MODULE -5

MANAGING SOURCE CODE – GIT

AND GITHUB

SUBMITTED BY – BALASASTHA P

SUBMITTED TO – STARAGILE

DATE OF SUBMISSION – 08-12-2024

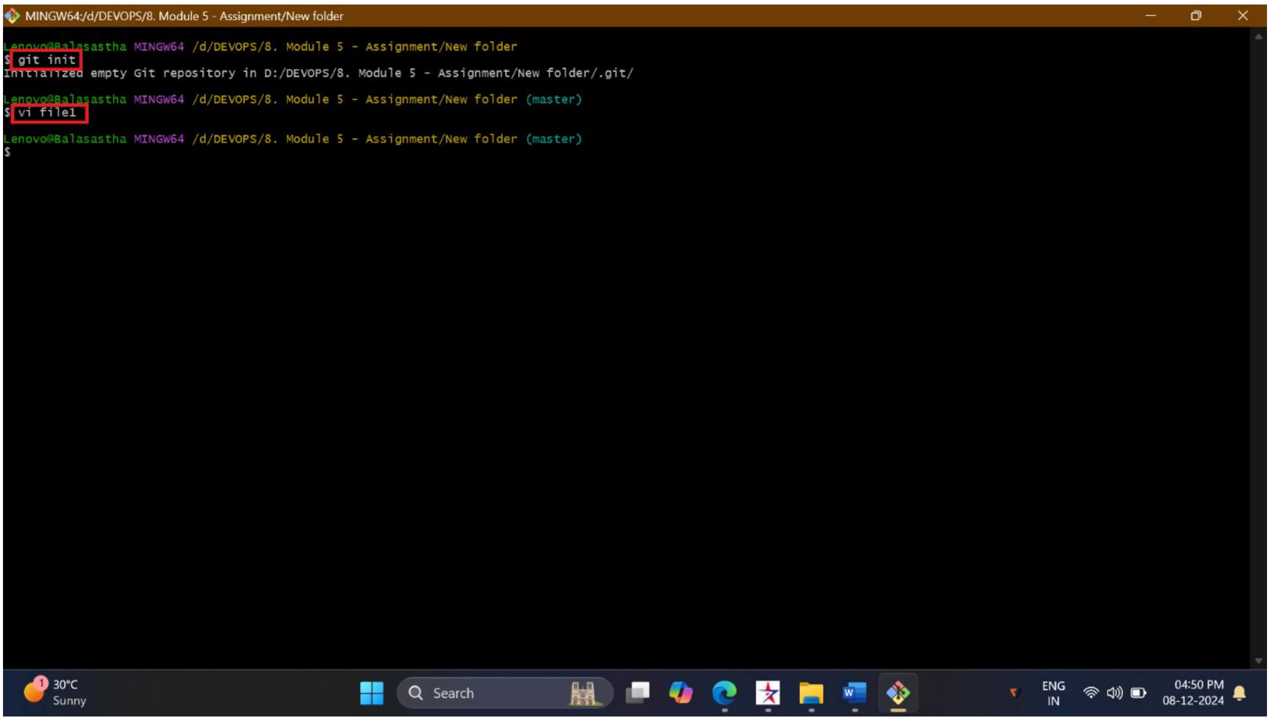
L1

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

GIT REVERT:

Create a new folder in your local computer → Right click and open git bash terminal → Initialize the git in particular directory/folder using the cmd ***"git init"*** → Now create a file using cmd ***"vi file1"*** this command will create and edit the file → Now press ***"i"*** to add some content to the file → To save and quit the file press ***"Esc"*** and type ***":wq"*** and press ***"Enter"*** → To start tracking the file type cmd ***"git add file1"*** this should be done every time while creating a file → To save the code as version use this cmd ***"git commit -m "first commit""*** this should be done every time to save the code as version → Now create a file using cmd ***"vi file2"*** this command will create and edit the file → Now press ***"i"*** to add some more content to the file → To save and quit the file press ***"Esc"*** and type ***":wq"*** and press ***"Enter"*** → To start tracking the file type cmd ***"git add file2"*** this should be done every time while creating a file → To save the code as version use this cmd ***"git commit -m "second commit""*** this should be done every time to save the code as version → Now create a file using cmd ***"vi file3"*** this command will create and edit the file → Now press ***"i"*** to add some content to the file → To save and quit the file press ***"Esc"*** and type ***":wq"*** and press ***"Enter"*** → To start tracking the file type cmd ***"git add***

