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(SKINNISHA)

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Git

- Recording system [(kind of) / Registry] where we can track everything & also used for collaboration.
- Git gives flexibility to manage everything

Create folder

Delete all files in it

cd Samal-d/

pwd

rm -rf *

ls -l



Inside your folder, create one folder

mkdir samal-git

mkdir akansha-git

ls

ls -l

cd akansha-git/ go to your folder

ls

git init.

→ create git repository inside the folder

ls -la → hidden folder created

cd .git/

\$ cd ..

rm -rf .git

git status → removes git

ls

git init.

git status

Add - Converts unstaged file to stage file
Commit - Converts staged file to committed file
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path should be: pwd

/home/missingskill/Samal-git

touch Readme

ls

ls -l

cat >> Readme

This is git session now

Ctrl + C

ls

ls -l

git status → red color file (untracked)

To add this file into git repository:

git add Readme

git status — will show the file in green
which git

→ Shows location /user/bm/git

To register a file into git:

git commit -m "Added readme file"

git status

ls

git status

git add License

git status

git commit -m "Adds license"

git status

To view commits:

git log

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ls

License Readme Config → Showing files.

cat >> Readme

This is a readme file.

Ctrl + C

git status → modified file.

cat Readme

This is git session now → prev line

This is a readme file → new line.

git status → showed [modified: Readme]

touch log

git status

git add Readme

git status

git commit -m "Readme updated"

git status

git log → Display committed files with unique com id
To copy commit:

git show [copy first 7-8 letter from commit id]

It will show u added content

git status

cat >> Readme

Git Commands:

git init.

git add <filename>

Ctrl+C

git status

It is showing in red because its modified.

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git add Readme

git commit -m "update file"

git show 033277a

Showing the content in green with + sign

cat >> Readme

git commit -m "message"

git show <Commit id>

git log

Ctrl + C

git status

git diff Readme → Shows changes in file

git add Readme

git status

git diff Readme → won't show the content because this is now added into git repository

git commit -m "Updates file"

git show >> acaef6

cat Readme

git status

ls → 4 files

vim Readme → Remove file

git status

git diff Readme → Showing modified because file is removed

git commit -m "Removes file"

git log → One more commit generated

git status

nano Readme

Ctrl + X

git status → Red

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~~changed~~

git diff Readme → Before commit

git add Readme

git status

git commit -m "Modified file"

git log

git show 451d79 → After commit

git status

git diff → changes of all files

git add * / git add . → add all files in present dir

git status

git commit -m "Modifies & adds the file"

git log



add some content in log

then git log

it will add new head.

git branch

shows master

- git init. → new repository

- git add FN / / *

- git status

- git log → history of git

- git ~~commit~~ diff

- git show → actual history of commit

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cd ~/Desktop — To check where desktop is located

pwd

/users/samal/Desktop

mkdir ~~git~~ missingSkill

ls

ls -l

cd missingSkill/

ls

mkdir git-practice

cd git-practice/

git init

git status

touch Readme

cat >*Readme

Readme file

Ctrl + C

git status

git add .

git status

git commit -m "First commit"

git log

git branch

git show 1558a819

git status

git log

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\$ Local → whatever project I have in my system
remote → project created on gitlab

git status → shows existing repository

pwd → git remote add origin git@github.com:samal/git-practice.git
→ From Push an existing folder

git status

git branch

To push master ~~base~~ branch to remote server :

push origin master [push master branch to origin server]

this will push any code to master branch

~~ssh-add id_rsa~~

cat >> Readme

Added remote origin to git repo

git status

git push origin master

git log → indicates local commit & remote

git diff

git status

git add Readme

git commit -m "Update Readme"

git log

git push origin master

git log

→ Dist. Version Control System

Local has updated code

Remote has old code

Unless i push the local code into remote, remote will continue to have old version of code

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git branch → displays the branch
git branch develop → create new branch
git branch → shows developed branch
git checkout develop → switch to 'develop' branch
git log
git push origin develop → push the develop branch
to origin server

Create a new folder & inside that a new file
having some content

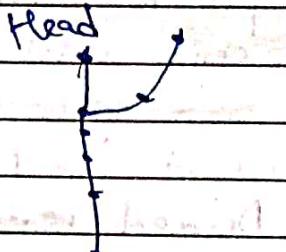
Then git add .

