

Intro to Git

What is Git?

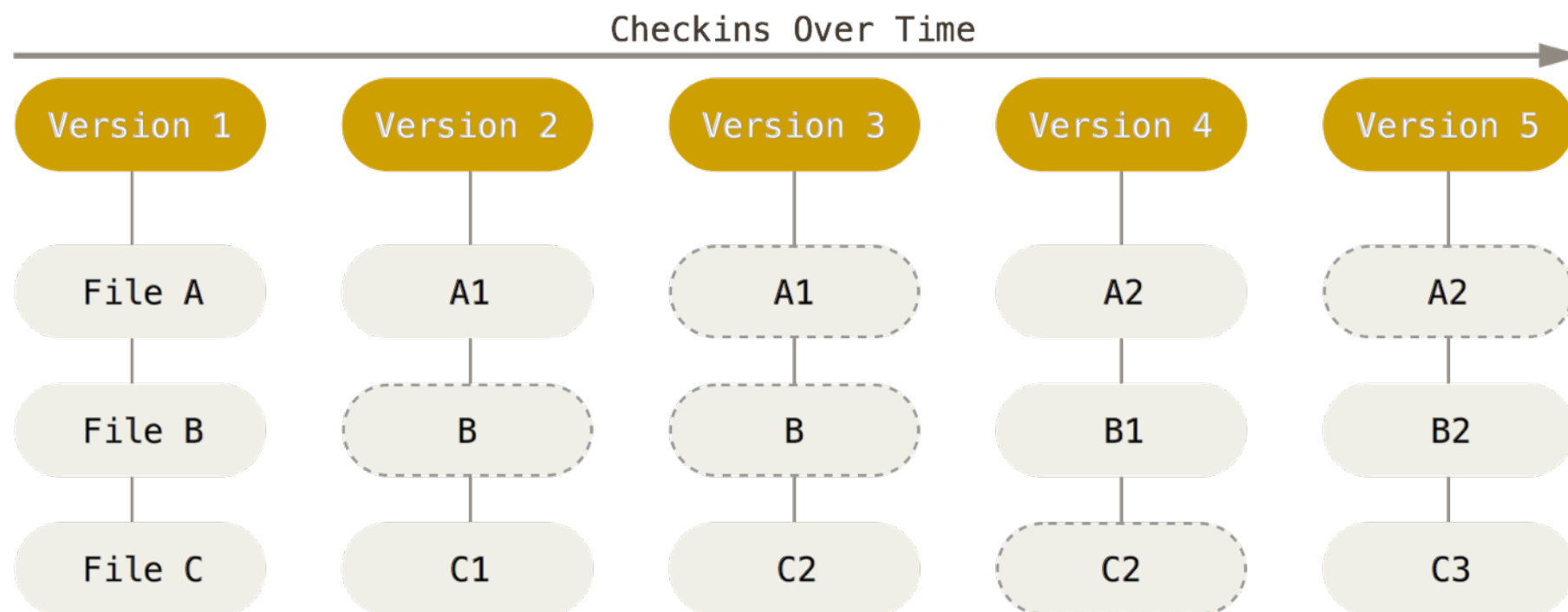
- A version control system (VCS)
 - Git, Subversion, Perforce
- What is a VCS?
 - Keeps multiple version of the same file
 - Allows you to undo changes

What is Git?

- Used for:
 - Working collaboratively on the same project
 - Keeping work safe
 - Keeping multiple versions of the same file