file3” this should be done every time while creating a file → To save the code as version use this cmd ***“git commit -m “third commit””*** this should be done every time to save the code as version → Now if you want to undo the changes and go back to previous commit with losing original commit from history use the cmd ***“git revert <commit id>”*** → With this a new commit will be created which contains ***“file1 & file2”*** → To get the commit ID type cmd ***“git log –oneline”*** → To see the changes made by the revert type cmd ***“git show <reverted-commit-id>”*** → If you want to undo the revert type cmd ***“git revert <revert-commit-hash>”***



```
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder
$ git init
Initialized empty Git repository in D:/DEVOPS/8. Module 5 - Assignment/New folder/.git/

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$
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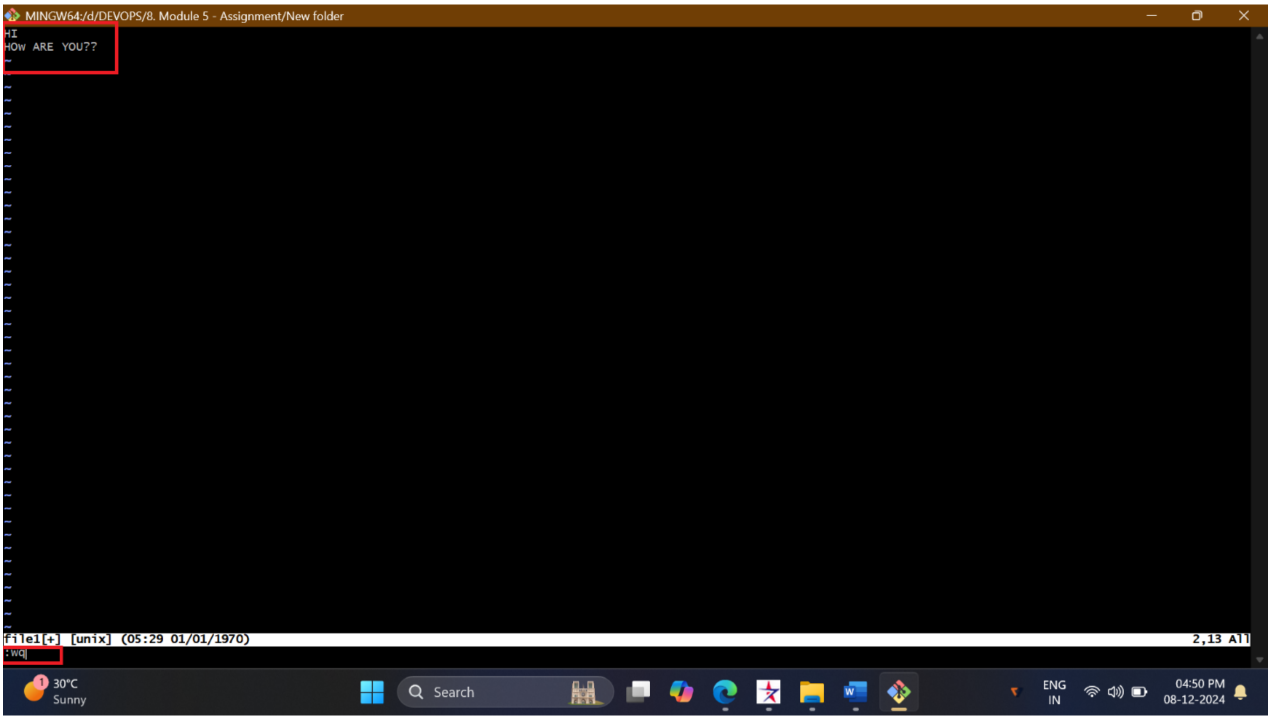

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file1[+] [unix] (05:29 01/01/1970)                                              2,13 All
:wq
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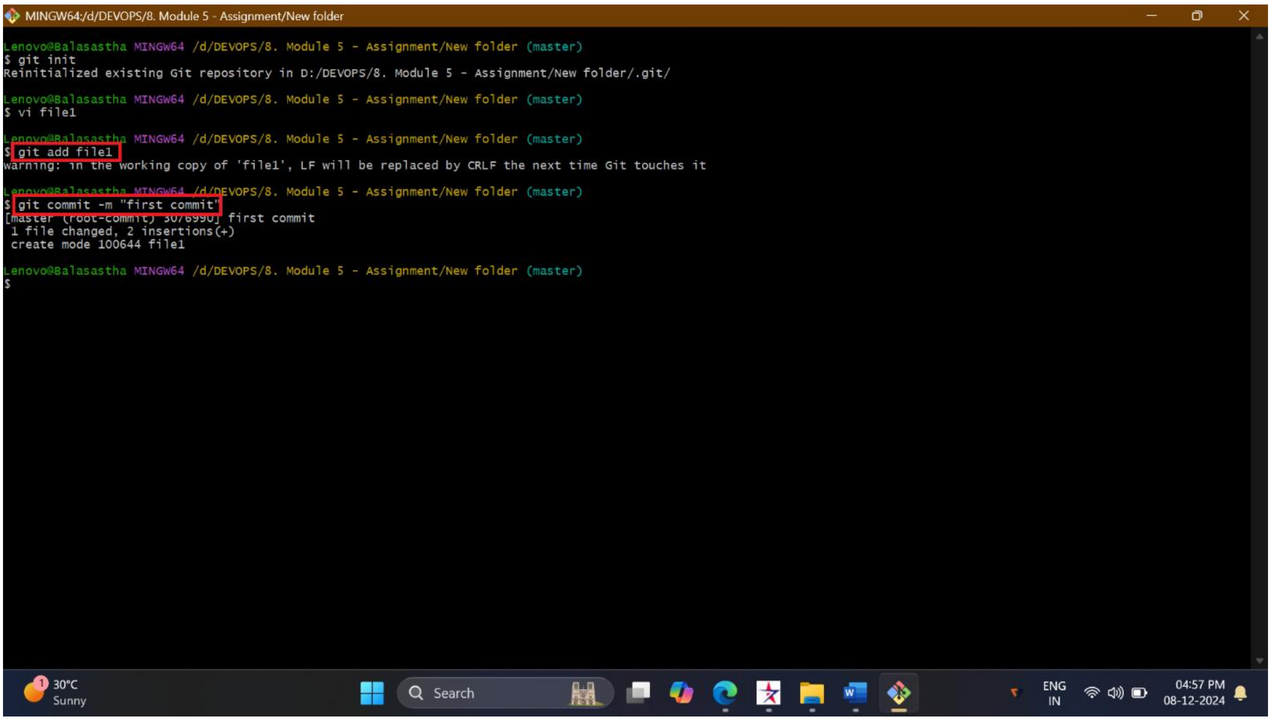

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Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git init
Reinitialized existing Git repository in D:/DEVOPS/8. Module 5 - Assignment/New folder/.git/

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file1
warning: in the working copy of 'file1', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "first commit"
[master (root-commit) 3076990] first commit
 1 file changed, 2 insertions(+)
 create mode 100644 file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$
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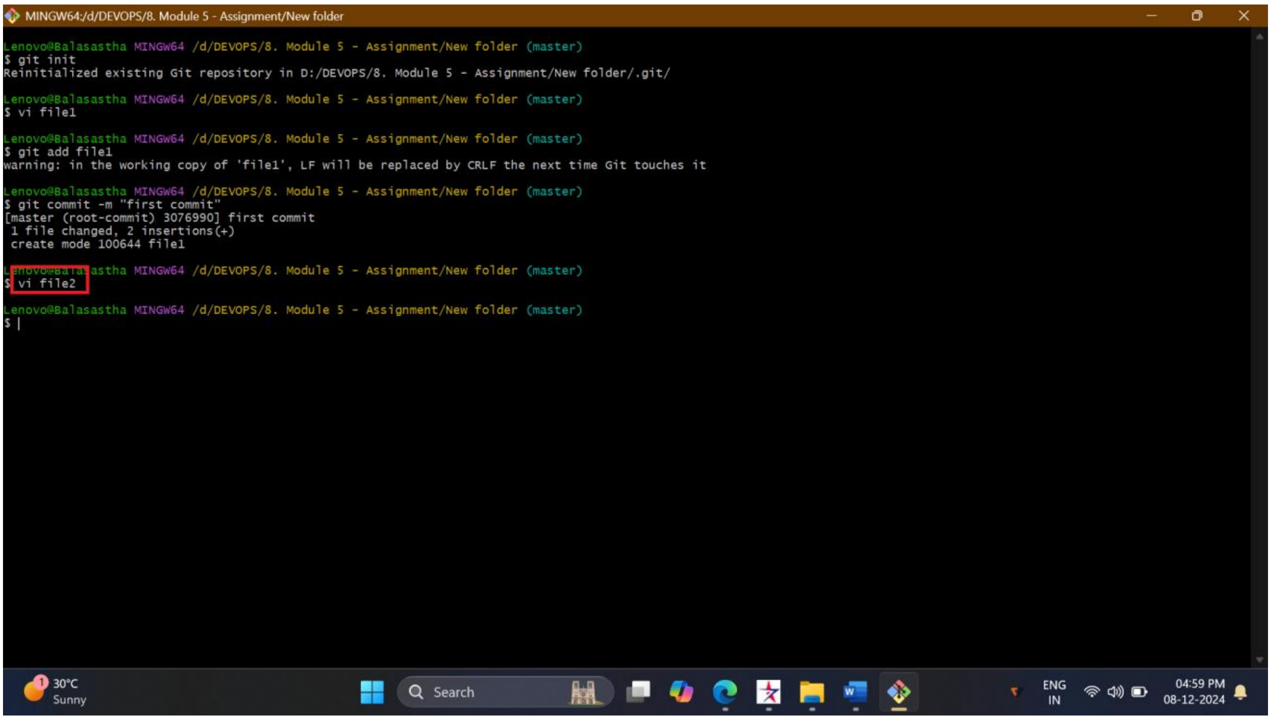

