GIT - GITHUB (LOCAL REPO)

yum install git -y --> Install Git

mkdir @dir; cd $dir --> local repo direcrory

git init --> Initialize git local repo (.git directory will be created)

git status --> To check unstaged, staged, current changes in local git repo

git log --> To check IN DETAIL all the commits made in our local repo

git log --oneline --> To check all the commits made in our local repo (Only one line output --> Commit version header)

GIT - GITHUB (REMOTE REPO)

Signup --> https://github.com/join/plan

verify by clicking a verification link to your mail account

Create a new repo

Create Remote repo through command line :

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…or create a new repository on the command line

echo "# devops" >> README.md

git init

git add README.md

git commit -m "first commit"

git remote add origin https://github.com/purnimaatada/devops.git

git push -u origin master

…or push an existing repository from the command line

git remote add origin https://github.com/purnimaatada/devops.git

git push -u origin master

…or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

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# git remote -v

# (--> No Output means remote repo LINK is not configured in our local repo)

# git remote add purnima https://github.com/purnimaatada/devops.git

# git remote -v

origin git@github.com:DevopsLearners123/ycard.git (fetch)

origin git@github.com:DevopsLearners123/ycard.git (push)

--- remote alias & link will be updated in "config" file :

cd .git

cat config

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# cat config

[core]

repositoryformatversion = 0

filemode = true

bare = false

logallrefupdates = true

[remote "origin"]

url = git@github.com:DevopsLearners123/ycard.git

fetch = +refs/heads/\*:refs/remotes/origin/\*

[remote "purnima"]

url = https://github.com/purnimaatada/devops.git

fetch = +refs/heads/\*:refs/remotes/purnima/\*

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touch abc.txt (This step involves any changes made in local repo)

git add $filename (or) git add . (will add changes from unstaged to staged level, which is it will bundle up recent changed to be committed)

git commit -m "message" (will commit staged updates to local git repo)

**\*\*\*\*\*\*\*\*\*\*\*NOTE : WHENEVER YOU'RE TRYING TO PUSH/PULL CHANGES TO GITHUB REPO, IT WILL ASK PASSWORD FOR AUTHENTICATION. WE HAVE TO MAKE PASSWORDLESS AUTHENTICATION.\*\*\*\*\*\*\*\*\*\***

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# git push purnima**(alias for github link)** master**(default base branch in github)**

Username for 'https://github.com': purnimaatada@gmail.com

Password for 'https://purnimaatada@gmail.com@github.com':

Counting objects: 16, done.

Compressing objects: 100% (12/12), done.

Writing objects: 100% (16/16), 1.31 KiB | 0 bytes/s, done.

Total 16 (delta 4), reused 0 (delta 0)

remote: Resolving deltas: 100% (4/4), done.

remote:

remote: Create a pull request for 'master' on GitHub by visiting:

remote: https://github.com/purnimaatada/devops/pull/new/master

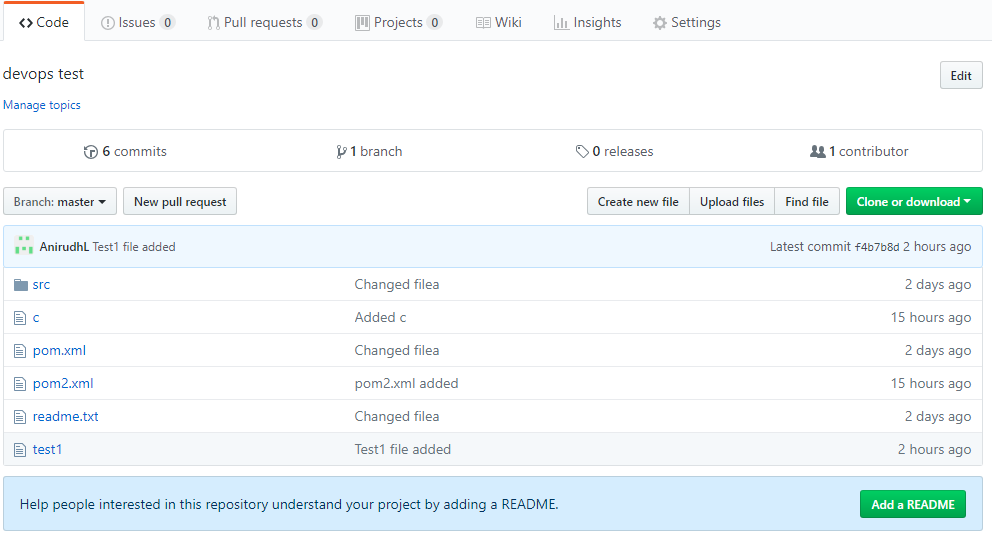
remote:

