**Getting & Creating Projects**

| **Command** | **Description** |
| --- | --- |
| git config --global user.name "Sam Smith"  git config --global user.email sam@example.com | Configure the author name and email address to be used with your commits. Note that Git [strips some characters](http://stackoverflow.com/questions/26159274/is-it-possible-to-have-a-trailing-period-in-user-name-in-git/26219423#26219423) (for example trailing periods) from user.name.  [**Tell Git who you are**](https://www.atlassian.com/git/tutorials/setting-up-a-repository/git-config) |
| git init | Initialize a local Git repository  [**Create a new local repository**](https://www.atlassian.com/git/tutorials/setting-up-a-repository/git-init) |
| git clone ssh://git@github.com/[username]/[repository-name].git  git clone username@host:/path/to/repository | Create a local copy of a remote repository  [**Check out a repository**](https://www.atlassian.com/git/tutorials/setting-up-a-repository/git-clone) |

**Basic Snapshotting**

| **Command** | **Description** |
| --- | --- |
| git status | Check status  [**Status**](https://www.atlassian.com/git/tutorials/inspecting-a-repository#git-status) |
| git add [file-name.txt] | Add a file to the staging area  [**Add files**](https://www.atlassian.com/git/tutorials/saving-changes#git-add) |
| git add -A | Add all new and changed files to the staging area |
| git commit -m "[commit message]"  git commit -a | Commit changes  [**Commit**](https://www.atlassian.com/git/tutorials/saving-changes#git-commit) |
| git rm -r [file-name.txt] | Remove a file (or folder) |

**Branching & Merging**

| **Command** | **Description** |
| --- | --- |
| git branch | List branches (the asterisk denotes the current branch)  [**Branches**](https://www.atlassian.com/git/tutorials/using-branches) |
| git branch -a | List all branches (local and remote) |
| git branch [branch name] | Create a new branch |
| git branch -d [branch name] | Delete a branch |
| git push origin --delete [branchName] | Delete a remote branch |
| git checkout -b [branch name] | Create a new branch and switch to it |
| git checkout -b [branch name] origin/[branch name] | Clone a remote branch and switch to it |
| git checkout [branch name] | Switch to a branch |
| git checkout - | Switch to the branch last checked out |
| git checkout -- [file-name.txt] | Discard changes to a file |
| git merge [branch name] | Merge a branch into the active branch |
| git merge [source branch] [target branch] | Merge a branch into a target branch |
| git stash | Stash changes in a dirty working directory |
| git stash clear | Remove all stashed entries |

**Sharing & Updating Projects**

| **Command** | **Description** |
| --- | --- |
| git push origin [branch name] | Push a branch to your remote repository  [**Push**](https://www.atlassian.com/git/tutorials/syncing#git-push) |
| git push -u origin [branch name] | Push changes to remote repository (and remember the branch) |
| git push | Push changes to remote repository (remembered branch) |
| git push origin --delete [branch name] | Delete a remote branch |
| git pull | Update local repository to the newest commit |
| git pull origin [branch name] | Pull changes from remote repository |
| git remote add origin ssh://git@github.com/[username]/[repository-name].git | Add a remote repository |
| git remote set-url origin ssh://git@github.com/[username]/[repository-name].git | Set a repository's origin branch to SSH |

**Inspection & Comparison**

| **Command** | **Description** |
| --- | --- |
| git log | View changes |
| git log --summary | View changes (detailed) |
| git diff [source branch] [target branch] | Preview changes before merging |
| git grep "foo()" | Search the working directory for foo(): |

|  |  |  |
| --- | --- | --- |
| Git task | Notes | Git commands |
| [**Connect to a remote repository**](https://www.atlassian.com/git/tutorials/syncing#git-remote) | If you haven't connected your local repository to a remote server, add the server to be able to push to it: | git remote add origin <server> |
| List all currently configured remote repositories: | git remote -v |
| [**Branches**](https://www.atlassian.com/git/tutorials/using-branches) | Create a new branch and switch to it: | git checkout -b <branchname> |
| Switch from one branch to another: | git checkout <branchname> |
| List all the branches in your repo, and also tell you what branch you're currently in: | git branch |
| Delete the feature branch: | git branch -d <branchname> |
| Push the branch to your remote repository, so others can use it: | git push origin <branchname> |
| Push all branches to your remote repository: | git push --all origin |
| Delete a branch on your remote repository: | git push origin :<branchname> |
| [**Update from the remote repository**](https://www.atlassian.com/git/tutorials/syncing) | Fetch and merge changes on the remote server to your working directory: | git pull |
| To merge a different branch into your active branch: | git merge <branchname> |
| View all the merge conflicts:  View the conflicts against the base file:  Preview changes, before merging: | git diff  git diff --base <filename>  git diff <sourcebranch> <targetbranch> |
| After you have manually resolved any conflicts, you mark the changed file: | git add <filename> |
| **Tags** | You can use tagging to mark a significant changeset, such as a release: | git tag 1.0.0 <commitID> |
| CommitId is the leading characters of the changeset ID, up to 10, but must be unique. Get the ID using: | git log |
| Push all tags to remote repository: | git push --tags origin |
| [**Undo local changes**](https://www.atlassian.com/git/tutorials/undoing-changes) | If you mess up, you can replace 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. | git checkout -- <filename> |
| Instead, to drop all your local changes and commits, fetch the latest history from the server and point your local master branch at it, do this: | git fetch origin  git reset --hard origin/master |