

A sort notes on GIT And GitHub.

1: What is Git.

- Git is a distributed version control and source code management (SCM) system with an emphasis on speed, data integrity, and support for distributed, non-linear workflows. Git was initially designed and developed by Linus Torvalds for Linux kernel development in 2005, and has since become the most widely adopted version control system for software development.
- Distributed fast and more natural
- Capable of handling large projects

2: Working With Git

Two way to work with Git

- Command Line Interface
- GUI tools
available on <http://www.git-scm.com>

3: Working With Git Command LineInterface

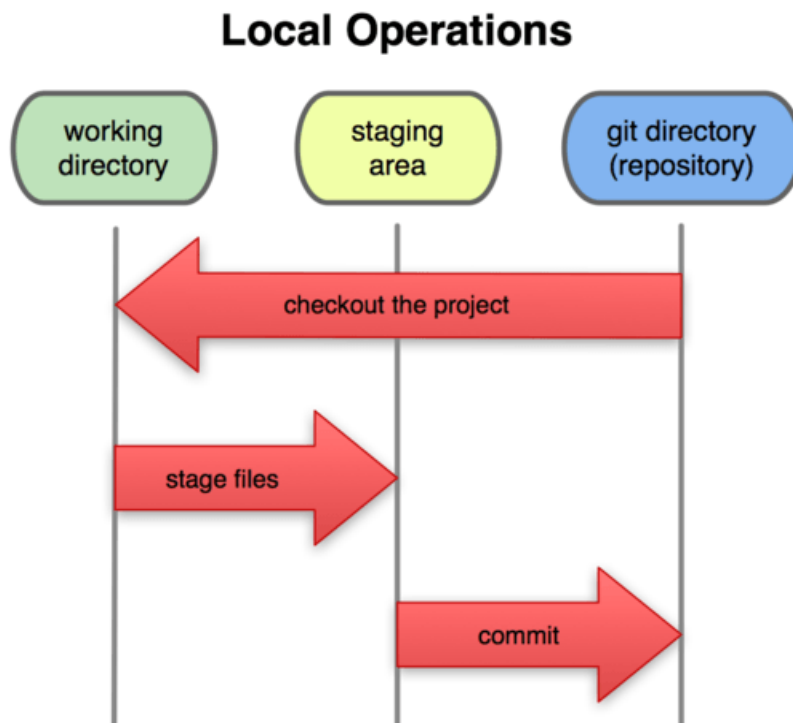
Steps are following

- Download Git from above url
- Open Git bash and set the path to the local directory where you want to work
- Make the project folder and go through it
- First configure Git repository on local server it will help taking the snap shot
 - Command is – `$ git config --global user.name "manish"`
 - `$ git config --global user.email "manishmips28@gmail.com"`
- Create Git repository it create the master branch
 - `$ git init <project name>`
- Now told Git that which file you want to track
 - `$ git add .` (. for add all files in repository)
 - `$ git add <file name>`(for add individual files in repository)
- If you want to remove file from tracking
 - `$ git rm -- cached <file name>`
- Check all files added or not before commit if you made any modification you have to add files before commit called status checking

- `$ git status` (it will show which file is tracking or not also show modification)
- Now commit the file
 - `$ git commit -m "message about commit"`
- You do a commit, which takes the files as they are in the staging area and stores that snapshot permanently to your Git directory.

4: The three States

Git has three main states that your files can reside in: committed, modified, and staged. Committed means that the data is safely stored in your local database. Modified means that you have changed the file but have not committed it to your database yet. Staged means that you have marked a modified file in its current version to go into your next commit snapshot.



The basic Git workflow goes something like this:

1. You modify files in your working directory.
2. You stage the files, adding snapshots of them to your staging area.
3. You do a commit, which takes the files as they are in the staging area and stores that snapshot permanently to your Git directory.

Integration Of Local Repository To Server Repository (GitHub)

Steps are following.

1. Should have an account on GitHub
2. Create a deploy key (SSH key) .A deploy key is a SSH key that is stored on the server and grant access to the single repository on GitHub. This key is attached directly to the repository instead of a user account. Deploy key have full Read/Write access
 - Command for generation of SSH key
 - `$ ssh-keygen -t rsa -C "manishmips28@gmail.com"`

Note: The SSH key will generate in user profile folder .ssh folder contains two key

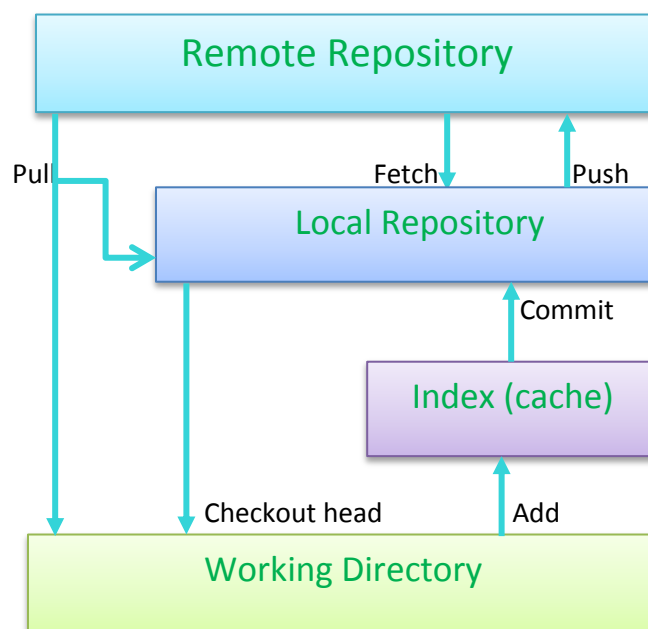
- I. Private key(id_rsa)
- II. Public key(id_rsa.pub)

Copy the public key past it on server in your GitHub account

<https://github.com/settings/ssh> add a new SSH key .

3. To check SSH woking or not `$ ssh -T git @git.com`
4. Now upload project on server with github.com
5. Make connection to push project or code to github.com
 - I. `$ git remote add origin "url"` here url is SSH or https of repository on server copy and paste to the command line interface. And origin is the connection to the repository to the server. Here I am working with SSH url will be as follows
<git@github.com:manishmips28/NotesOnGit.git>
 - II. Now `$ git push -u origin master`

Architecture Of Git And GitHub



Refresh the server page and you can see the project or code.

This is a sort description how Git and GitHub working .

Thank you