GIT AND GITHUB MODULE

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BATCH NO.- SA2409031

DATE -18/11/2024

L1 - Create Local git repository and demonstrate all git reset options and revert. Compare the differences

Step1- create the git repository

- ***Go to git***
- ***Start the git(git init)***
- ***Create file(touch file name)***
- ***Track the file(git add file name)***
- ***Commit the file(git commit -m "name to the commit")***

STEP 2- GIT REVERT

- ***Create some file tracked them and also commit them.***
  Revert the file(git revert commit file id)
  (it will undo the previous changes that are made to file without deleting it. We can retrive the file)
  STEP 3- GIT RESET
  Git reset commit id – soft
  (it delete the commit but file are there)
  Git reset commit id –hard
  (it will delete commit as well as file also)

DIFFRENCE

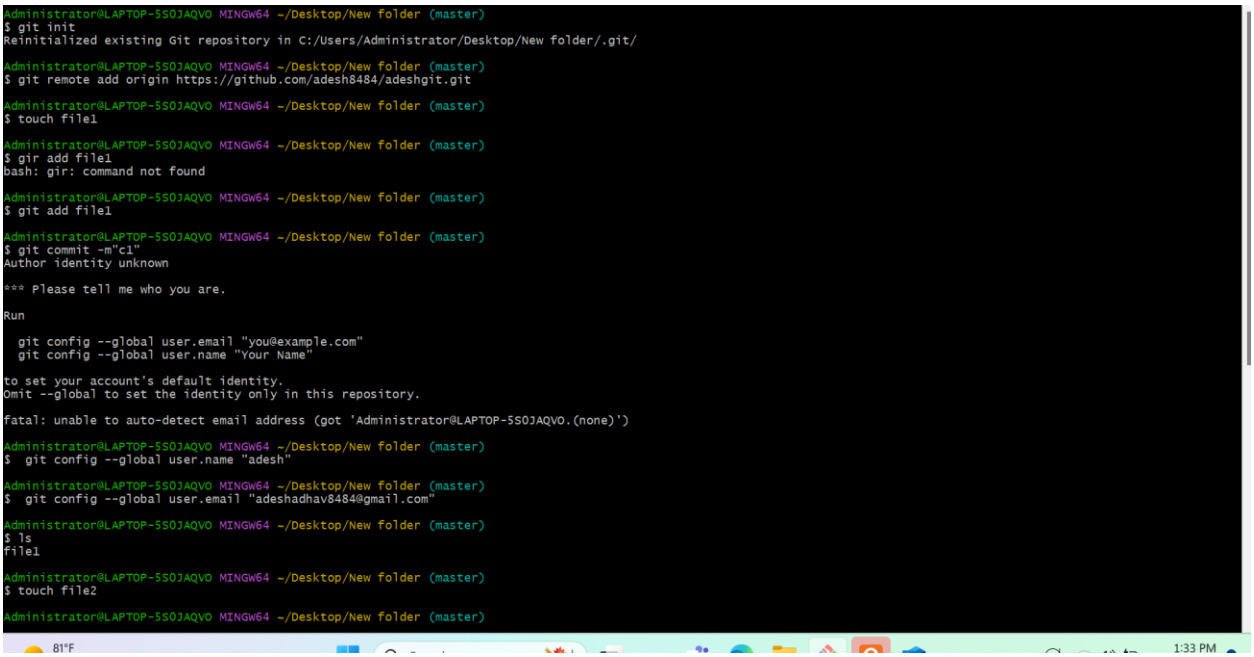
