**current state**

git status list which (unstaged) files have changed  
git diff list (unstaged) changes to files  
git log list recent commits

**adding files to repo**

git add fn stage file  
git commit -m 'message' commit file  
git commit -am 'message' add/commit all changes from all tracked files (no untracked files) in one go

**undoing previous actions**

<http://git-scm.com/book/en/Git-Tools-Rewriting-History>  
git reset filename unstage file  
git commit --amend -m 'message' alter the last commit (add any staged files, new comment)  
git reset --soft HEAD^ undo previous commit, put changes in staging  
git reset --hard HEAD^ Undo last commit and all changes  
git reset --hard HEAD^^ Undo two (^^) last commits and all changes  
git checkout -- cats.html index.html Undo all changes that were made to files cats.html and index.html  
git rebase --onto <commit-id>\^ <commit-id> HEAD remove specific commit from repository. the \ in ^ is just an escape char to make zsh play nice and is not necessary if using bash.

**remote repositories**

git remote add origin git@example.com:example/petshop.git add a remote repository  
git push -u origin master push current local repo to remote. -u sets it to default for the future  
git remote -v show show the available remote repositories that have been added  
git pull checkout and merge remote changes in one go  
git fetch origin update the local cache of the remote repository  
git remote -v update bring remote refs up to date (and -v show which branches were updated)  
git status -uno will tell you whether the branch you are tracking is ahead, behind or has diverged. If it says nothing, the local and remote are the same.  
git show-branch \*master will show you the commits in all of the branches whose names end in master (eg master and origin/master).  
git show remote origin show local<->remote branch tracking and sync status

**Examine changes on remote, without pulling them**

git fetch origin  
git log HEAD..origin/master --oneline shows commit messages  
git diff HEAD..origin/master shows all changes on remote compared to local HEAD

**Branches**

git branch list currently existing branches  
git branch [branchname] create new branch  
git checkout branchname move to that branch  
git checkout -b branchname create and checkout new branch in one go  
git branch -d branchname remove branch

**merging branch back to master**

git checkout master; git merge branchname; conditions for fast-forward merge - nothing new on master between branch start/end points

**branches on remote**

git fetch origin``git branch -r list remote branches (after a fetch)  
git push origin :branchname delete remote branch 'branchname'  
git remote prune origin clean up deleted remote branches (let's say someone else deleted a branch on the remote)  
git remote show origin show local<->remote branch tracking and sync status (duplicate info under "remote repositories")

**push local branch to differently named remote branch. Eg Heroku only deploys master**

git push heroku yourbranch:master simple form  
git push heroku-staging staging:master (localBranchName:remoteBranchName)

**tagging**

git tag list all tags  
git checkout v0.0.1 checkout code  
git tag -a v0.0.3 -m 'Version 0.0.3' add new tag  
git push --tags push new tags to remote

**dealing with large files - keep them outside the repo on an ssh machine.**

<http://stackoverflow.com/questions/540535/managing-large-binary-files-with-git>  
<http://git-annex.branchable.com/walkthrough/> #see ssh section

git annex add mybigfile  
git commit -m 'add mybigfile'  
git push myremote git annex copy --to myremote mybigfile this command copies the actual content to myremote  
git annex drop mybigfile remove content from local repo  
git annex get mybigfile retrieve the content  
git annex copy --from myremote mybigfilespecify the remote from which to get the file