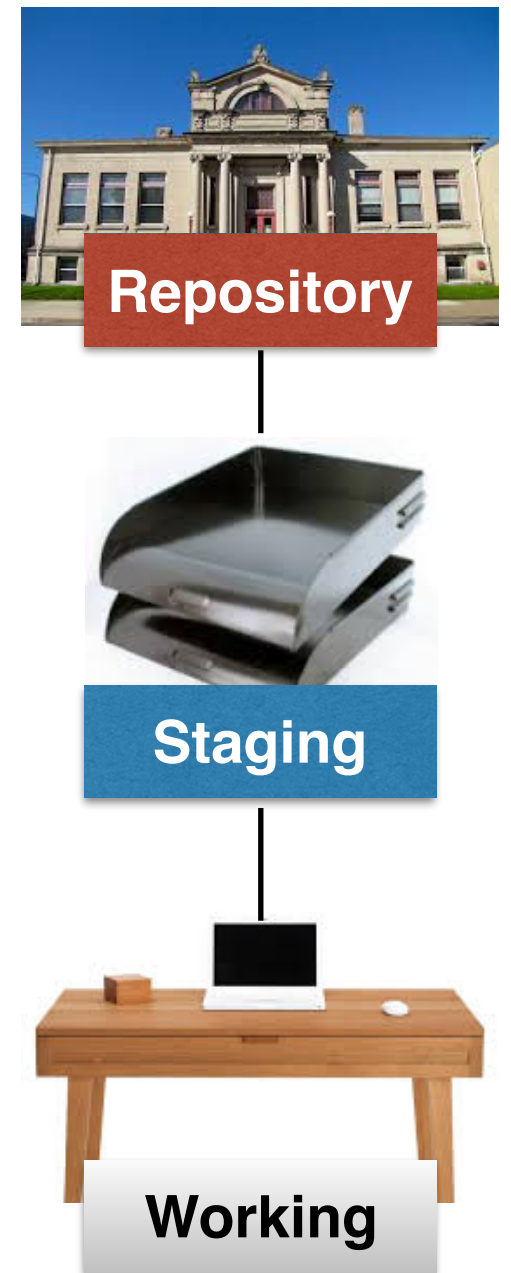
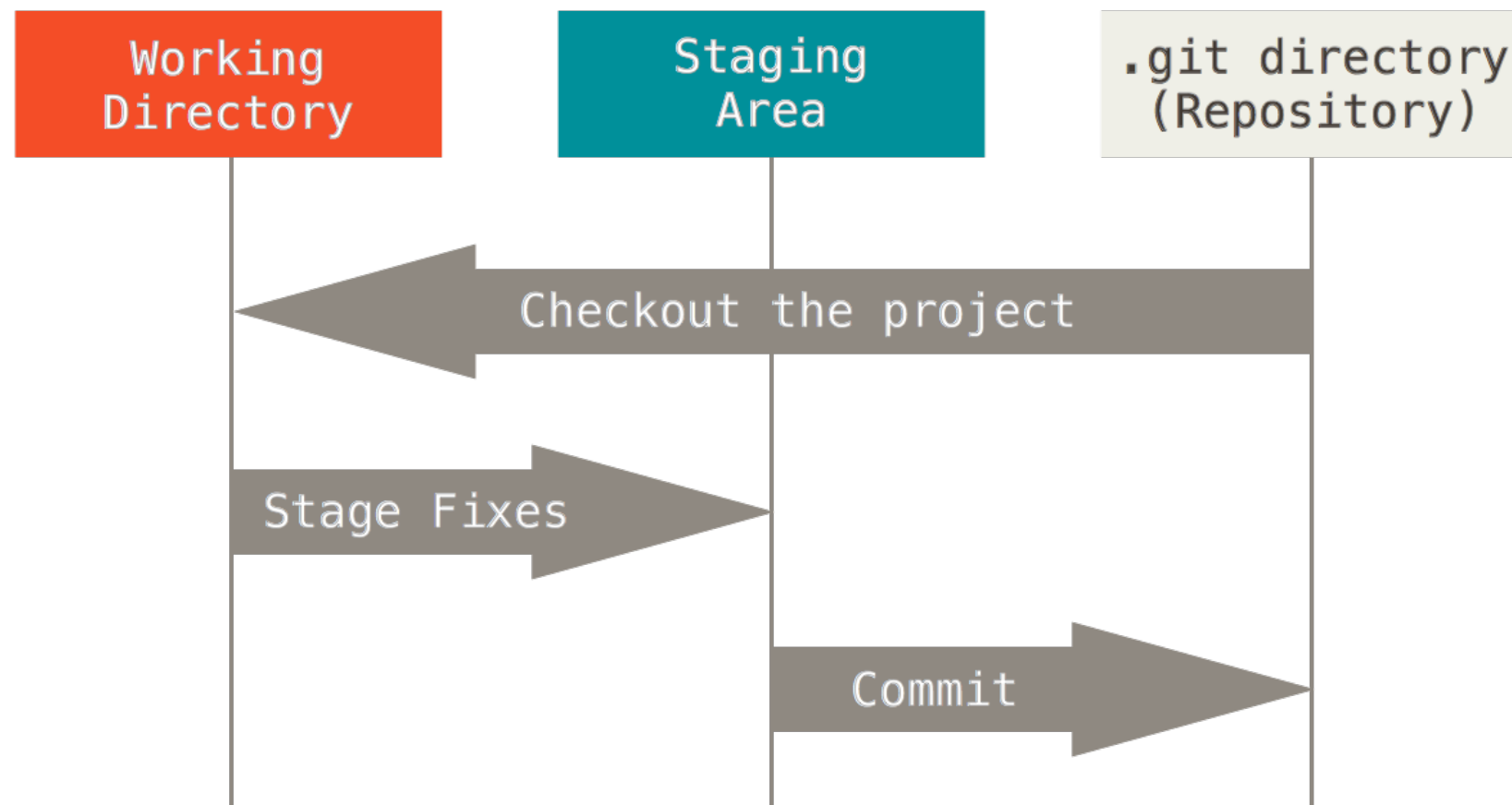
What is Git?