To https://github.com/purnimaatada/devops.git

\* [new branch] master -> master

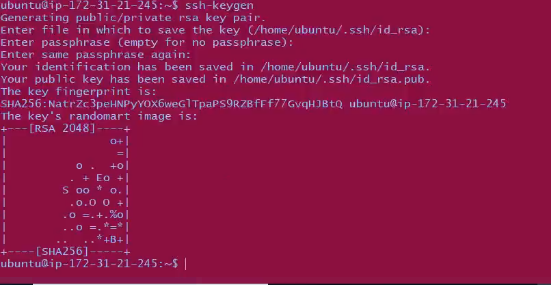
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Note : After which code will be visible in github remote repository \*\*\*\*



-----------------------PASSWORDLESS AUTHENTICATION-------------------------------------

#ssh-keygen



@ip-172-31-85-28 ~]# cd .ssh

[root@ip-172-31-85-28 .ssh]# ls -lia

total 16

8415733 drwx------. 2 root root 80 Nov 30 06:20 .

4194369 dr-xr-x---. 5 root root 245 Nov 30 05:49 ..

8415734 -rw-------. 1 root root 1096 Nov 28 09:08 authorized\_keys

8415738 -rw-------. 1 root root 1675 Nov 30 06:08 id\_rsa

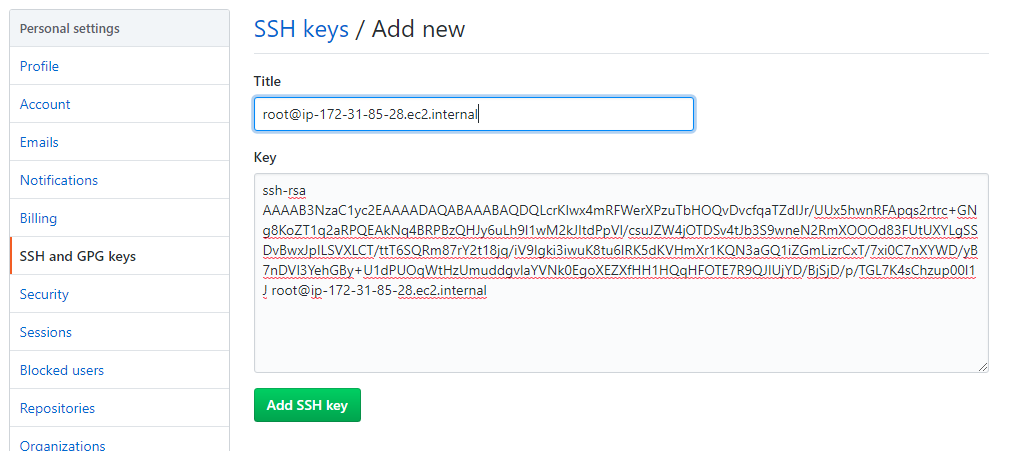
8588505 -rw-r--r--. 1 root root 415 Nov 30 06:08 id\_rsa.pub

8588508 -rw-r--r--. 1 root root 978 Dec 1 07:25 known\_hosts

# cat id\_rsa.pub

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDQLcrKIwx4mRFWerXPzuTbHOQvDvcfqaTZdIJr/UUx5hwnRFApqs2rtrc+GNg8KoZT1q2aRPQEAkNq4BRPBzQHJy6uLh9l1wM2kJItdPpVl/csuJZW4jOTDSv4tJb3S9wneN2RmXOOOd83FUtUXYLgSSDvBwxJpILSVXLCT/ttT6SQRm87rY2t18jq/iV9Igki3iwuK8tu6lRK5dKVHmXr1KQN3aGQ1iZGmLizrCxT/7xi0C7nXYWD/yB7nDVI3YehGBy+U1dPUOqWtHzUmuddgvlaYVNk0EgoXEZXfHH1HQqHFOTE7R9QJIUjYD/BjSjD/p/TGL7K4sChzup00l1J root@ip-172-31-85-28.ec2.internal

**\*\* share public key to github server \*\***



Remove HTTP based url & add ssh based URI to origin

# git remote remove purnima (To delete HTTP based URI)

# git remote add purnima [git@github.com:purnimaatada/devops.git](mailto:git@github.com:purnimaatada/devops.git) (ssh based URI)

In GITHUB account, create a finally & commit to master there itself but changes are not reflected in GIT local repo. So, we have to **pull changes in GIT local repo**.

