Version control concepts & GIT Basics

Why Do We Need A Version Control System (VCS)?

- Backup and Restore
- Synchronization
- Undo
- Track Changes
- Track Ownership
- Sandboxing
- Branching and merging

Repositories and working copies

Working copy

- Personal copy of all the files.
- We changes this copy, without affecting our teammates.

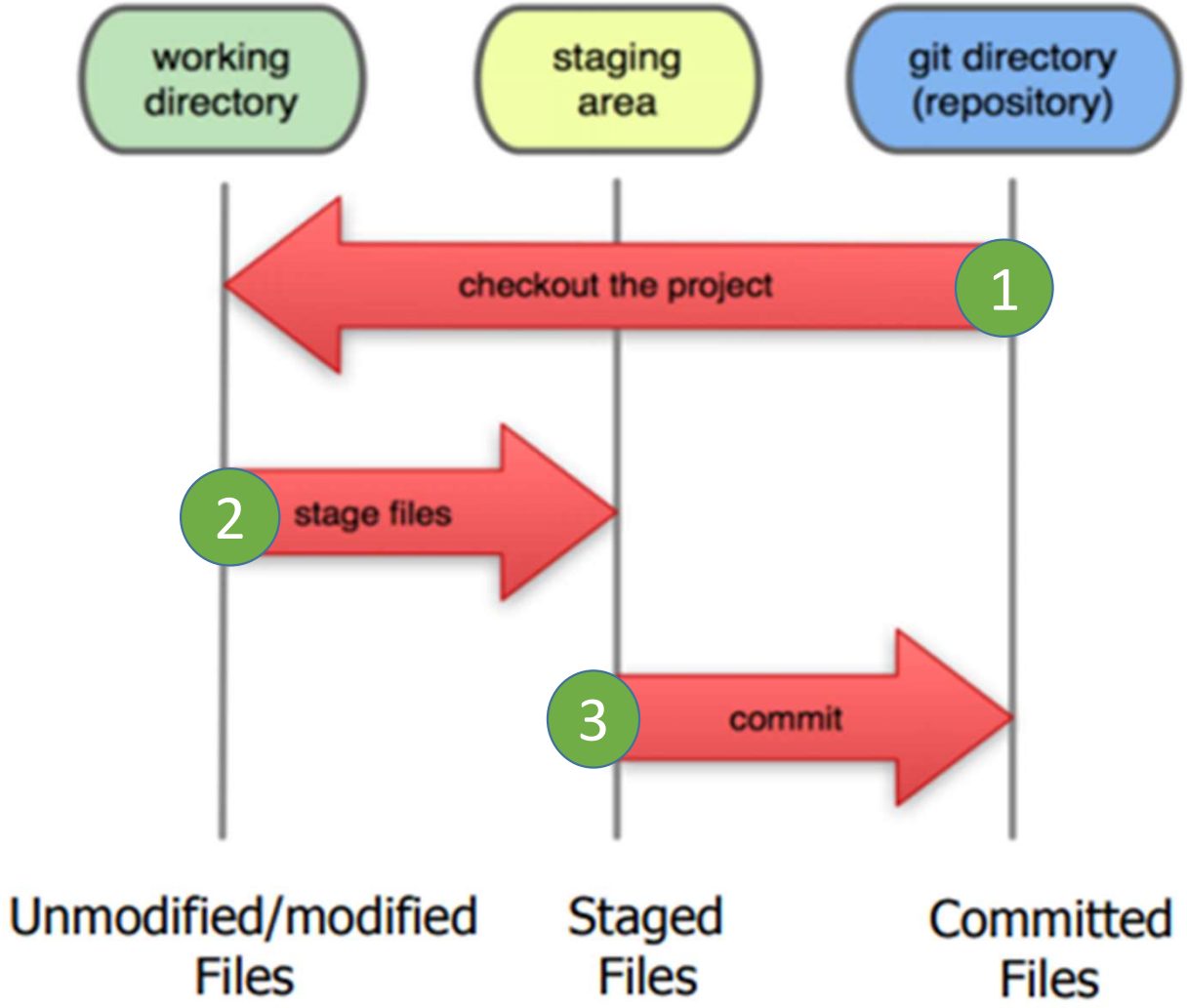
A repo/repository is

- A database of all the edits and historical versions (snapshots) of project.

