

# git - the simple guide

just a simple guide for getting started with git. no deep shit ;)



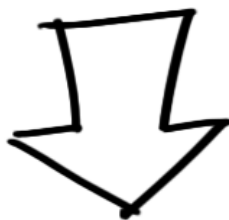
by Roger Dudler

credits to @tfnico, @fhd and Namics

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# setup

Download git for OSX

Download git for Windows

Download git for Linux

# create a new repository

create a new directory, open it and perform a

```
git init
```

to create a new git repository.

# checkout a repository

create a working copy of a local repository by running the command

```
git clone /path/to/repository
```

when using a remote server, your command will be

```
git clone username@host:/path/to/repository
```

## workflow

your local repository consists of three "trees" maintained by git. the first one is your **Working Directory** which holds the actual files. the second one is the **Index** which acts as a staging area and finally the **HEAD** which points to the last commit you've made.



# add & commit

You can propose changes (add it to the **Index**) using

```
git add <filename>
```

```
git add *
```

This is the first step in the basic git workflow. To actually commit these changes use

```
git commit -m "Commit message"
```

Now the file is committed to the **HEAD**, but not in your remote repository yet.

# pushing changes

Your changes are now in the **HEAD** of your local working copy. To send those changes to your remote repository, execute

```
git push origin master
```

Change *master* to whatever branch you want to push your changes to.

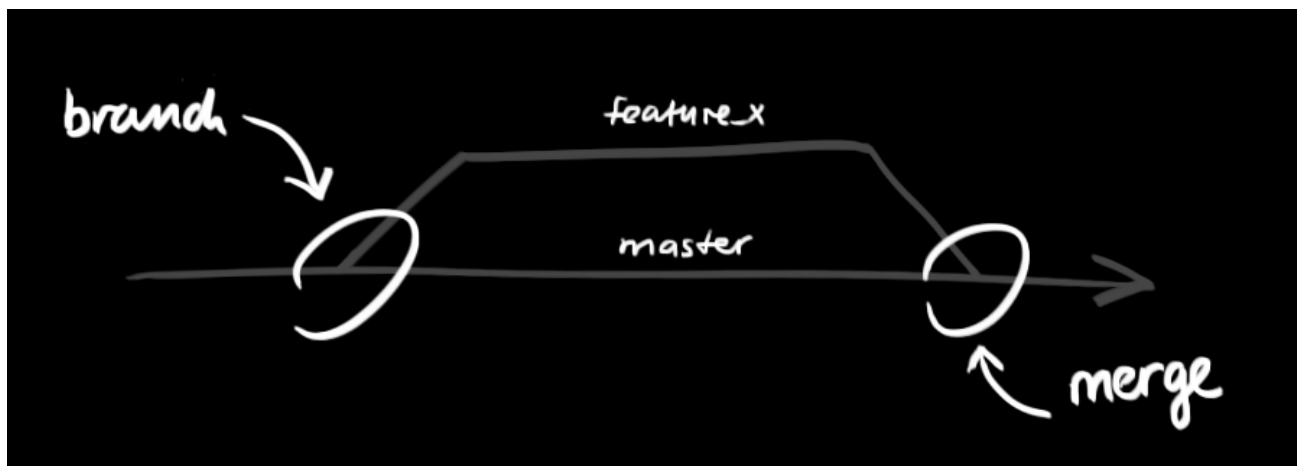
If you have not cloned an existing repository and want to connect your repository to a remote server, you need to add it with

```
git remote add origin <server>
```

Now you are able to push your changes to the selected remote server

# branching

Branches are used to develop features isolated from each other. The *master* branch is the "default" branch when you create a repository. Use other branches for development and merge them back to the master branch upon completion.



create a new branch named "feature\_x" and switch to it using

```
git checkout -b feature_x
```

switch back to master

```
git checkout master
```

and delete the branch again

```
git branch -d feature_x
```

a branch is *not available to others* unless you push the branch to your  
remote repository

```
git push origin <branch>
```

## update & merge

to update your local repository to the newest commit, execute

```
git pull
```

in your working directory to *fetch* and *merge* remote changes.

to merge another branch into your active branch (e.g. master), use

```
git merge <branch>
```

in both cases git tries to auto-merge changes. Unfortunately, this is not always possible and results in *conflicts*. You are responsible to merge those *conflicts* manually by editing the files shown by git. After

changing, you need to mark them as merged with

```
git add <filename>
```

before merging changes, you can also preview them by using

```
git diff <source_branch> <target_branch>
```

## tagging

it's recommended to create tags for software releases. this is a known concept, which also exists in SVN. You can create a new tag named *1.0.0*

by executing

```
git tag 1.0.0 1b2e1d63ff
```

the *1b2e1d63ff* stands for the first 10 characters of the commit id you

want to reference with your tag. You can get the commit id by looking at the...



# log

in its simplest form, you can study repository history using.. `git log`  
You can add a lot of parameters to make the log look like what you want.

To see only the commits of a certain author:

```
git log --author=bob
```

To see a very compressed log where each commit is one line:

```
git log --pretty=oneline
```

Or maybe you want to see an ASCII art tree of all the branches,  
decorated with the names of tags and branches:

```
git log --graph --oneline --decorate --all
```

See only which files have changed:

```
git log --name-status
```

These are just a few of the possible parameters you can use. For more,  
see `git log --help`

## replace local changes

In case you did something wrong, which for sure never happens ;), you can replace local changes using the command

```
git checkout -- <filename>
```

this replaces the changes in your working tree with the last content in HEAD. Changes already added to the index, as well as new files, will be kept.

If you instead want to drop all your local changes and commits, fetch the latest history from the server and point your local master branch at it

like this

```
git fetch origin
```

```
git reset --hard origin/master
```

## useful hints

built-in git GUI

```
gitk
```

use colorful git output

```
git config color.ui true
```

show log on just one line per commit

```
git config format.pretty oneline
```

use interactive adding

```
git add -i
```

## links & resources

### graphical clients

- [GitX \(L\) \(OSX, open source\)](#)
  - [Tower \(OSX\)](#)
- [Source Tree \(OSX & Windows, free\)](#)
  - [GitHub for Mac \(OSX, free\)](#)
  - [GitBox \(OSX, App Store\)](#)

### guides

- [Git Community Book](#)
  - [Pro Git](#)
  - [Think like a git](#)
  - [GitHub Help](#)
- [A Visual Git Guide](#)

### get help

- [Git User Mailing List](#)

- [#git on irc.freenode.net](#)

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Dwi Ahmad • a day ago

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Ramundo • 6 days ago

there is some rare good stuff . Pure, useful , practical basics. I always found alot of excessive shit in git threads across the internet, but this one is what most people need, when they starting to work with git

10/10


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Siqi Cao • 20 days ago

This is the best git solution I have ever read

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Harry → Siqi Cao • 6 days ago

This is bullshit

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I suggest you go to celebjiha.com website and see betterrr posts


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I wish i never clicked on that


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Alex Vergara Gil • 21 days ago

Can you elaborate on the new git switch command


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ShiroViper • a month ago

Very useful in newbie. Thanks a lot this made my day less hassle in searching for solution.


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Stephen Gault • a month ago

so freaking useful, having been away from using command line git for a few years


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JoeA-D • 2 months ago

Ta


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Paul Valley • 2 months ago

can you build the application with ./configure etc

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George Simons • 2 months ago

"No deep s\*\*\*" I love it Just like it said