- Git stores streams of snapshots
- Other VCS systems store changes



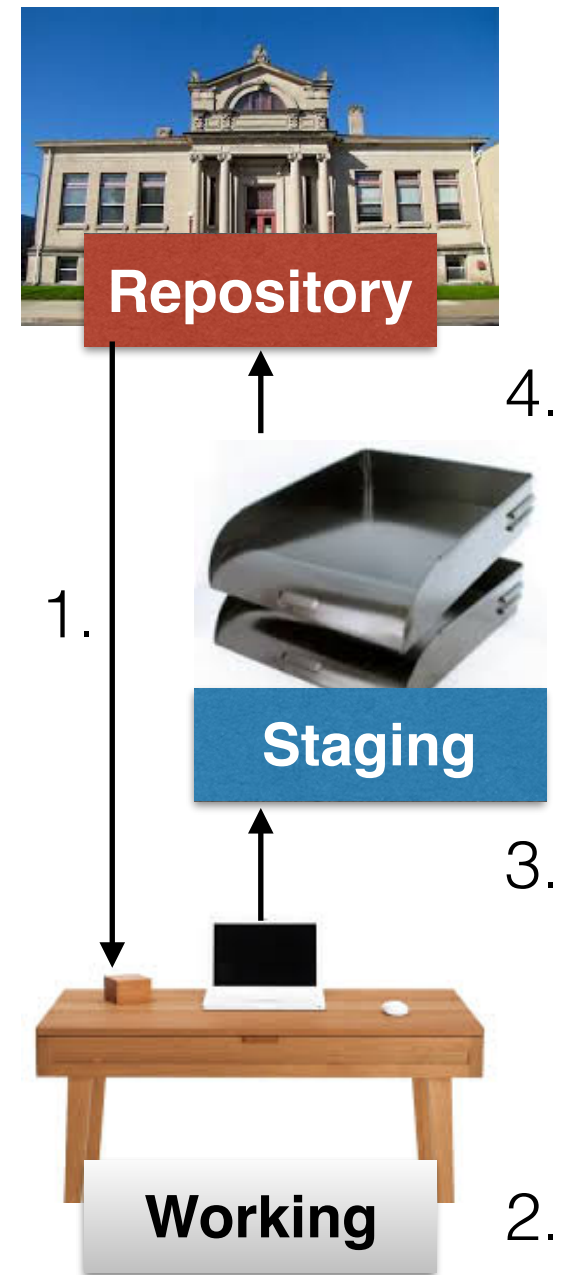
Three states in Git

- A file can be committed, modified, or staged



Git workflow

1. Pull latest version from the repository
2. Modify the files in your working directory
3. Stage the files you have modified
4. Commit the files in your staging area to your Git repository