GIT RESET-

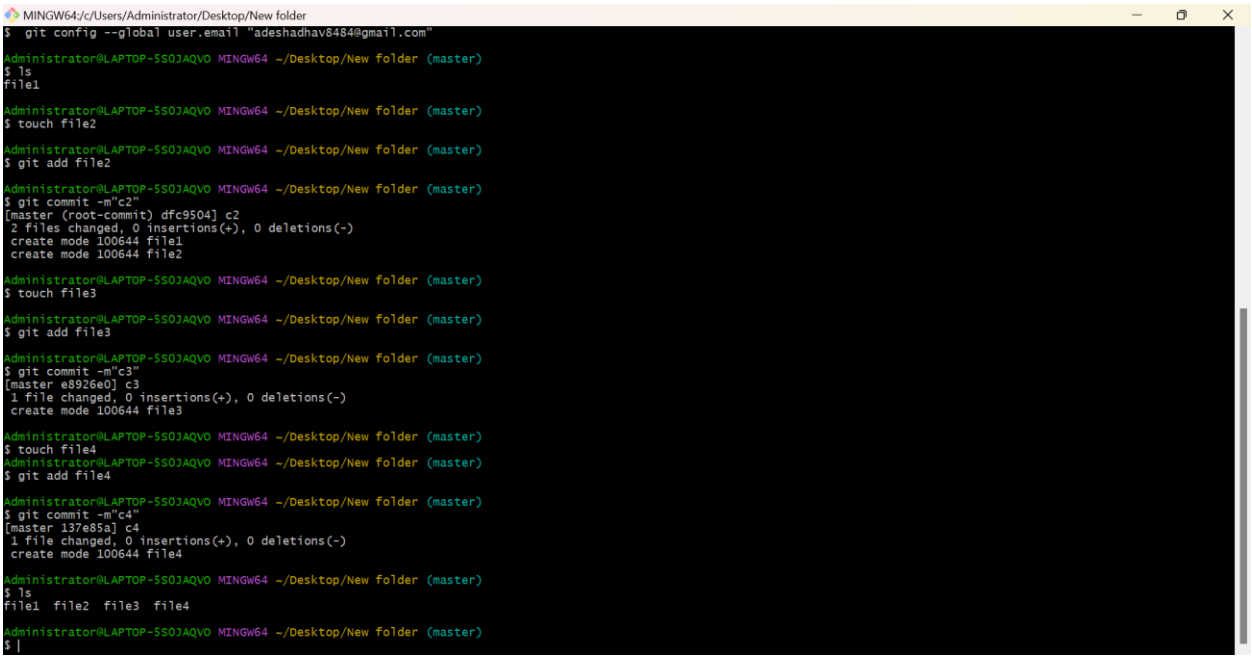
Git reset is used to undo changes in the local repository by moving the branch pointer to a previous commit, effectively discarding any commits made after that point. It can be used to unstage files or remove commits from the local repository.
Soft: Moves the head pointer to the specified commit but keeps the changes in the staging area.
Mixed: Moves the HEAD pointer and unstages the changes, keeping them in the working directory.
Hard: Moves the HEAD pointer and discards all changes in the working directory.

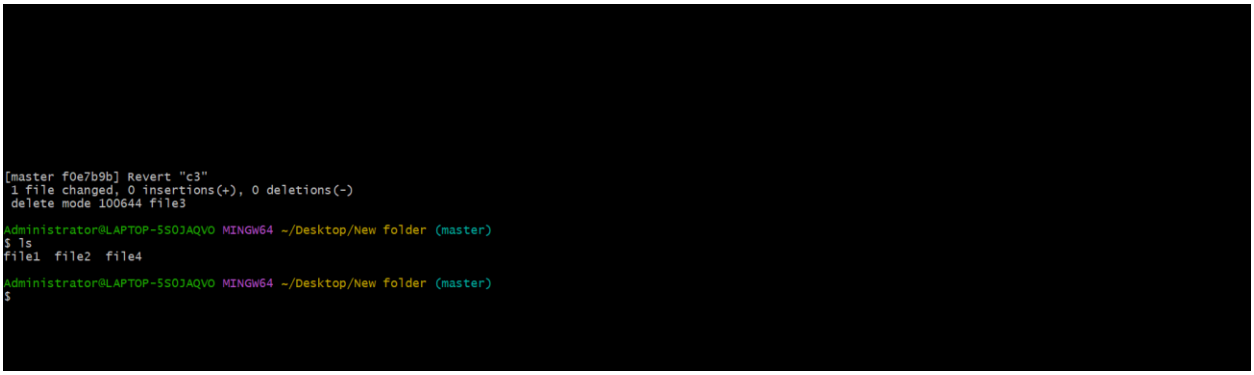
GIT REVERT-

Git revert is used to undo changes that have been committed to the repository by creating a new commit that undoes the changes made by the specific commit. This is a safer way to undo changes, especially in a shared or public branch, as it preserves the commit history.
SUMMARY-

