VCS - version control system

Git & GitHub are not the same

Git is **d**istributed VCS – DVCA

Repo - git repository

Git uses snapshots, not differences

Git stages:

1. Committed - data is safely stored locally
2. Modified - file has been altered from the last committed version, not yet committed
3. Staged - ready to be committed to local

Untracked – refers to newly added file

CMD COMMANDS

pwd - print working directory

cd - change directory

dir - list files

copy con

mkdir - create new folder

Graphical git interface: <https://git-scm.com/downloads/guis>

Download Git- <https://scm.com/download/win>

GIT COMMANDS

man git - full manual

git help - help on core commands

git init - to set dir as Git dir, need to be in desired directory

cd .git - to get to config files

.git contains git metadata

GITHUB

GitHub - web-based git repository hosting service

To create GitHub account --> go to [https://GitHub.com](https://github.com/)

Connect To Git Repo - git remote add origin URL-of-git-rep

git remote add origin <https://github.com/SvetaSy/PluralSightTraining.git>

Push Changes To Git - git push -u origin master

MY GitHub

username: SvetaSy

email: [svetlanathebrain@gmail.com](mailto:svetlanathebrain@gmail.com)

pwd: SchastlivyeVseMarBdayMyBdayIreneBday

Repository name: PluralSightTraining

git project URL on GitHub: <https://github.com/SvetaSy/PluralSightTraining.git>

* Use git init to set directory as git repository
* Use git remote add origin URL-of-git-rep to connect to git distributed DB

Example: git remote add origin <https://git.bnymellon.net/omx-99/tiqigc.api/tree/v1>

**Basic commands of everyday GIT**

origin - repository version that sits on our GitHub profile

push - commits changes to global repository

git status -

1. reports the branch we are at
2. reports status of local repository relatively to mater branch
3. working tree status - differences report

stages

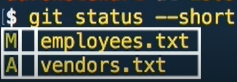
1. tracked - in a previous git snapshot --> comitted, modified, or staged
2. untracked - not in a previous git snapshot

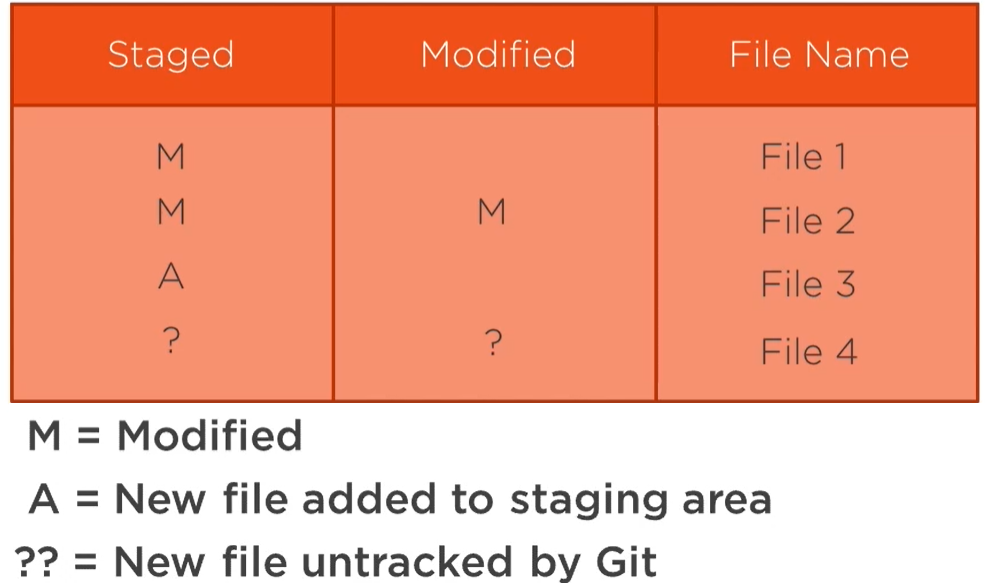
SHORT STATUS

git status -s

git status –short

Both produce the same output





See differences

git diff

git diff –staged

Add individual file

git add filename

to exit git info after :, type **q**

Consolidate add and commit

here, -a option allows to consolidate add and commit

git commit -a -m "comment"

Create empty file(s)

git touch f1 f2 f3... - creates new empty files

**Extended commands**

log

git log - shows commit history with most recent commits on top

git log -s – short log

git log -# - show # number of commits

git log --oneline - to see condensed commit history, one line per commit

git log --stat - get detailed info on commits

git log --patch - very elaborate info on commits

q - type to exit from git info window

Writing good commit comments

<https://chris.beams.io/posts/git-commit/>

Untrack files

git rm file\_name - stop tracking the file, stage for removal

git rm --cached file\_name - stop tracking file but retain it in repository 🡨 better command

Rename file

git mv current\_file\_name new\_file\_name - rename file

**Visualizing git**

<https://git-school.github.io/visualizing-git/>

New branch

git checkout -b new\_branch

1. create new branch
2. populate with the code from master
3. call this new branch new\_branch

Managing work-in-progress

git stash -- create work-in-progress stage; use when not sure if want to commit;

will not loose changes, will allow to checkout different branch

git stash show - show work-in-progress files

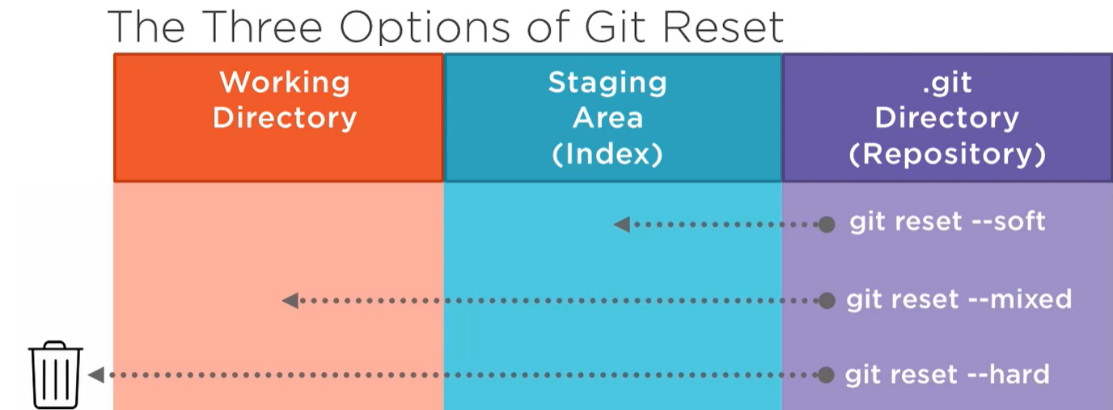
git merge new\_branch - merge changes from new\_branch to master

:wq

w - save changes

q – close

Reset – undo changes



WORKING --> STAGING --> .GIT

git reset --soft - move last commit back to staging

git reset --mixed - same as git reset; move last commit back to working directory, default

git reset - use to change history, dangerous command 🡪 by default, **mixed**

git rest --hard - moves last commit changes to trash, if have changes in staging or working, will move these to trash as well

Push

git push origin master - push changes to origin master in GitHub

Clone

git clone url\_of\_git\_repository - to clone git repository