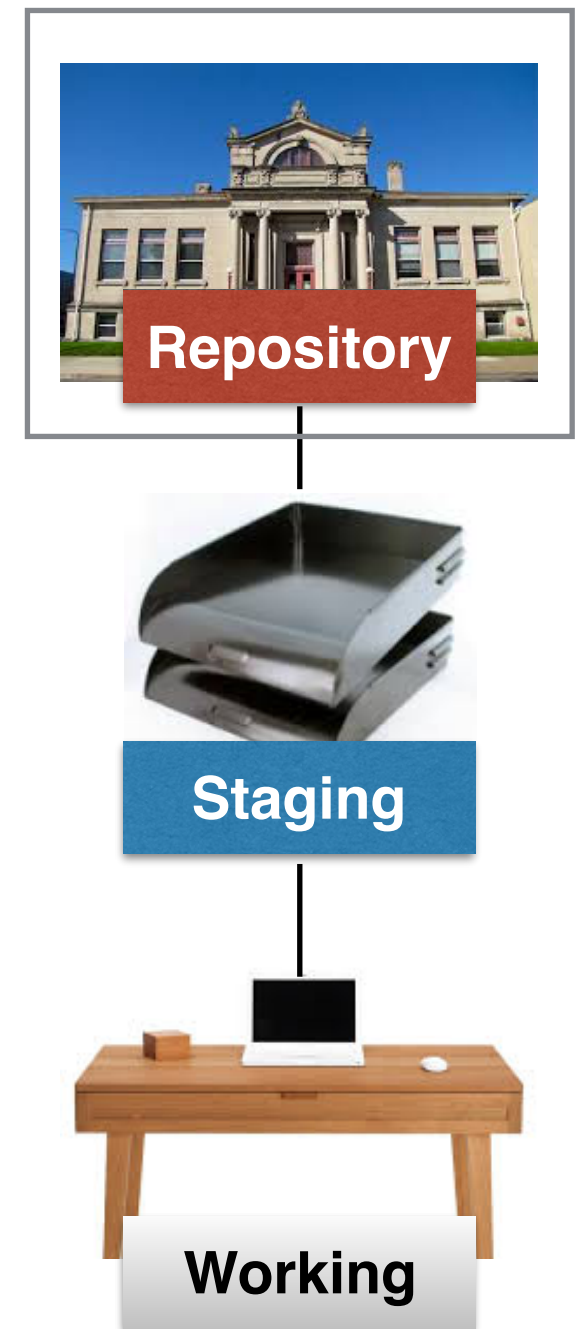
Git usage

- Can be used from:
 - The command line
 - A browser
 - A GUI
 - Built into interactive development environments (IDEs)



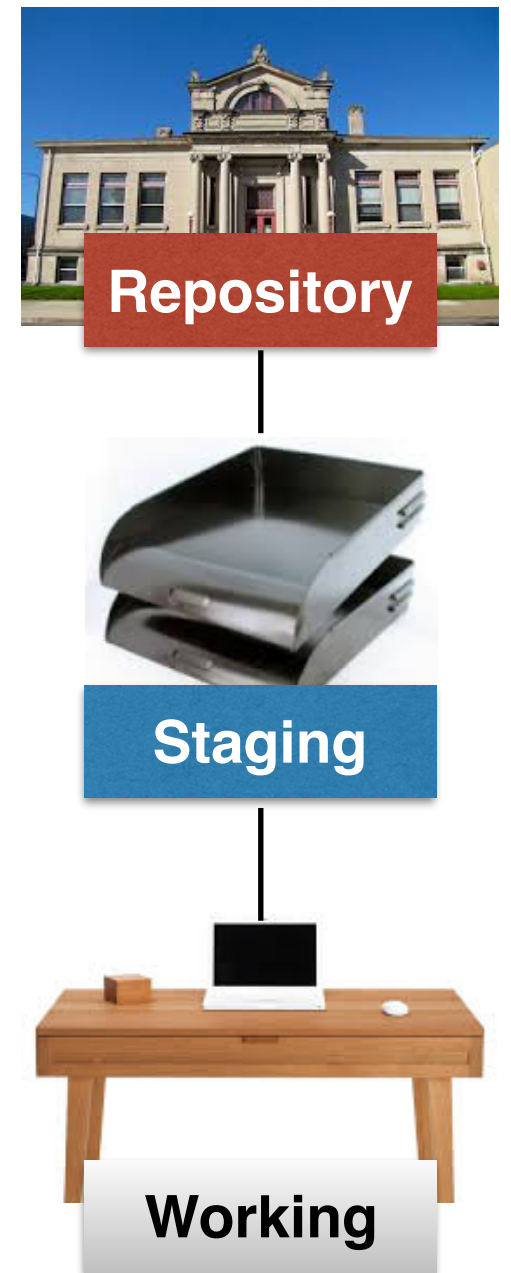
Repositories

- Local
 - More control
 - For sensitive data
- Remote
 - Github, Bitbucket
 - Safer backup-wise
 - Files are not private (Free version)



