**Version control system – Git**

* **Basic local operations : -**

1] Create a new local git repository on to your machine and configure it for

user.name and user.email attribute.

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git config --global user.name "Rancel"

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git config --global user.email "azavedorancel@gmail.com"

1. Create below files in directory– File1.txt, IgnoreFile.txt and FileToDelete.txt, now start tracking only the File1.txt and FileToDelete.txt, and ignore the IgnoreFile.txt by using .gitignore.

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git init

Initialized empty Git repository in C:/Users/rance/Desktop/PSL\_GIT/Assignments/GitAssignment1/.git/

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git status

On branch master

No commits yet

Untracked files:

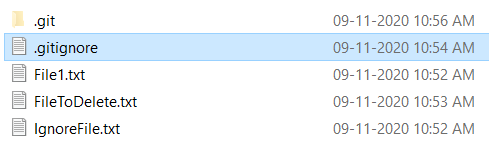
(use "git add <file>..." to include in what will be committed)

.gitignore

File1.txt

FileToDelete.txt

nothing added to commit but untracked files present (use "git add" to track)



3] Commit these changes to repository.

Use commit message as “This is First Commit, Tracking File1 and FileToDelete”

Note: - only File1.txt and FileToDelete.txt should be tracked and not the IgnoreFile.txt

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git add File1.txt

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git status

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: File1.txt

Untracked files:

(use "git add <file>..." to include in what will be committed)

.gitignore

FileToDelete.txt

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git add .

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git status

On branch master

No commits yet

Changes to be committed:

(use "git rm --cached <file>..." to unstage)

new file: .gitignore

new file: File1.txt

new file: FileToDelete.txt

$ git commit -m "WI1:File1.txt, FileToDelete.txt and .gitignore were created."

[master (root-commit) 17c4f0c] WI1:File1.txt, FileToDelete.txt and .gitignore were created.

3 files changed, 4 insertions(+)

create mode 100644 .gitignore

create mode 100644 File1.txt

create mode 100644 FileToDelete.txt

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --oneline --graph --decorate

\* 17c4f0c (HEAD -> master) WI1:File1.txt, FileToDelete.txt and .gitignore were created.

4] Make 2 more commits by making following changes in the File1.txt

Add changes to file as:-

Change1 – commit with message as “Change1 in File1”

=>rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git commit -am "WI:File1.txt updated for Change1 in File1."

[master c992c77] WI:File1.txt updated for Change1 in File1.

1 file changed, 1 insertion(+)

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --oneline --graph --decorate

\* c992c77 (HEAD -> master) WI:File1.txt updated for Change1 in File1.

\* 17c4f0c WI1:File1.txt, FileToDelete.txt and .gitignore were created.

Change2 – commit with message as “Change2 in File1”

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git commit -am "WI:File1.txt updated for Change2 in File1."

[master 466e850] WI:File1.txt updated for Change2 in File1.

1 file changed, 2 insertions(+), 1 deletion(-)

And if you check the log it should display in following manner:-

Change2 in File1

Change1 in File1

This is First Commit, Tracking File1 and FileToDelete

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --oneline --graph --decorate

\* 466e850 (HEAD -> master) WI:File1.txt updated for Change2 in File1.

\* c992c77 WI:File1.txt updated for Change1 in File1.

\* 17c4f0c WI1:File1.txt, FileToDelete.txt and .gitignore were created.

1. Delete the FileToDelete.txt file from directory and commit with message as “FileToDelete is deleted”

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git commit -am "WI:FileToDelete.txt was deleted."

[master 2761b0b] WI:FileToDelete.txt was deleted.

1 file changed, 0 insertions(+), 0 deletions(-)

delete mode 100644 FileToDelete.txt

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --oneline --graph --decorate

\* 2761b0b (HEAD -> master) WI:FileToDelete.txt was deleted.

\* 466e850 WI:File1.txt updated for Change2 in File1.

\* c992c77 WI:File1.txt updated for Change1 in File1.

\* 17c4f0c WI1:File1.txt, FileToDelete.txt and .gitignore were created.

6] Display logs with below filter condition:-

- Show all the commit logs.

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log

commit 2761b0b5405f4949a3f71b8aabb900ead469ee2f (HEAD -> master)

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:09:31 2020 +0530

WI:FileToDelete.txt was deleted.

commit 466e8507574cd5362851f4853bcdf0a51c505cdd

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:06:57 2020 +0530

WI:File1.txt updated for Change2 in File1.

commit c992c7773af7731361633bf83134ab727be4030c

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:05:19 2020 +0530

WI:File1.txt updated for Change1 in File1.

commit 17c4f0c442f6c17d67b11cd4daa04f4e57630ffc

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:02:23 2020 +0530

WI1:File1.txt, FileToDelete.txt and .gitignore were created.

- Show last three logs in one line

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log -n 3 --oneline

2761b0b (HEAD -> master) WI:FileToDelete.txt was deleted.