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Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git init
Reinitialized existing Git repository in D:/DEVOPS/8. Module 5 - Assignment/New folder/.git/

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file1
warning: in the working copy of 'file1', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "first commit"
[master (root-commit) 3076990] first commit
 1 file changed, 2 insertions(+)
 create mode 100644 file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ |
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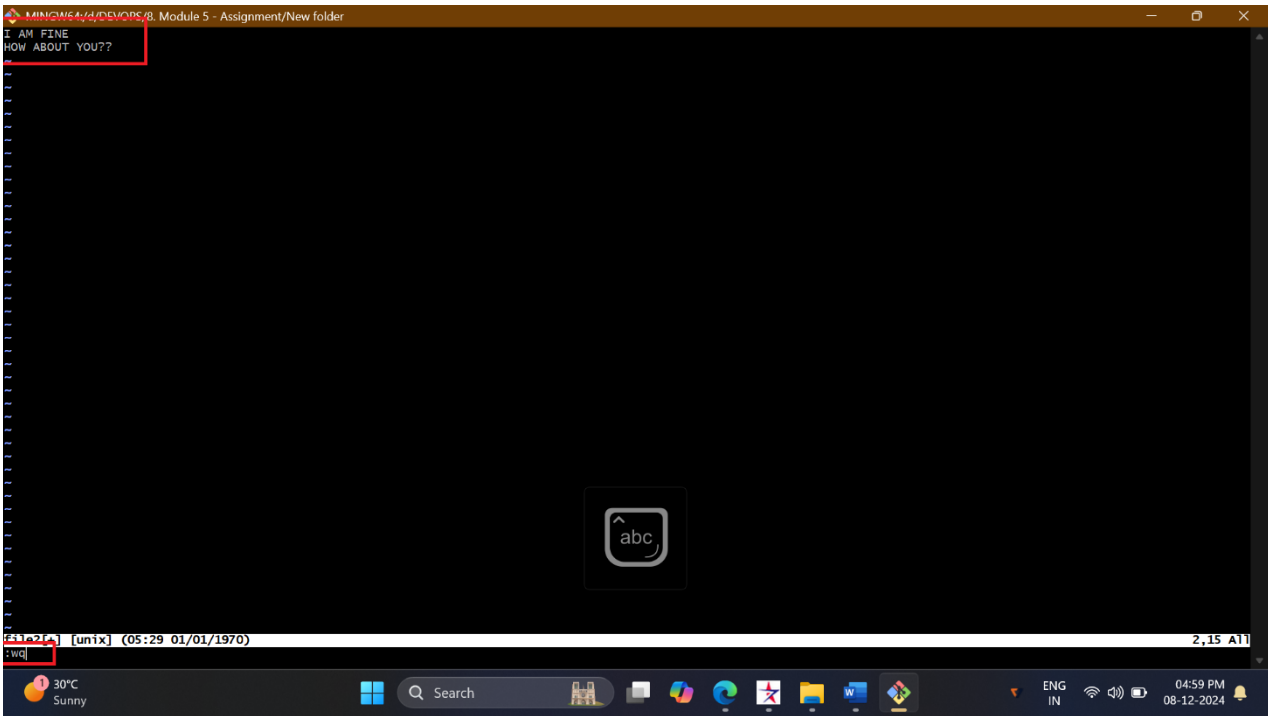

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file2[+] [unix] (05:29 01/01/1970)                                    2,15 All
:wq
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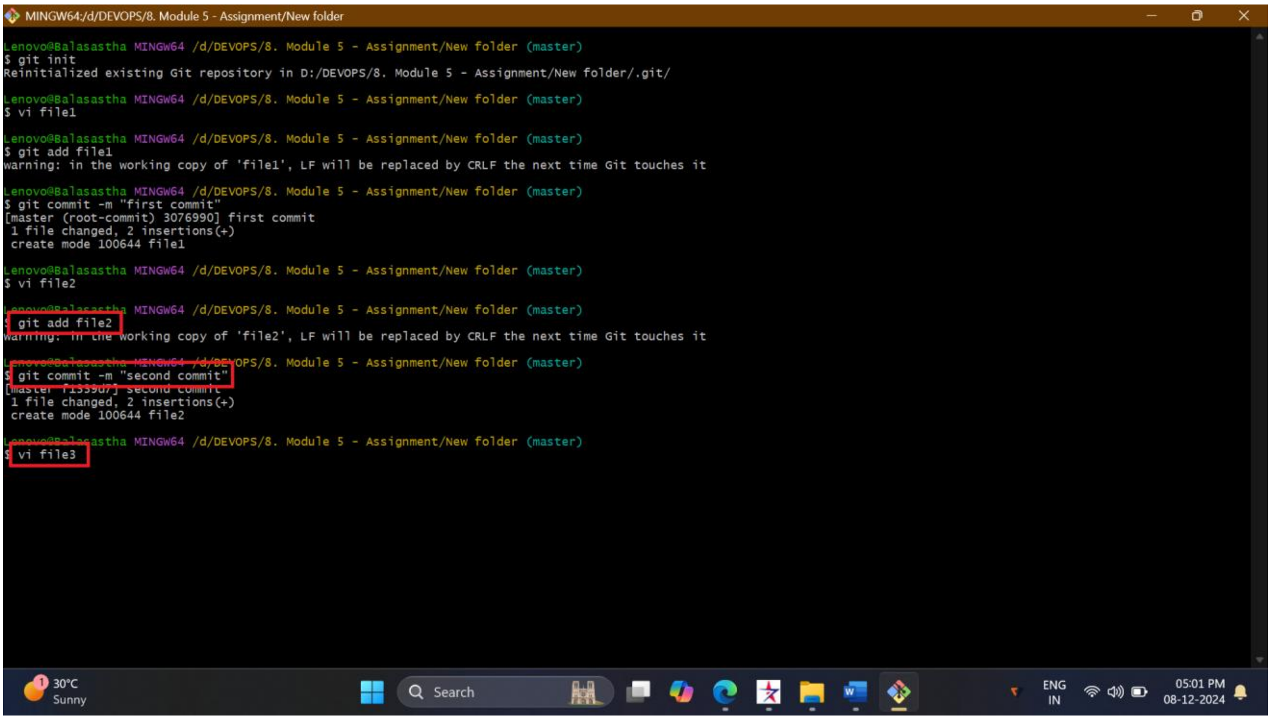

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Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git init
Reinitialized existing Git repository in D:/DEVOPS/8. Module 5 - Assignment/New folder/.git/

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file1
warning: in the working copy of 'file1', LF will be replaced by CRLF the next time Git touches it

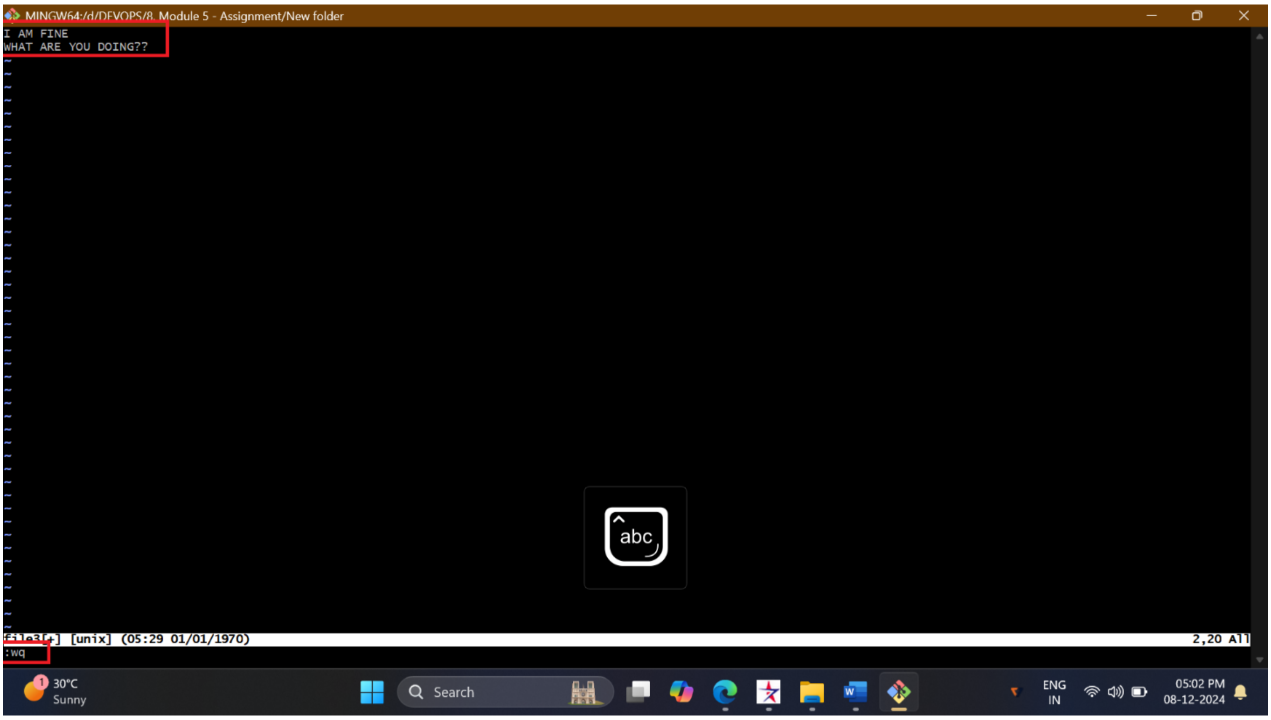
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "first commit"
[master (root-commit) 3076990] first commit
 1 file changed, 2 insertions(+)
 create mode 100644 file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file2
warning: in the working copy of 'file2', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "second commit"
[master f1339d7] second commit
 1 file changed, 2 insertions(+)
 create mode 100644 file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file3
```