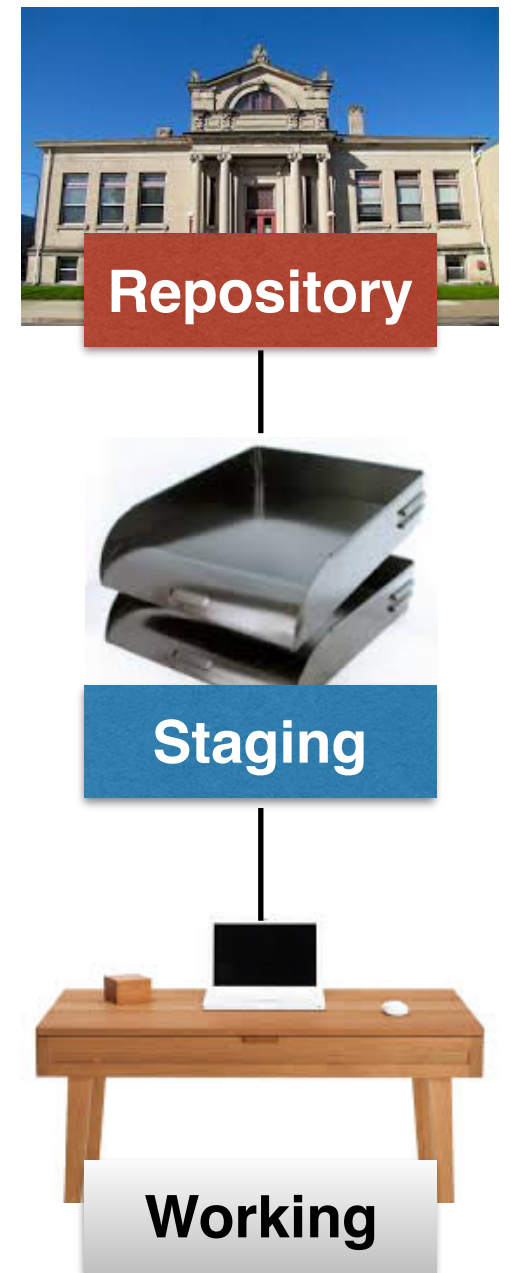
Startup: First time

- `$ git config`
- Configuration stored at 3 levels
 - System (`--system`)
 - User (`--global`)
 - Directory