466e850 WI:File1.txt updated for Change2 in File1.

c992c77 WI:File1.txt updated for Change1 in File1.

- Show only commits that occur between from date and to date

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --since="10/29/2020" --until="11/12/2020"

commit 2761b0b5405f4949a3f71b8aabb900ead469ee2f (HEAD -> master)

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:09:31 2020 +0530

WI:FileToDelete.txt was deleted.

commit 466e8507574cd5362851f4853bcdf0a51c505cdd

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:06:57 2020 +0530

WI:File1.txt updated for Change2 in File1.

commit c992c7773af7731361633bf83134ab727be4030c

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:05:19 2020 +0530

WI:File1.txt updated for Change1 in File1.

commit 17c4f0c442f6c17d67b11cd4daa04f4e57630ffc

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:02:23 2020 +0530

WI1:File1.txt, FileToDelete.txt and .gitignore were created.

- Show only those commit message that contains “File1” as in commits.

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --grep "File1"

commit 466e8507574cd5362851f4853bcdf0a51c505cdd

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:06:57 2020 +0530

WI:File1.txt updated for Change2 in File1.

commit c992c7773af7731361633bf83134ab727be4030c

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:05:19 2020 +0530

WI:File1.txt updated for Change1 in File1.

commit 17c4f0c442f6c17d67b11cd4daa04f4e57630ffc

Author: Rancel <azavedorancel@gmail.com>

Date: Mon Nov 9 11:02:23 2020 +0530

WI1:File1.txt, FileToDelete.txt and .gitignore were created.

1. Permanently undo a “FileToDelete is deleted” commit snapshot (performed in step 5).

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --oneline

2761b0b (HEAD -> master) WI:FileToDelete.txt was deleted.

466e850 WI:File1.txt updated for Change2 in File1.

c992c77 WI:File1.txt updated for Change1 in File1.

17c4f0c WI1:File1.txt, FileToDelete.txt and .gitignore were created.

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git reset --hard 466e850

HEAD is now at 466e850 WI:File1.txt updated for Change2 in File1.

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

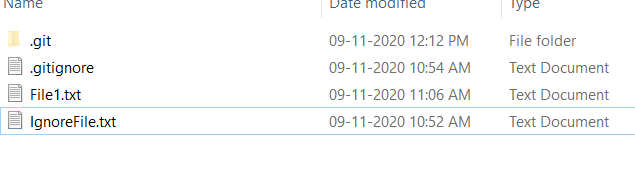
$ git log --oneline

466e850 (HEAD -> master) WI:File1.txt updated for Change2 in File1.

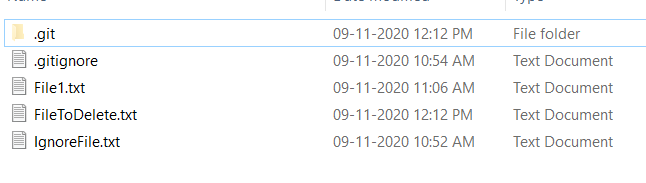
c992c77 WI:File1.txt updated for Change1 in File1.

17c4f0c WI1:File1.txt, FileToDelete.txt and .gitignore were created.

Before reset:



After reset:



1. Rename File1.txt to TestFile.txt and commit it

=>

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git mv File1.txt TestFile.txt

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git status

On branch master

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

renamed: File1.txt -> TestFile.txt

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git commit -am "WI:File1.txt renamed as TestFile.txt."

[master 257def8] WI:File1.txt renamed as TestFile.txt.

1 file changed, 0 insertions(+), 0 deletions(-)

rename File1.txt => TestFile.txt (100%)

9] undo change made in above step 8 but retain the history log

=>rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git revert 9e64a69

hint: Waiting for your editor to close the file... unix2dos: converting file C:/Users/rance/Desktop/PSL\_GIT/Assignments/GitAssignment1/.git/COMMIT\_EDITMSG to DOS format...

dos2unix: converting file C:/Users/rance/Desktop/PSL\_GIT/Assignments/GitAssignment1/.git/COMMIT\_EDITMSG to Unix format...

[master a088341] Revert "WI:File1.txt renamed as TestFile.txt."

1 file changed, 0 insertions(+), 0 deletions(-)

rename TestFile.txt => File1.txt (100%)

rance@LAPTOP-9CQDJ3S1 MINGW64 ~/Desktop/PSL\_GIT/Assignments/GitAssignment1 (master)

$ git log --oneline

a088341 (HEAD -> master) Revert "WI:File1.txt renamed as TestFile.txt."

9e64a69 WI:File1.txt renamed as TestFile.txt.

466e850 WI:File1.txt updated for Change2 in File1.

c992c77 WI:File1.txt updated for Change1 in File1.

17c4f0c WI1:File1.txt, FileToDelete.txt and .gitignore were created.