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I AM FINE
WHAT ARE YOU DOING??
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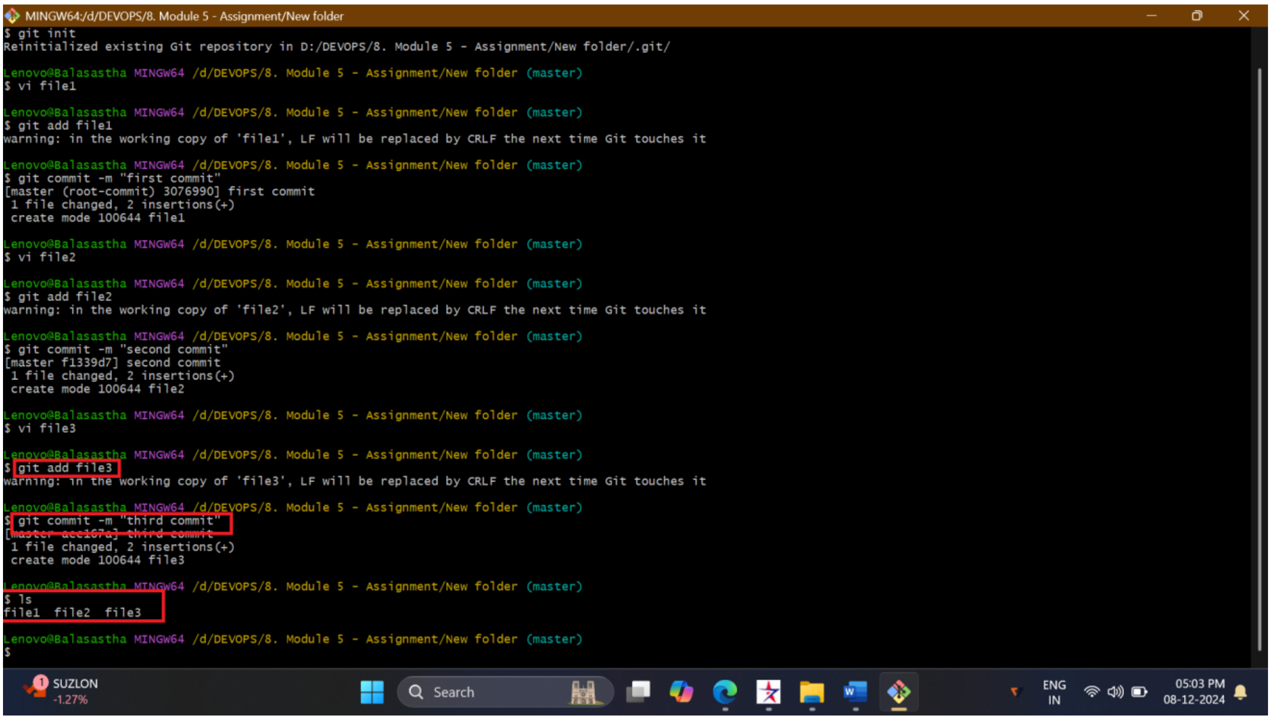
file3[+] [unix] (05:29 01/01/1970)                                          2,20 All
:wq
```