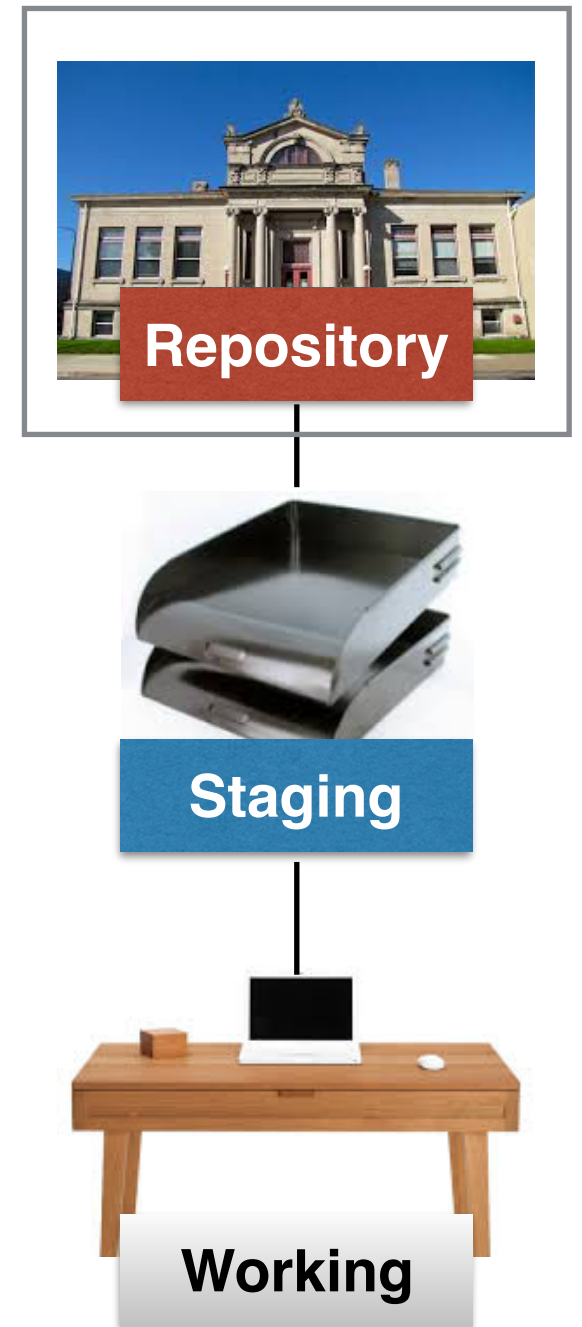
Startup: First time

- Setting the user identity
 - `$ git config --global user.name "John Doe"`
 - `$ git config --global user.email johndoe@example.com`
 - These must be the same as your Github details



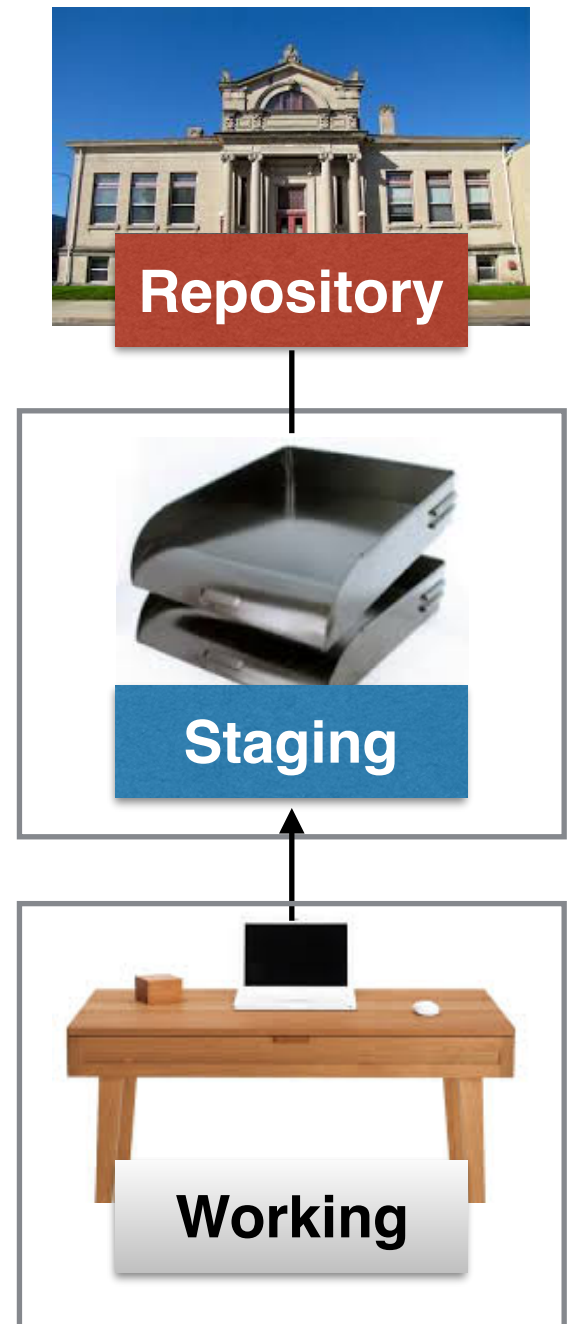
Creating a repository

- Creating a local repo:
 - `$ git init`
- Creating a remote repo:
 - <https://github.com>