git status

git commit -m "Add Linux"

git log

git push origin develop



→ Head is always pointing to current branch

git push origin master

git checkout develop

git branch local → create new branch over develop

git branch

git checkout local

git branch

git log

git branch local -D

If any file is deleted from vscode then it will go
to trash & if we delete it from trash also

& check git status → it will display that
file is deleted

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Switching to branch recovers the file only if it is committed.

git checkout develop
git status

git checkout -- README → Recover the file
git status

If we make any modification to file but don't want to commit the file then

git checkout -- → revert file to last committed stage
git status

If by mistake folder is removed from desktop which is inside missingskill folder

ls

rm -rf git-practice

To recover it:

Go to remote → Go to clone → Copy http path
git clone <path> → Clone remote/origin code into local

If will ask username & password

Go back to vscode → open git-practice

All the code will be back

git branch → showing only master branch

git fetch origin develop → fetch the branch from remote

git branch

git checkout develop → To display branch, we need to checkout to that branch first

git branch → Shows the master & develop branch

Same way

git fetch origin feature

git fetch session-5

git checkout feature } Do one by one

git checkout session-5 }

git branch

git checkout develop

git branch

→ git merge feature → merge feature branch into develop branch

git log

git branch

git push origin develop

All the content of feature is now merged to develop

git branch

develop merged to master
but master doesn't merged to develop

git merge master

git push origin develop

Commands:

git init - initialize new repo in local

git add - Add all the files to stage the commit

git show

git log

git diff

git branch

git checkout - To recover, to revert the change to, to switch

git push

git remote

git clone (<remote-repo-url>)

git merge branch_to_be_merged

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git branch <branch-name> -D/-d → delete branch

git fetch

git pull

Open account on gitlab.com

Create new project, make it private

Copy two lines from Git global setup

Paste in gitbash/terminal in ubuntu

Copy first line from create new repository & Go to gitbash

cd Desktop/

cd missingskill/

ls

git clone [paste the link]

ls

cd git-ms/

ls

git status → No commits yet

pwd

Open folder git-ms in [Open git-ms folder]
Create new file in vscode as 'Readme' & add some content

ls

cd git-ms/

ls

git status

git add Readme

git status

git commit -m "first commit"

git status

Neel
username - in git url, your name is your username
password - gitlab password

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git push origin master

Go to gitlab & [F5], Readme file is created.

git branch

git branch S6

git branch

git checkout S6

git status

Go to vs code - create new file as session-6

git status → Showing in red color

git add Session-6

git status

git commit -m "adds file"

git status

git branch

git push origin S6

Go to gitlab

click on master | there is a branch S6

Go to graph

Create another branch

git branch S5

ls

touch session5

cat >> session5

Git commands

Ctrl + C

```

git status
git add session5
git status
git commit -m "add session file"
git status
ls
git status
git push origin master
git status. does not appear to be a git repository
git status
So go to gitlab, create new project 'git-msk'
    
```

Copy path [3rd line] from push an existing folder
 Paste in gitbash → enter
 pwd

→ git push origin master
 → It will ask username & password → enter if

Refresh gitlab → all files are shown
 Go to repository → Graph

```

git branch
git checkout s5
git branch
git push origin s5
    
```

Username, Password

Refresh gitlab & see graph

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ls

cat >> session5

session5

Ctrl + C

git status

git add .

git status

git commit -m "add file"

git branch

git push origin s5

username, password

Refresh gitlab, & see the change in graph.

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Collaboration

ls

Go to gitlab → members → invite member

Add 4-5 gitlab members

choose a role permission → Maintainer

click invite

Go to Gitlab account [at left upper corner]

Go to Projects

First project is Samal Gorai/git-msk, Click on it

Go to clone

Copy http link

ls

[s -]

cd samal-git/

ls

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cd

ls

history | grep 139

ssh missingskill@139.180.132.156 skill10212

cd

ls

mkdir Samal-Sep05

cd Samal-Sep05/

ls

git clone <paste the copied link>

username, password.

ls

cd git-msk/

ls

pwd

ls

ls -l

cd

ls

ls -l

git log

git branch

git branch ~~rahulbr~~

git checkout rahulbr

git branch

cat > learning-git

hi everyone!

Ctrl + C

git status

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git add.
git status
git reset HEAD missingfile
git status
git commit -m "first commit"
git push origin rahulbr
username, password
Check gitlab, refresh
in master see for rahulbr
go to graph
add few more commits to this branch.

ls
git status
git branch samalbr
git branch
git checkout samalbr
ls
cat >> samal
Hello
Ctrl + C
git status
git add samal
git status git commit -m "add a new file"
git push origin Samalbr
username, password

Add more commits to your name branch
Keep on adding the commits.