```
$ git init
Reinitialized existing Git repository in D:/DEVOPS/8. Module 5 - Assignment/New folder/.git/

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file1
warning: in the working copy of 'file1', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "first commit"
[master (root-commit) 3076990] first commit
 1 file changed, 2 insertions(+)
 create mode 100644 file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file2
warning: in the working copy of 'file2', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "second commit"
[master f1339d7] second commit
 1 file changed, 2 insertions(+)
 create mode 100644 file2

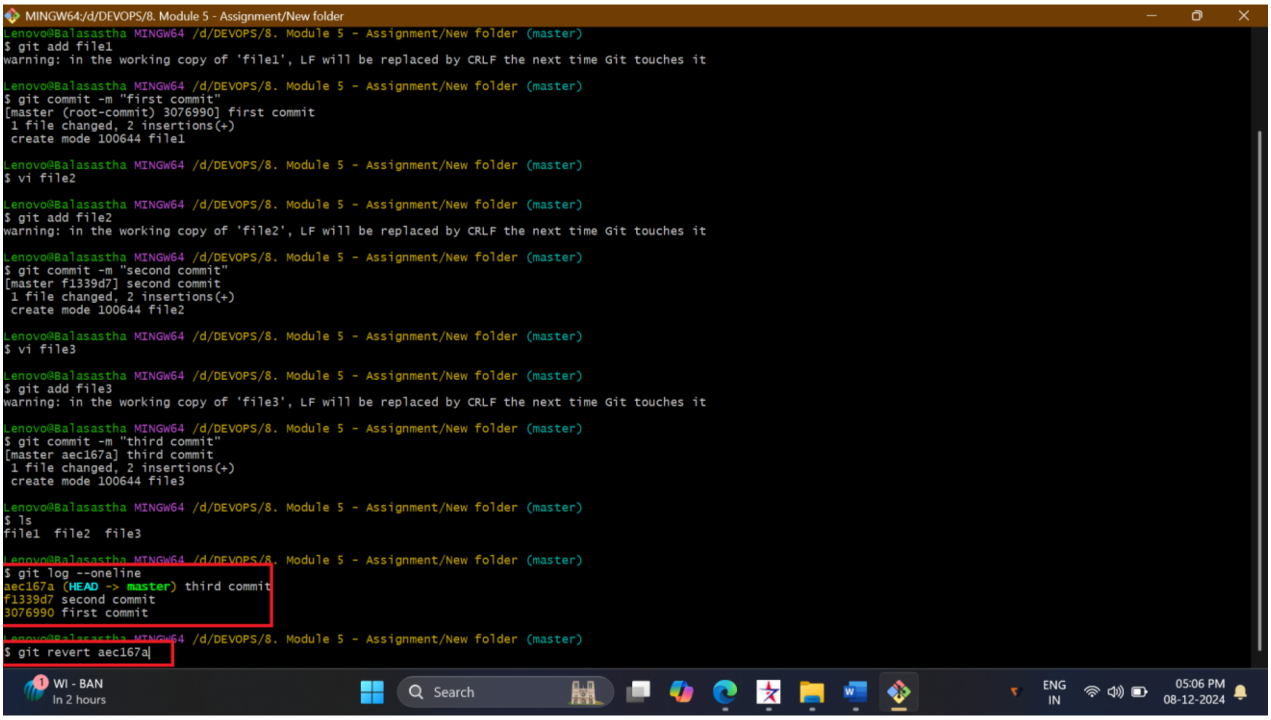
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file3
warning: in the working copy of 'file3', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "third commit"
[master aec167a] third commit
 1 file changed, 2 insertions(+)
 create mode 100644 file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$
```