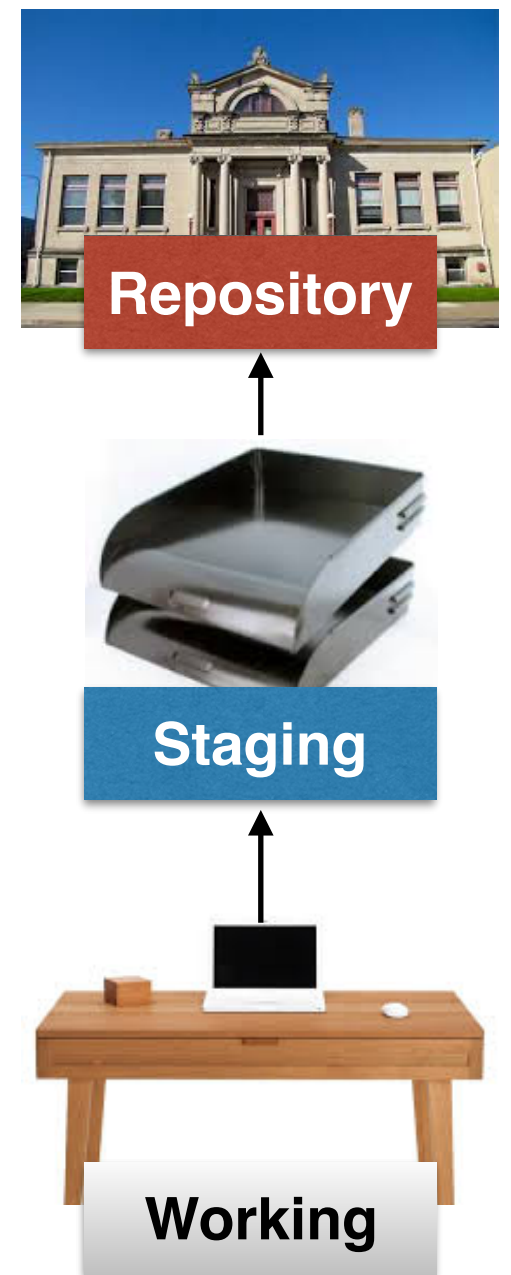
Adding files for VC

- Add files to be tracked:
 - `$ git add <file>`
- Checking what is the state of the files in the dir
 - `$ git status`



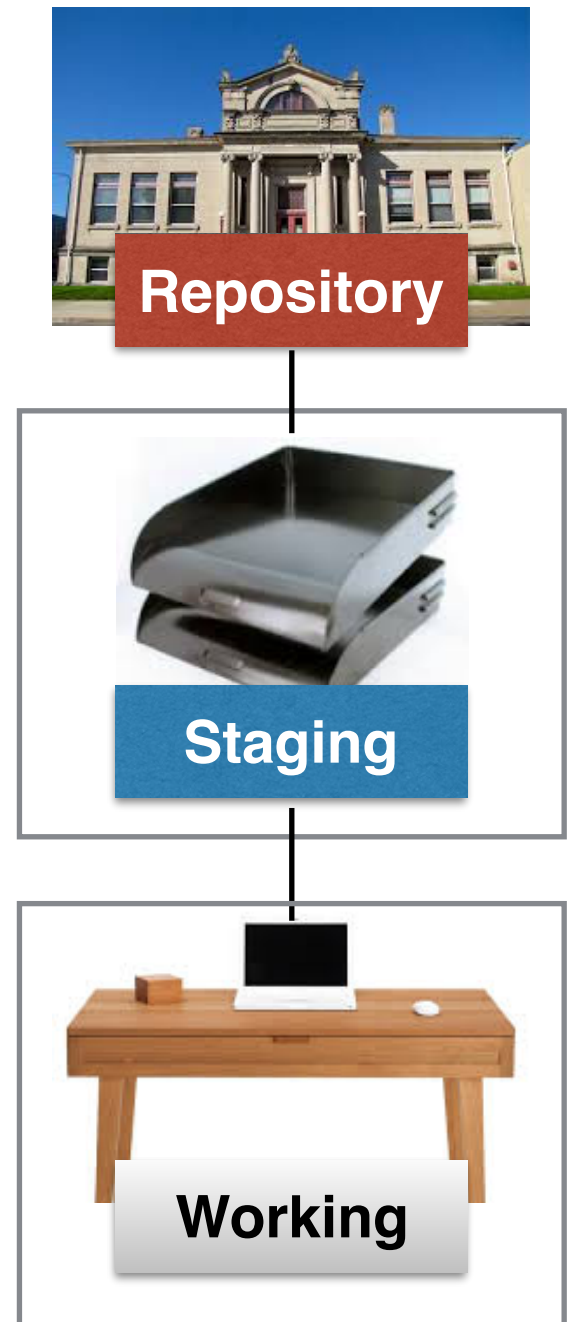
Git usage

- To move a file to the staging area from the working area
 - `$ git add <file>`
- To move a file from the staging area to the local repository
 - `$ git commit`



