```
~/Projects/MarsProject     master
 git credential-osxkeychain
usage: git credential-osxkeychain <get|store|erase>
```

****

For Persistence:


```
~/Projects/MarsProject     master
 1  git config --global credential.helper osxkeychain
```

****

The Tag Is Only See On Our Local Machine.

To See The Tag On The Remote Repository:

- *Run Command*: ***git push origin V1.2***


```
Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git log --oneline --all --graph
* 58365db (HEAD -> main, tag: V1.2, origin/main) Pick File From Another Branch
| * aaca04f (feature/send-email) Update File-01.txt
|/
* a5a1ed5 (feature/shopping-card) Adding Cart.txt
* e595bff Update file-01.txt
* ba352bf Fix The Bug On The Photo Upload Page.
*   6969780 Merge branch 'bug-fixing-03' Into Main Branch.
|\
| * 758d0b3 (bug-fixing-03) Changes The File-05.txt To Test Merging
|/
* df13941 (bug-fixing-02) Adding New File For Fast-Forward Merging
*   076b09b Compare Changes For File-03
|\
| * 048e6e4 Adding New Line For File-04
| * 10b7bed Test Branches For Bug Fixing
* | 9df8a5c Adding File-03 With Changes To Main Branch
|/
| * 2d80b85 (refs/stash) On main: For Testing The VSCode With Branches
|/|
| * 0747d0d index on main: a6f4fa3 Restore File After Deleting
|/
* a6f4fa3 (tag: V1.1) Restore File After Deleting
* 715de30 Deleting The New File: file-03.txt
* 1b6514e Adding All Files
* 43a35dd Second Testing Of Files To Show Output
* c5b550f Testing Short Status Command
* edc6933 Removing File From Index/Staging Area
* c047d34 Adding By Accident
* 014c4b9 Adding .gitignore To Project
* 2df21af Trying Rename Files
* 4702e82 After Deleting File2.txt
* c378284 Initial Commit

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ |
```

****

To Delete The Tag That We Pushed, We Use *push-Command* Also:

****

To Delete The Tag From Local Machine:

****

****
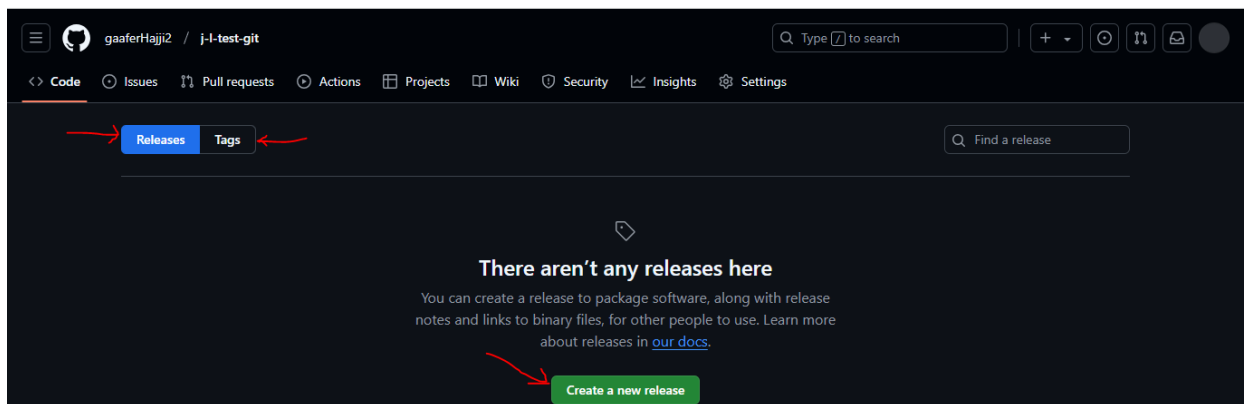
Branches Are: **Private** OR **Local** By Default.

****

****

```
Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git switch -C feature/change-password
Switched to a new branch 'feature/change-password'

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ git branch -r
  origin/main

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ touch pass-01.txt

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ git push origin ^C

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ git push origin feature/change-password
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/change-password' on GitHub by visiting:
remote:      https://github.com/gaaferHajji2/j-l-test-git/pull/new/feature/change-password
remote:
To https://github.com/gaaferHajji2/j-l-test-git.git
 * [new branch]      feature/change-password -> feature/change-password

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ |
```

