



GIT KEYWORDS

Cheat Sheet

Version Control

Version control is used to control resources, traditionally software, that is being worked on by multiple people. It allows you to control access, versioning, editing, and deployment. It is very useful for tracking changes over time, because let's face it, we make mistakes.

Git

"Git is an open source program for tracking changes in text files. It was written by the author of the Linux operating system, and is the core technology that GitHub, the social and user interface, is built on top of."

Pull

Pull refers to when you are fetching in changes and merging them. For instance, if someone has edited the remote file you're both working on, you'll want to pull in those changes to your local copy so that it's up to date.

Push

Pushing refers to sending your committed changes to a remote repository, such as a repository hosted on GitHub. For instance, if you change something locally, you'd want to then push those changes so that others may access them.

Commit

A commit, or "revision", is an individual change to a file (or set of files). It's like when you save a file, except with Git, every time you save it creates a unique ID (a.k.a. the "SHA" or "hash") that allows you to keep record of what changes were made when and by who. Commits usually contain a commit message which is a brief description of what changes were made.

Head

A named reference to the commit at the tip of a branch. Heads are stored in a file in `$GIT_DIR/refs/heads/` directory, except when using packed refs.

The current branch. In more detail: Your working tree is normally derived from the state of the tree referred to by HEAD. HEAD is a reference to one of the heads in your repository, except when using a detached HEAD, in which case it directly references an arbitrary commit.

Branch

A branch is a parallel version of a repository. It is contained within the repository, but does not affect the primary or master branch allowing you to work freely without disrupting the "live" version. When you've made the changes you want to make, you can merge your branch back into the master branch to publish your changes.

Origin

The default upstream repository. Most projects have at least one upstream project which they track. By default origin is used for that purpose. New upstream updates will be fetched into remote-tracking branches named `origin/name-of-upstream-branch`, which you can see using `git branch -r`.



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Repo

A repository is the most basic element of GitHub. They're easiest to imagine as a project's folder. A repository contains all of the project files (including documentation), and stores each file's revision history. Repositories can have multiple collaborators and can be either public or private.

Git Flow

GitFlow is a branching model for Git, created by Vincent Driessen. It has attracted a lot of attention because it is very well suited to collaboration and scaling the development team.

Remote

This is the version of something that is hosted on a server, most likely GitHub. It can be connected to local clones so that changes can be synced.

Fork

A fork is a personal copy of another user's repository that lives on your account. Forks allow you to freely make changes to a project without affecting the original. Forks remain attached to the original, allowing you to submit a pull request to the original's author to update with your changes. You can also keep your fork up to date by pulling in updates from the original.

Upstream

When talking about a branch or a fork, the primary branch on the original repository is often referred to as the "upstream", since that is the main place that other changes will come in from. The branch/fork you are working on is then called the "downstream".

Fetch

Fetching refers to getting the latest changes from an online repository without merging them in. Once these changes are fetched you can compare them to your local branches (the code residing on your local machine).

Rebase

To reapply a series of changes from a branch to a different base, and reset the head of that branch to the result.

Master

The default development branch. Whenever you create a Git repository, a branch named "master" is created, and becomes the active branch. In most cases, this contains the local development, though that is purely by convention and is not required.

Resources

Here are some resources for finding out more.

<https://goo.gl/7wMEHt> - Gits official command glossary for more obscure commands.

<https://goo.gl/TUkNtI> - Short glossary of Git terms and definitions