Git usage

- If you start working on a staged file:
 - You will be working on a different file to the one that is staged
- If you run git commit, the staged file, not the one you are working on will be committed to the repo

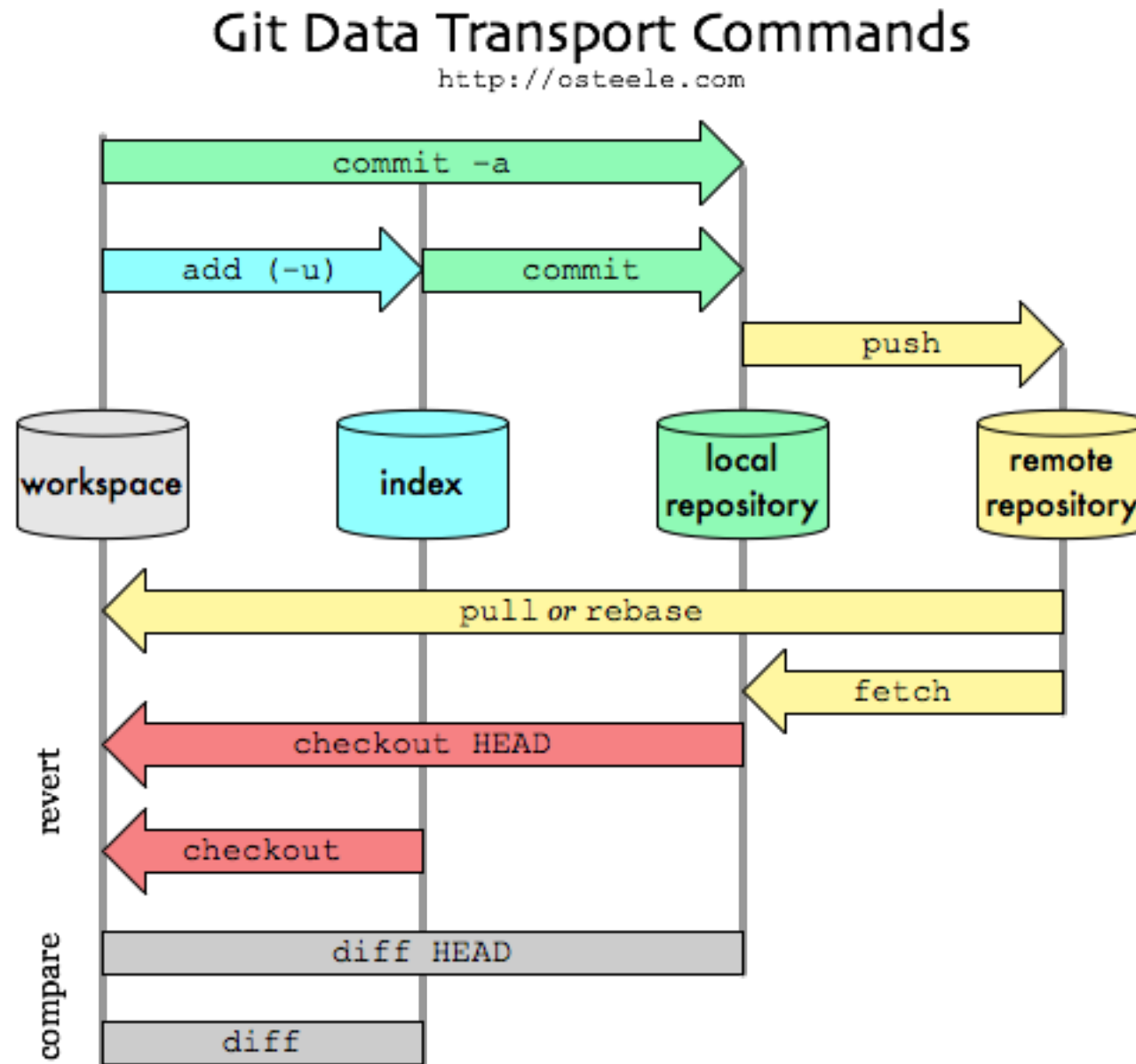


Git usage

- To undo the changes you have made and revert to a previously committed version
- `$ git checkout`



Remote repositories



Remote repositories

- Cloning an existing repo:
 - `$ git clone <url>`
- Create a Github account
 - https://github.com/jambler24/git_lecture.git