```
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file1
warning: in the working copy of 'file1', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "first commit"
[master (root-commit) 3076990] first commit
 1 file changed, 2 insertions(+)
 create mode 100644 file1

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file2
warning: in the working copy of 'file2', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "second commit"
[master f1339d7] second commit
 1 file changed, 2 insertions(+)
 create mode 100644 file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ vi file3

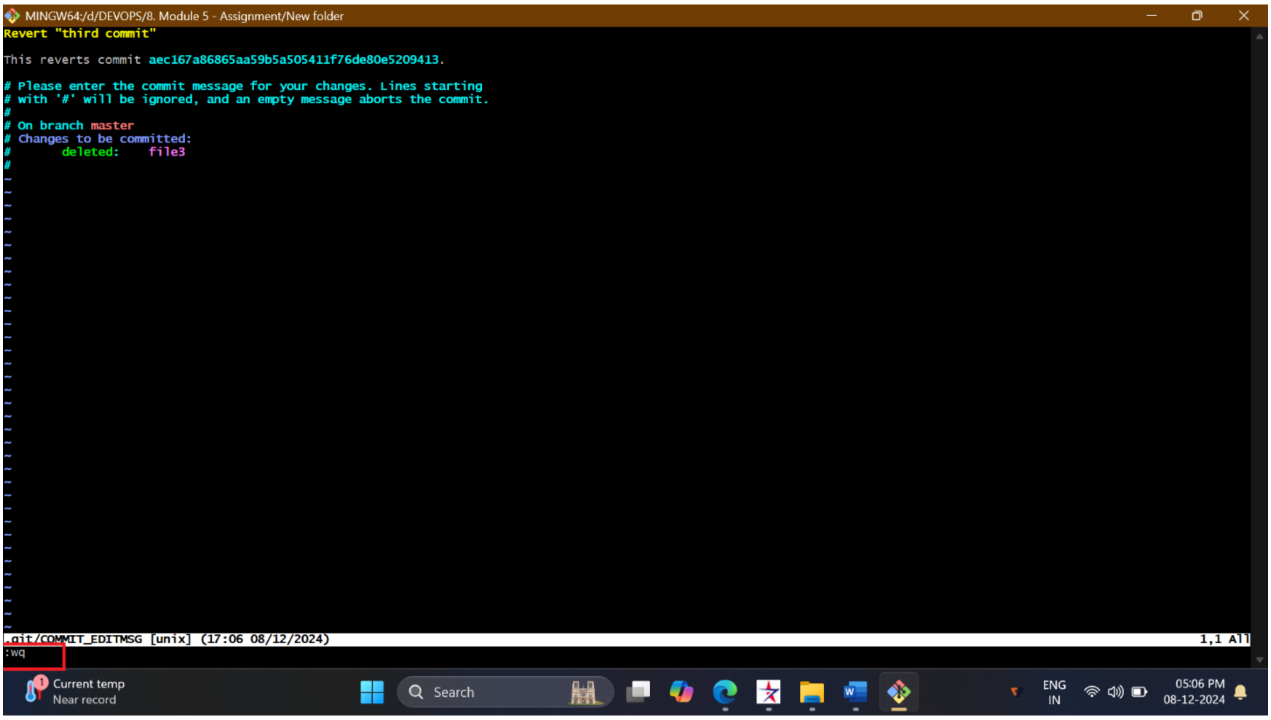
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git add file3
warning: in the working copy of 'file3', LF will be replaced by CRLF the next time Git touches it

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git commit -m "third commit"
[master aec167a] third commit
 1 file changed, 2 insertions(+)
 create mode 100644 file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
aec167a (HEAD -> master) third commit
f1339d7 second commit
3076990 first commit

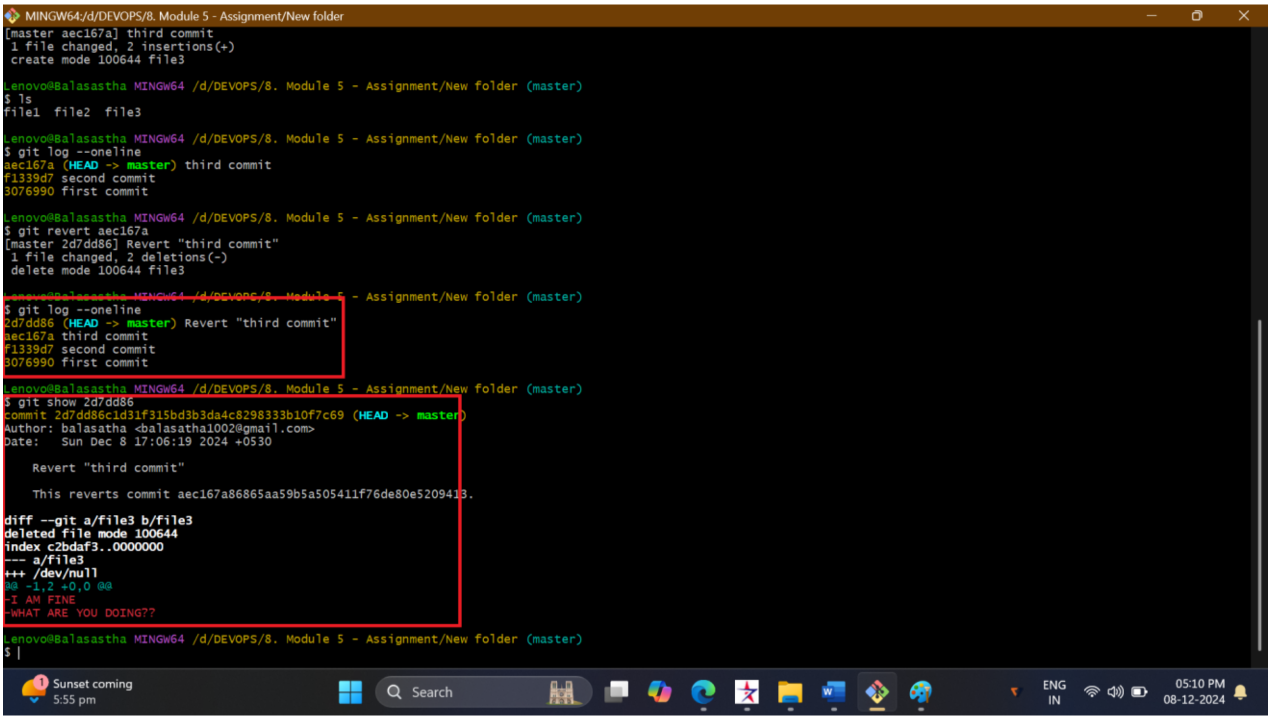
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git revert aec167a
```



```
Revert "third commit"

This reverts commit aec167a86865aa59b5a505411f76de80e5209413.

