git Quick Reference

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Note: *italiized* words are parameters and *[italicized]* words in square brackets are optional parameters

Getting Help:

git help *command*	or
git *command* --help	Show help for a command

Git Setup:

git config --global user.name "*Your Name*"	and
git config --global user.email "*you@ex.com*"	Used to set author on commits

Repository creation:

git init	Create a repository in the current directory
git clone *url*	Clone a remote repository into a subdirectory

File operations:

git add *path*	Add file or files in directory recursively
-p	Add parts of files
git rm *path*	Remove file or directory from the working tree
-f	Force deletion of file(s) from disk
git mv *path destination*	Move file or directory to new location
-f	Overwrite existing destination files
git checkout *[rev] file*	Restore file from current branch or revision
-f	Overwrite uncommitted local changes

Working tree:

git status	Show status of the working tree
git diff *[path]*	Show diff of changes in the working tree
git diff HEAD *path*	Show diff of stages and unstaged changes
git add *path*	Stage file(s) for commit
git reset HEAD *path*	Unstage file for commit
git commit	Commit files that have been staged (via git-add)
-a	Automatically stage all modified files
git reset --soft HEAD^	Undo commit & keep changes in the working tree
git reset --hard HEAD^	Reset the working tree to the last commit
git clean	Clean unknown files from the working tree

Examining History:

git log *[path]*	View commit log, optionally for specific path
git log *[from[..to]]*	View commit log for a given revision range
--stat	List diffstat for each revision
-S'pattern'	Search history for changes matching pattern
git blame *[file]*	Show file annotated with line modifications

Remote repositories - *remotes*:

git fetch *[remote]*	Fetch changes from a remote repository
git pull *[remote]*	Fetch and **merge** changes from a remote repository
git push *[remote]*	Push changes to a remote repository
git remote -v	List remote repositories
git remote add *remote_name url*	Add remote to list of tracked repositories

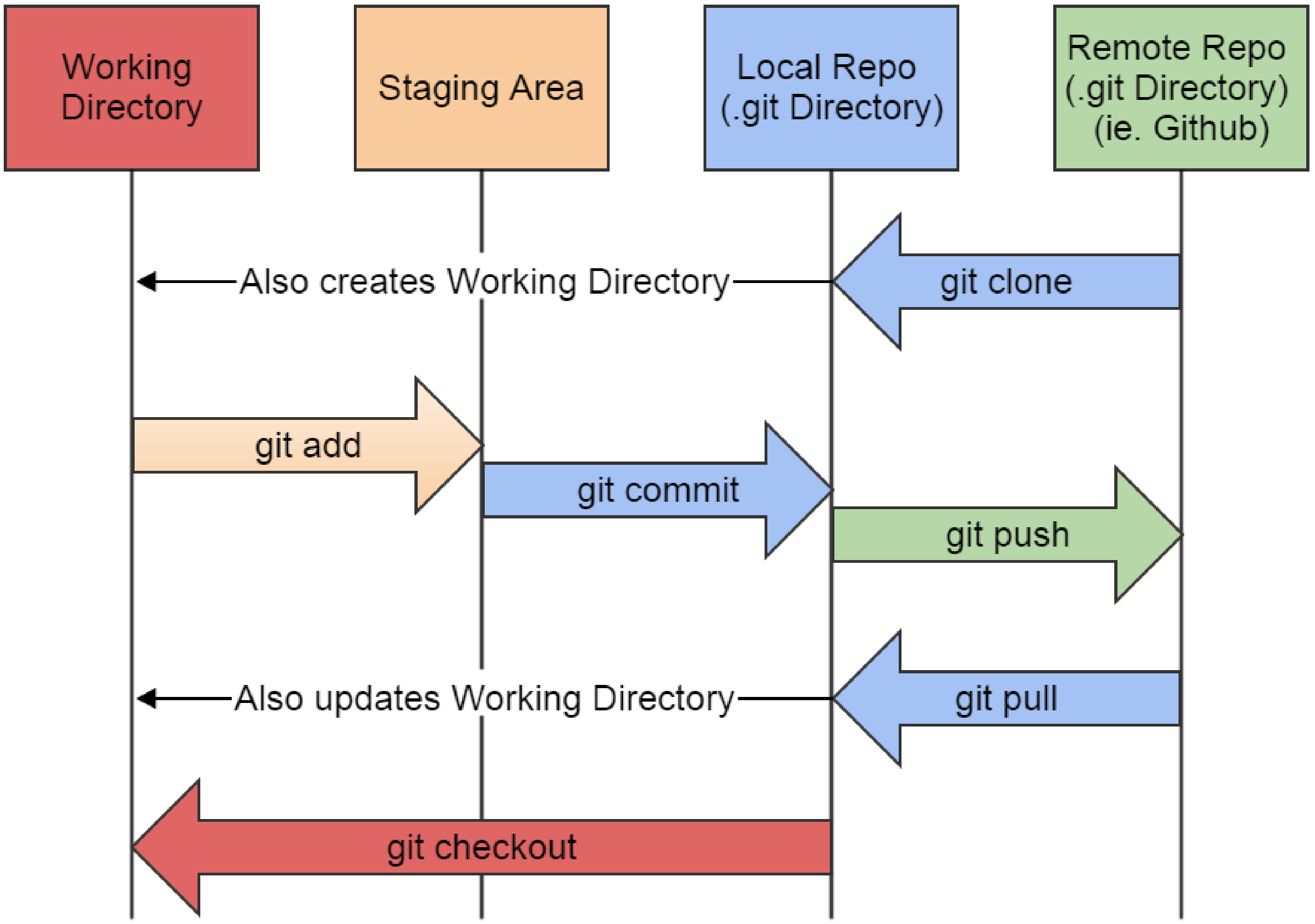
Branches:

git checkout *branch*	Switch working tree to branch
-b *branch*	Create branch before switching to it
git branch	List local branches
git merge *branch*	Merge changes from branch into current branch

Tags:

git tag *name [revision]*	Create tag for a given revision
-l *[pattern]*	List tags, optionally matching pattern

Visualizing git commands


Working Directory
Staging Area
Local Repo (.git Directory)
Remote Repo (.git Directory) (ie. Github)
Also creates Working Directory
git clone
git add
git commit
git push
Also updates Working Directory
git pull
git checkout

Example Flows

Working on an existing repository:

git clone *url*	Download and checkout a remote repository
<make changes>	Fix some bugs or add a feature
git add -p *glob*	Stage file(s) for commit
git commit	Create a commit from staged files
git push	Send the changes back to original repository

Creating a new repository:

<start work>	Make some bugs, or create a feature
git init	Create a repository in current directory
git add -p *glob*	Stage file(s) for commit
git commit	Create a commit from staged files
git remote add *remote_name url*	Add remote to list of tracked repositories
git push -u origin master	Send the changes to remote repository

Helpful Hints:

use git-number to save typing	https://github.com/holygeek/git-number
create aliases and use them	https://git.io/vCIBR
use ssh keys with passphrases	https://help.github.com/articles/generating-ssh-keys/
checkout tldr-manpages	https://github.com/tldr-pages/tldr
ignore binary and compiled files	add them to a .gitignore file https://git-scm.com/docs/gitignore
use cygwin on windows	get a linux terminal in windows https://cygwin.com/