Commit changes to repo

- When we are happy with changes

Local git operations



Workstation Setup

Visit	• git-scm.com/downloads.
Detailed information	• http://git-scm.com/book/en/Getting-Started-Installing-Git
First thing	• git config --global user.name “My Name" • git config --global user.email myemail@gmail.com

Let’s get started: Create a new Git Repository

Create a new directory	• mkdir mygitrepo • cd mygitrepo
Initialize repository	• git init
Check status of repository	• git status
Create and commit file	• $ touch hello.txt • $ echo Hello, world! > hello.txt

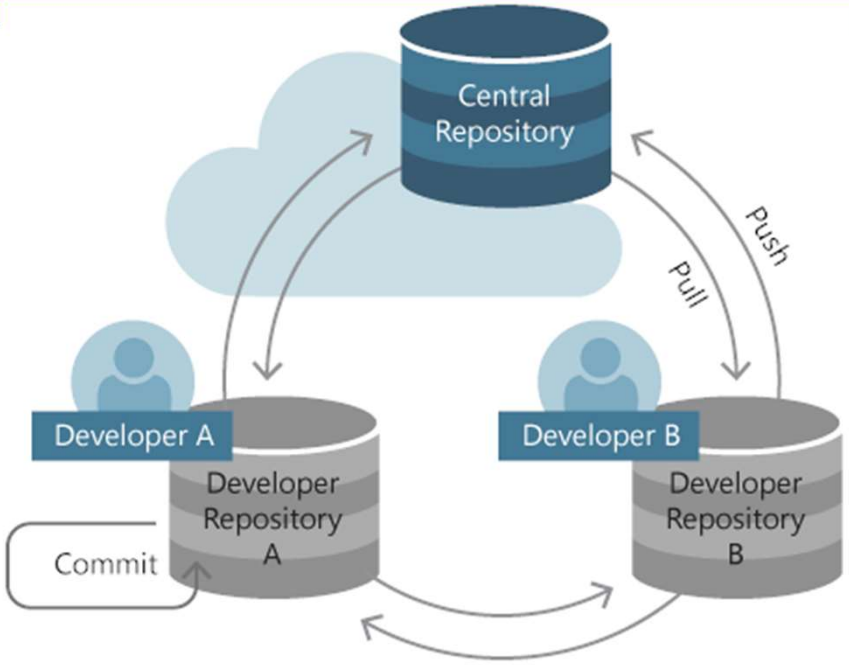
Lets get started: Create a new Git Repository

“register” the file for committing

- $ git add hello.txt

Check status

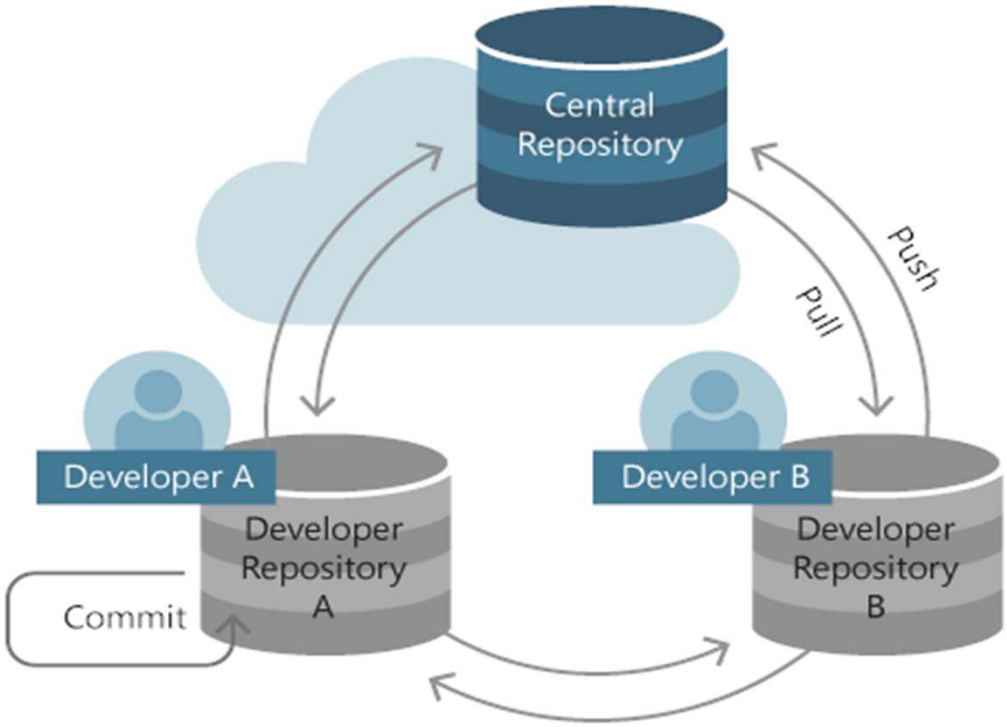
- $ git status
- # On branch master
- #
- # Initial commit
- #
- # Changes to be committed:
- #   (use "git rm --cached <file>..." to unstage)
- #
- #   new file: hallo.txt
- #