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# git pull purnima(alias) master(default branch)

remote: Enumerating objects: 4, done.

remote: Counting objects: 100% (4/4), done.

remote: Compressing objects: 100% (3/3), done.

remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0

Unpacking objects: 100% (3/3), done.

From https://github.com/purnimaatada/devops

\* branch master -> FETCH\_HEAD

Updating 23b2b3f..b21b103

Fast-forward

Docker | 6 ++++++

1 file changed, 6 insertions(+)

create mode 100644 Docker

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# ls

c **Docker** jenkins pom2.xml pom.xml readme.txt src test1 –> New file uploaded in remote repo is visible in local repo after pull.

**CLONE REPO FROM REMOTE REPO TO LOCAL REPO:**

# git clone https://github.com/purnimaatada/devops.git

Cloning into 'devops'...

remote: Enumerating objects: 21, done.

remote: Counting objects: 100% (21/21), done.

remote: Compressing objects: 100% (12/12), done.

remote: Total 21 (delta 6), reused 17 (delta 5), pack-reused 0

Unpacking objects: 100% (21/21), done.

**Note : Even if all files/directories are deleted from local repo, we can clone from remote to local as shown above.**

Note : When we commit using IDE like Eclipse or Intellij or pycharm, it will create hidden files like .meta or .ide or such files & we don’t want to commit these files to remote repo. We have to create a hidden file called **(.gitignore)** and add ignorable files in this file.

555 touch .gitignore

556 vim .gitignore 🡪 Add files to be ignored in .gitignore

559 git status

560 git add .

562 git commit -m "Added .gitignore"

563 git status

564 # git push purnima master

Username for 'https://github.com': purnimaatada@gmail.com

Password for 'https://purnimaatada@gmail.com@github.com':

Counting objects: 4, done.

Compressing objects: 100% (2/2), done.

Writing objects: 100% (3/3), 275 bytes | 0 bytes/s, done.

Total 3 (delta 1), reused 0 (delta 0)

remote: Resolving deltas: 100% (1/1), completed with 1 local object.

To https://github.com/purnimaatada/devops.git

b21b103..b6a9e3c master -> master

**Git RESET : git reset (--hard/--soft/--mixed) ($previous header value to which we need to remove changes)**

* soft
* mixed (default)
* hard

soft -> Will remove details from the log(git log --oneline) but file will be present in staged area

mixed -> Willl remove details from both log & staged area but file will be in unstaged area

hard -> will remove details & file as well from local git repo.

**#push to remote repo**

If we try to re-commit after removing a file in local repo(but this file will already be committed in remote repo), it will get failed as given below:

**# git push purnima master**

Username for 'https://github.com': purnimaatada@gmail.com

Password for 'https://purnimaatada@gmail.com@github.com':

To https://github.com/purnimaatada/devops.git

! [rejected] master -> master (non-fast-forward)

**error: failed to push some refs to 'https://github.com/purnimaatada/devops.git'**

**hint: Updates were rejected because the tip of your current branch is behind**

hint: its remote counterpart. Merge the remote changes (e.g. 'git pull')

hint: before pushing again.

hint: See the 'Note about fast-forwards' in 'git push --help' for details.

In this case, we’ve to **push the changes to remote repo forcefully**.

# git push purnima **+master**

Username for 'https://github.com': purnimaatada@gmail.com

Password for 'https://purnimaatada@gmail.com@github.com':

Total 0 (delta 0), reused 0 (delta 0)

To https://github.com/purnimaatada/devops.git

**+ 858dc48...b6a9e3c master -> master (forced update)**

**Git revert 🡪**

If we want to only change the header to earlier versions but not delete the newly added version(which we deleted via hard reset), we’ve to use the “revert” command & then push it to remote repo.

#git revert #(Required log header)

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* STASH\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***