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git branch

git checkout master

ls

touch akku

cat >> akku

Hi everyone

Ctrl + C

git status

git add akku

git status

git commit -m "first commit myself"

git status

git push origin master ,username password

check gitlab graph

git branch

git checkout master [your branch to master]

git pull origin master

username password

git branch

git merge atulms

git status

git push origin master

username ,password

go to gitlab & verify

checkout to your branch

add something & push changes to your branch.

checkout the files in master branch & files
in your own branch.

git branch

git checkout akansha

git merge master

git

git push origin akansha

username, password.

Go to gitlab & check for master branch graph

{ git branch [should be checkout at your branch]

git status

ls

Update any file launch git

new folder

Ctrl + C

ls

git status → red color

Do not commit it

git checkout master

git status

git checkout -- launch git

see
next
page

first

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Stash

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ls
 cat >> akansha
 myself akansha
 Ctrl + C
 git status
 git add .
 git status
 git commit -m "change"
 git push origin master
 username, password →
 refresh gitlab → added one commit in master branch
 git branch
 git checkout akansha
 git status
 cat >> study
 dbms
 dwm
 Ctrl + C
 git status → red Content modified

whenever developer working in their own branch & doing some changes to their code & suddenly someone say that we have to pull another branch into & remote, but he already done some changes which are not committed that time if he try to checkout to master branch & pull^{branch} then it will not be allowed.

Then he is not actually ready to commit it because you are currently working in it what will happen if he checkout his file,
 → The code will be gone

Stash protect us from loosing our code.

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First he has to commit the changes otherwise all the changes will be reverted to last committed file.

To handle this:

cp Study Study.mp (backup) → check on net
git status

git checkout -- study

git status

git checkout master

git checkout akansha

git merge master

git status

cat >> ~~Study~~git study

C

C++

html

Ctrl + C

git status

git diff → show changes

git status

git stash

→ copy git repository that could be find at another location

git status → file is gone

git checkout master

git pull origin master

username, password

git checkout akansha

git merge master

→ Local folder is sinked with master branch

git stash help to keep our code.

Its like a backup ~~MANAGER CHARITABLE TRUST~~

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[Backup of unfinished work]

git status

git stash pop → get folder back → Restore

git status → changes are back

git diff

git status

Conflict [Solve a conflict]

Go to gitlab

In your branch, update Linux file & commit & push it

git status

cat >> Linux

Welcome

Ctrl + C

git status

git add Linux

git status

git commit -m "updated"

git push origin akansha-br

username, password

Refresh gitlab & see graph

Remote branch is ahead of local branch

Then you will get rejected msg.

In that case,

we always do pull first

Go to gitlab & check the changes in Linux file
when we merge this Linux file, it will give a conflict
For this we do:

git status
~~git checkout master~~
git branch
git status
git stash
git checkout master
git pull origin master
username, password
→ git merge akansha-br
git push origin master
username, password

if we do git merge master
→ it will return a conflict
git status
cat Linux → conflict is shown with '>>>>'

Vim linux [others → incoming change]
In that → it will show my changes at top
↓ below that it will show others' changes
↓ git will confused that who's changes
to be merged. & not able to decide which one to keep
Then developer will :

- ① Remove incoming changes & keep my change
OR
- ② Remove my change & keep incoming change
OR
- ③ Keep both the code & remove '>>>>' depending
on the requirement.

Current branch → head

incoming branch → ~~not~~ ^{the} head
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so Remove three lines of conflict

git status

git add Linux

git status

git commit -m "Fixed conflict"

git push origin akansha-br

username, password

git checkout master

git merge akansha-br

git push origin master

username, password

git status

Press D twice to remove conflict lines

Then Press Shift + wq & Enter

How to do it in vscode: Update file in vscode

git branch

git checkout akansha-br

git status

git add Linux

git status

git commit -m "updates"

git push origin akansha-br

git checkout master

git pull origin master

git merge akansha-br

git status

vim Linux

OR

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Open Linux file in ~~vscode~~ vscode

It will show you some options to manually
keep the changes as per requirement.

git status

git add Linux

git commit -m "conflict fixed"

git status

git push origin master

Go to gitlab & refresh & see the change in graph.

This is how we solved the conflict
in git

We have to put our username & password
because we are using http url

We can completely avoid this by using
ssh url.