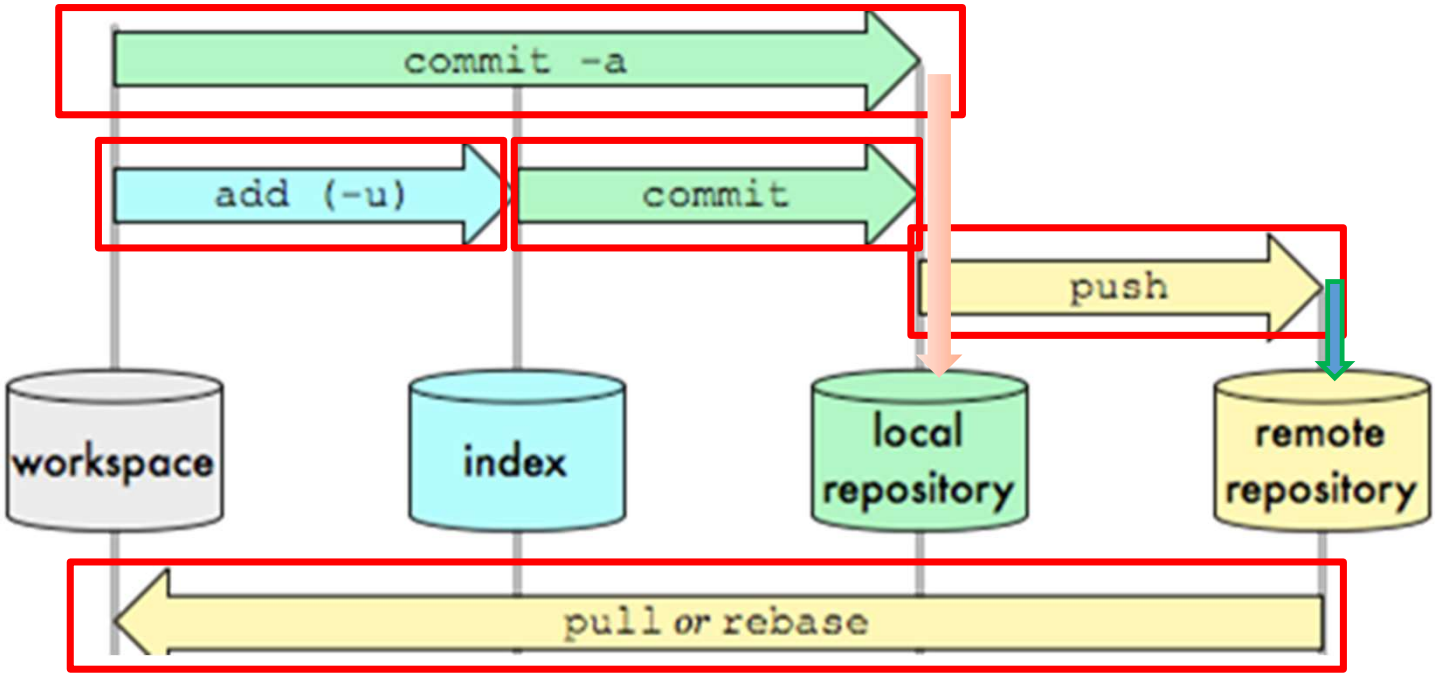


Lets get started: Create a new Git Repository

Commit

- $ git commit -m "Add my first file"



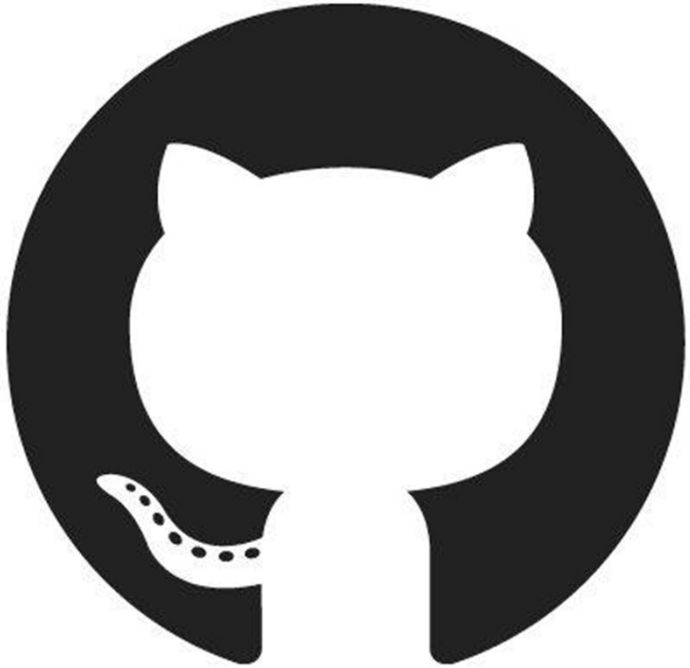

commit -a
add (-u)
commit
push
workspace
index
local repository
remote repository
pull or rebase

Git commands

Command	Description
git clone url [dir]	Copy a Git repository so we can add to it
git add file	Adds file contents to the staging area
git commit	Records a snapshot of the staging area
git status	View the status of our files in the working directory and staging area
git diff	Shows diff of what is staged and what is modified but unstaged
git help [command]	Get help info about a particular command
git pull	Fetch from a remote repo and try to merge into the current branch
git push	Push our new branches and data to a remote repository

GitHub.com

- For online storage of Git repositories
  - Can create a remote repo there and push code to it
  - Free space for open source projects
- Its not mandatory to use Github to use Git.
  - We can use Git locally for our own purposes.
  - We can also set up a git server locally




thanks