

Git Cheat Sheet

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Based on work by Zack Rubin

Basics

Use `git help [command]` if you're stuck.

master	default devel branch
origin	default upstream branch
HEAD	current branch
HEAD^	parent of HEAD
HEAD~4	great-great grandparent of HEAD
foo..bar	from branch foo to branch bar



Create

From existing files

```
git init
git add .
```

From existing repository

```
git clone --old --new
git clone git://...
git clone ssh://...
```

Publish

In Git, `commit` only respects changes that have been marked explicitly with `add`.

```
git commit [-a]
  (-a: add changed files automatically)
git format-patch origin
  (create set of diffs)
git push remote
  (push to origin or remote)
git tag foo
  (mark current version)
```

Useful Tools

```
git archive
  Create release tarball
git bisect
  Binary search for defects
git cherry-pick
  Take single commit from elsewhere
git fsck
  Check tree
git gc
  Compress metadata (performance)
git rebase
  Forward-port local changes to remote branch
git remote add URL
  Register a new remote repository for this tree
git stash
  Temporarily set aside changes
git tag
  (there's more to it)
gitk
  Tk GUI for Git
```

Tracking Files

```
git add files
git mv old new
git rm files
git rm --cached files
  (stop tracking but keep files in working dir)
```

View

```
git status
git diff [oldid newid]
git log [-p] [file|dir]
git blame file
git show id (meta data + diff)
git show id:file
git branch (shows list, * = current)
git tag -l (shows list)
```

Update

```
git fetch (from defl. upstream)
git fetch remote
git pull (= fetch & merge)
git am -3 patch.mbox
git apply patch.diff
```

Conflicts

Use `add` to mark files as resolved.

```
git diff [--base]
git diff --ours
git diff --theirs
git log --merge
gitk --merge
```

Revert

In Git, `revert` usually describes a new commit that undoes previous commits.

```
git reset --hard (NO UNDO)
  (reset to last commit)
git revert branch
git commit -a --amend
  (replaces prev. commit)
git checkout id file
```

Branch

```
git checkout branch
  (switch working dir to branch)
git merge branch
  (merge into current)
git branch branch
  (Branch current)
git checkout -b new other
  (branch new from other and switch to it)
```