# 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:
#       deleted:    file3
#
~
.git/COMMIT_EDITMSG [unix] (17:06 08/12/2024)                    1,1 All
:wq
```



```
[master aec167a] third commit
 1 file changed, 2 insertions(+)
 create mode 100644 file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
aec167a (HEAD -> master) third commit
f1339d7 second commit
3076990 first commit

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git revert aec167a
[master 2d7dd86] Revert "third commit"
 1 file changed, 2 deletions(-)
 delete mode 100644 file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
2d7dd86 (HEAD -> master) Revert "third commit"
aec167a third commit
f1339d7 second commit
3076990 first commit

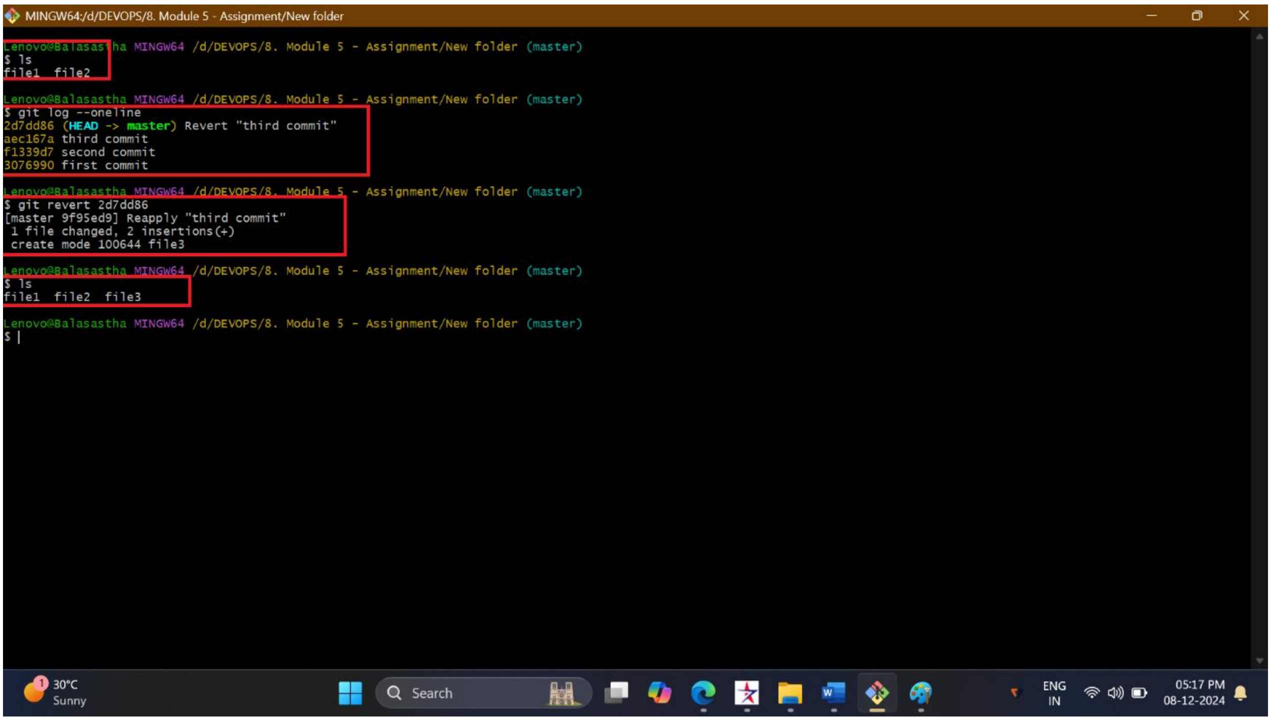
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git show 2d7dd86
commit 2d7dd86c1d31f315bd3b3da4c8298333b10f7c69 (HEAD -> master)
Author: balasatha <balasatha1002@gmail.com>
Date:   Sun Dec 8 17:06:19 2024 +0530

    Revert "third commit"

    This reverts commit aec167a86865aa59b5a505411f76de80e5209413.

diff --git a/file3 b/file3
deleted file mode 100644
index c2bdaf3..0000000
--- a/file3
+++ /dev/null
@@ -1,2 +0,0 @@
-I AM FINE
-WHAT ARE YOU DOING??

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ |
```



```
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
2d7dd86 (HEAD -> master) Revert "third commit"
aec167a third commit
f1339d7 second commit
3076990 first commit

