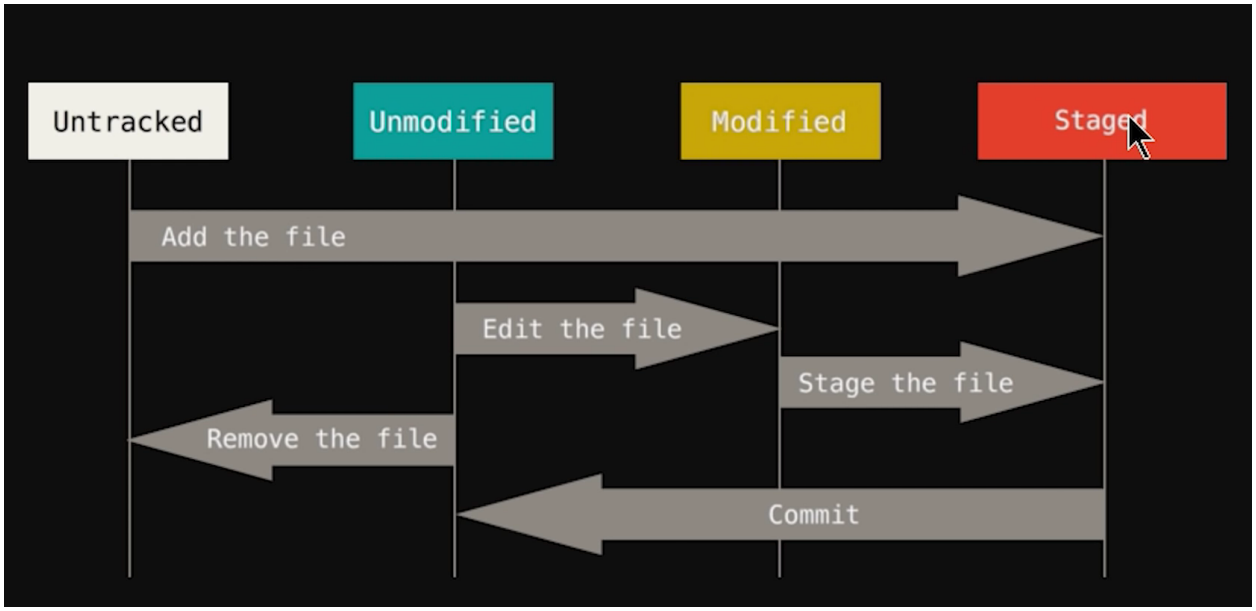
Git revision & basics



- Git init
  - To create a blank git local repository
  - It creates .git folder internally which is hidden it is responsible for tracking all the changes made to the git repository
- Git add .
  - Git add stages the file and it stars to keep track of it
- Git commit
  - Git commit - commits the file to the git repository and is ready to be pushed and takes a snapshot.
- Git checkout
  - Sync files with last commit
  - Specify filename after checkout or -f for all files
  - Switch branch as well
- Git branch
  - Create branch specify file name
- Git merge
  - Merge from the parent branch with the child branch
- Git checkout -b
  - Create a new branch and switch at the same time.

NSTALLATION & GUIS

With platform specific installers for Git, GitHub also provides the ease of staying up-to-date with the latest releases of the command line tool while providing a graphical user interface for day-to-day interaction, review, and repository synchronization.

GitHub for Windows

https://windows.github.com

GitHub for Mac

https://mac.github.com

For Linux and Solaris platforms, the latest release is available on the official Git web site.

Git for All Platforms

http://git-scm.com

SETUP

Configuring user information used across all local repositories

STAGE & SNAPSHOT

Working with snapshots and the Git staging area

git status

show modified files in working directory, staged for your next commit

git add [file]

add a file as it looks now to your next commit (stage)

git reset [file]

unstage a file while retaining the changes in working directory

git diff

diff of what is changed but not staged

git diff --staged

diff of what is staged but not yet committed

git commit -m “[descriptive message]”

commit your staged content as a new commit snapshot

git config --global user.name “[firstname lastname]”

set a name that is identifiable for credit when review version history

git config --global user.email “[valid-email]”

set an email address that will be associated with each history marker

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git config --global color.ui auto

set automatic command line coloring for Git for easy reviewing

BRANCH & MERGE

Isolating work in branches, changing context, and integrating changes

git branch

list your branches. a * will appear next to the currently active branch

git branch [branch-name]

create a new branch at the current commit

git checkout

switch to another branch and check it out into your working directory

git merge [branch]

merge the specified branch’s history into the current one

git log

show all commits in the current branch’s history

SETUP & INIT

Configuring user information, initializing and cloning repositories

git init

initialize an existing directory as a Git repository

git clone [url]

retrieve an entire repository from a hosted location via URL

INSPECT & COMPARE

Examining logs, diffs and object information

SHARE & UPDATE

Retrieving updates from another repository and updating local repos

git log

show the commit history for the currently active branch

git log branchB..branchA

show the commits on branchA that are not on branchB

git log --follow [file]

show the commits that changed file, even across renames

git diff branchB...branchA

show the diff of what is in branchA that is not in branchB

git show [SHA]

show any object in Git in human-readable format

git remote add [alias] [url]

add a git URL as an alias

git fetch [alias]

fetch down all the branches from that Git remote

git merge [alias]/[branch]

merge a remote branch into your current branch to bring it up to date

git push [alias] [branch]

Transmit local branch commits to the remote repository branch

git pull

fetch and merge any commits from the tracking remote branch

TRACKING PATH CHANGES

Versioning file removes and path changes

REWRITE HISTORY

Rewriting branches, updating commits and clearing history

TEMPORARY COMMITS

Temporarily store modified, tracked files in order to change branches

git rebase [branch]

apply any commits of current branch ahead of specified one

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git reset --hard [commit]

clear staging area, rewrite working tree from specified commit

git rm [file]

delete the file from project and stage the removal for commit

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git mv [existing-path] [new-path]

change an existing file path and stage the move

git log --stat -M

show all commit logs with indication of any paths that moved

git stash

Save modified and staged changes

git stash list

list stack-order of stashed file changes

git stash pop

write working from top of stash stack

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git stash drop
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discard the changes from top of stash stack