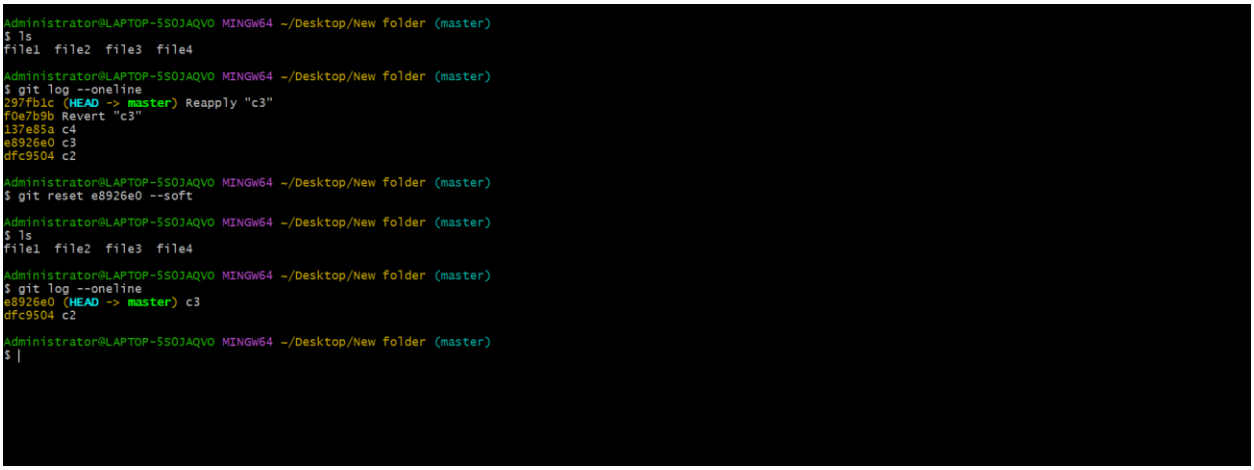
- **Git reset**: Used to undo changes in the local repository by moving the branch pointer to a previous commit. It can unstage files or remove commits. Suitable for private branches.
- **Git revert**: Used to undo changes by creating a new commit that undoes the changes made by a specific commit. Suitable for public branches as it preserves the commit history




MINGW64:/c/Users/Administrator/Desktop/New folder
$ git config --global user.email "adeshadhav8484@gmail.com"
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ touch file2
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git add file2
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git commit -m"c2"
[master (root-commit) dfc9504] c2
2 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file1
create mode 100644 file2
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ touch file3
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git add file3
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git commit -m"c3"
[master e8926e0] c3
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file3
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ touch file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git add file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git commit -m"c4"
[master 137e85a] c4
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1 file2 file3 file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$


[master f0e7b9b] Revert "c3"
1 file changed, 0 insertions(+), 0 deletions(-)
delete mode 100644 file3
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1 file2 file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$


Reapply "c3"
This reverts commit f0e7b9bb68e550b4ab42114eea4b1ac929f99d84.
Please enter the commit message for your changes. Lines starting
with '#' will be ignored, and an empty message aborts the commit.
#
On branch master
Changes to be committed:
#	new file: file3
#
.git/COMMIT_EDITMSG [unix] (13:37 19/11/2024)
1,1 All


Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1 file2 file3 file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git log --oneline
297fb1c (HEAD -> master) Reapply "c3"
f0e7b9b Revert "c3"
137e85a c4
e8926e0 c3
dfc9504 c2
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git reset e8926e0 --soft
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1 file2 file3 file4
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git log --oneline
e8926e0 (HEAD -> master) c3
dfc9504 c2
Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$

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Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1  file2  file3  file4

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git log --oneline
297fb1c (HEAD -> master) Reapply "c3"
f0e7b9b Revert "c3"
137e85a c4
e8926e0 c3
dfc9504 c2

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git reset e8926e0 --soft

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1  file2  file3  file4

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git log --oneline
e8926e0 (HEAD -> master) c3
dfc9504 c2

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1  file2  file3  file4

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git log --oneline
e8926e0 (HEAD -> master) c3
dfc9504 c2

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git reset dfc9504 --hard
HEAD is now at dfc9504 c2

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ git log --oneline
dfc9504 (HEAD -> master) c2

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$ ls
file1  file2

Administrator@LAPTOP-5SOJAQVO MINGW64 ~/Desktop/New folder (master)
$
```