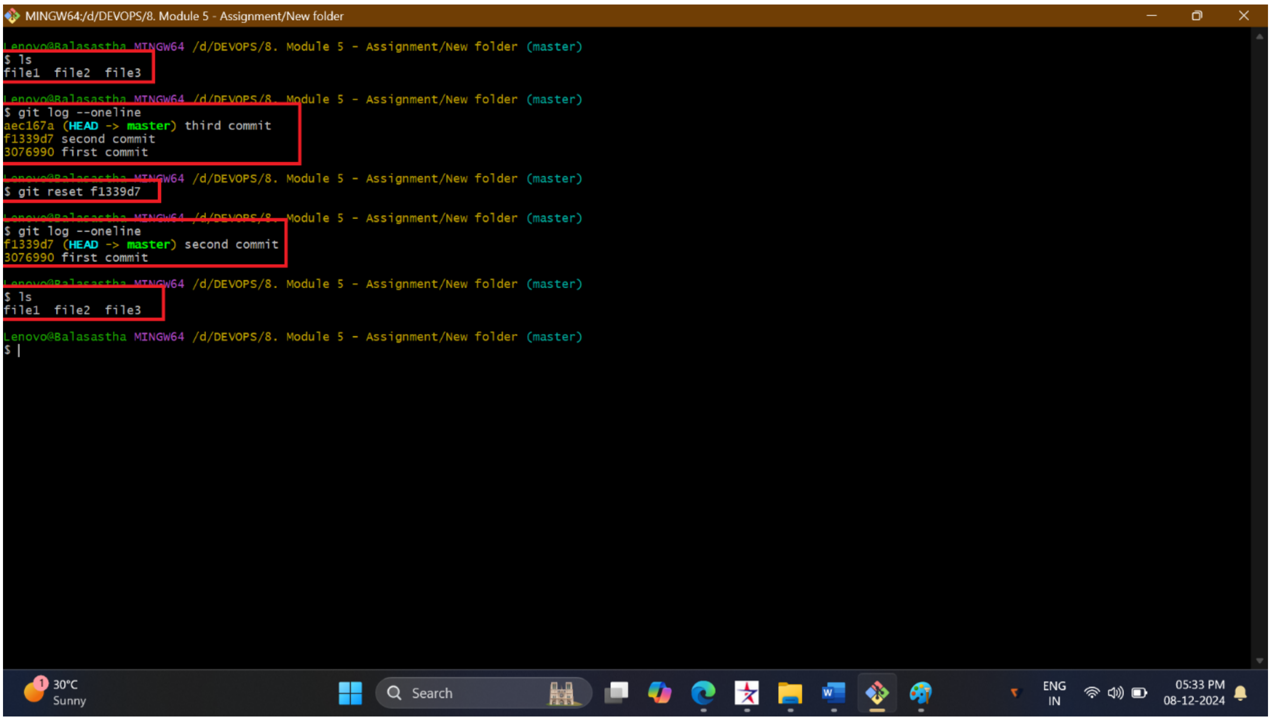
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git revert 2d7dd86
[master 9f95ed9] Reapply "third commit"
 1 file changed, 2 insertions(+)
 create mode 100644 file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ |
```

GIT RESET:

Create 3 files with same content as shown the above → Reset command is used to undo the changes in git by moving current commit to different commit → Type the cmd ***"git reset <commit-id> --hard"*** to delete the files → Type the cmd ***"git reset <commit-id> --soft"*** to delete the commits it Moves the HEAD pointer but keeps all changes staged (in the index).



```
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

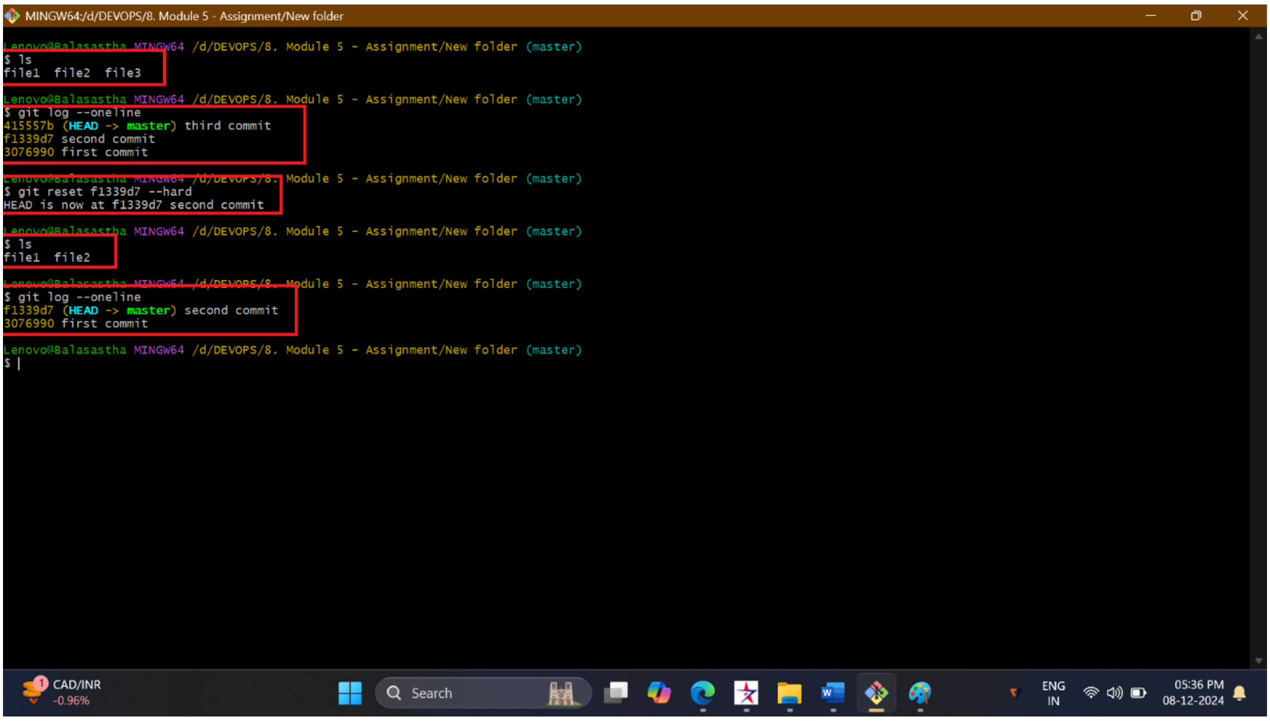
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
aec167a (HEAD -> master) third commit
f1339d7 second commit
3076990 first commit

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git reset f1339d7

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
f1339d7 (HEAD -> master) second commit
3076990 first commit

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ |
```



```
Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2  file3

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
415557b (HEAD -> master) third commit
f1339d7 second commit
3076990 first commit

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git reset f1339d7 --hard
HEAD is now at f1339d7 second commit

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ ls
file1  file2

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ git log --oneline
f1339d7 (HEAD -> master) second commit
3076990 first commit

Lenovo@Balasastha MINGW64 /d/DEVOPS/8. Module 5 - Assignment/New folder (master)
$ |
```

Differences between git revert and git reset:

Git revert:

- Creates a new commit that negates the changes made by a specific commit.
- Preserves history by appending a new commit.

Git reset:

- Moves the HEAD to a different commit, optionally altering the staging area or working directory.
- Can rewrite history (destructive if shared with others).

Assignment completed

Thank You!!!