****

```
Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ git branch -vv
  bug-fixing-02           df13941 Adding New File For Fast-Forward Merging
  bug-fixing-03           758d0b3 Changes The File-05.txt To Test Merging
* feature/change-password 65b405f [origin/feature/change-password] Adding Test File To Branch
  feature/send-email      58365db Pick File From Another Branch
  feature/shopping-card   a5a1ed5 Adding Cart.txt
  main                    58365db [origin/main] Pick File From Another Branch

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (feature/change-password)
$ git switch main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ ls
File-05.txt  bin/  cart.txt  file-01.txt  file-02.txt  file-03.txt  file-04.txt  logs/

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git fetch
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (1/1), 926 bytes | 132.00 KiB/s, done.
From https://github.com/gaaferHajji2/j-l-test-git
   58365db..0334557  main       -> origin/main

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ ls
File-05.txt  bin/  cart.txt  file-01.txt  file-02.txt  file-03.txt  file-04.txt  logs/

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git merge feature/change-password
Updating 58365db..65b405f
Fast-forward
 pass-01.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 pass-01.txt

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ ls
File-05.txt  bin/  cart.txt  file-01.txt  file-02.txt  file-03.txt  file-04.txt  logs/  pass-01.txt

Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git status
On branch main
Your branch is behind 'origin/main' by 1 commit, and can be fast-forwarded.
  (use "git pull" to update your local branch)
```

****

To Get All Remote Branches:

```
Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git branch -r
  origin/feature/change-password
  origin/main
```

****

To Delete Branch From Remote Site:

```
~/Projects/MarsProject        feature/change-password
  git push -d origin feature/change-password
To https://github.com/codewithmosh/Mars.git
 - [deleted]            feature/change-password
```

****

We Must Also Delete The Branch From Local Machine:

```
~/Projects/MarsProject        feature/change-password
  git branch -vv
* feature/change-password 478ac2a [origin/feature/change-password; go
e] Add file1
  master                  478ac2a [origin/master] Add file1
```

****

```
~/Projects/MarsProject        feature/change-password
  git branch
* feature/change-password
  master

~/Projects/MarsProject        feature/change-password
  git switch master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

~/Projects/MarsProject        master
  git branch -d feature/change-password
Deleted branch feature/change-password (was 478ac2a).

~/Projects/MarsProject        master
  
```

****

To Make Our Branch Point To Same Remote Branch That We May Create On GitHub Repository (Not Using Git-Tool):

```
~/Projects/MarsProject      master  v1.0
  git switch -C feature/change-password origin/feature/change-pas
word
Branch 'feature/change-password' set up to track remote branch 'featu
e/change-password' from 'origin'.
Switched to a new branch 'feature/change-password'
```

****

To Update The Remote Branches On The Other Collaborators:

```
~/Amy/Mars      master
  git branch -r
 origin/HEAD -> origin/master
 origin/feature/change-password
 origin/master

~/Amy/Mars      master
  git remote prune origin
Pruning origin
URL: https://github.com/codewithmosh/Mars.git
 * [pruned] origin/feature/change-password

~/Amy/Mars      master
 
```

****

In This Way We Can Make The Forked Repositories Are Up-To-Date

```
~/Projects/vidly-mvc-5      bugfix
  git remote add upstream https://github.com/mosh-hamedani/vidly-
vc-5.git
```

****

```
~/Projects/vidly-mvc-5      bugfix
  git remote rename upstream base

~/Projects/vidly-mvc-5      bugfix
  git remote rm base
```

****

Also, We Can Do: merge.


```
📁 ~/Projects/vidly-mvc-5    😺  ⟑ bugfix
  ✔     git fetch base
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 664 bytes | 664.00 KiB/s, done.
From https://github.com/mosh-hamedani/vidly-mvc-5
 * [new branch]      dependabot/nuget/Vidly/bootstrap-3.4.1 -> base/d
pendabot/nuget/Vidly/bootstrap-3.4.1
 * [new branch]      master      -> base/master
```
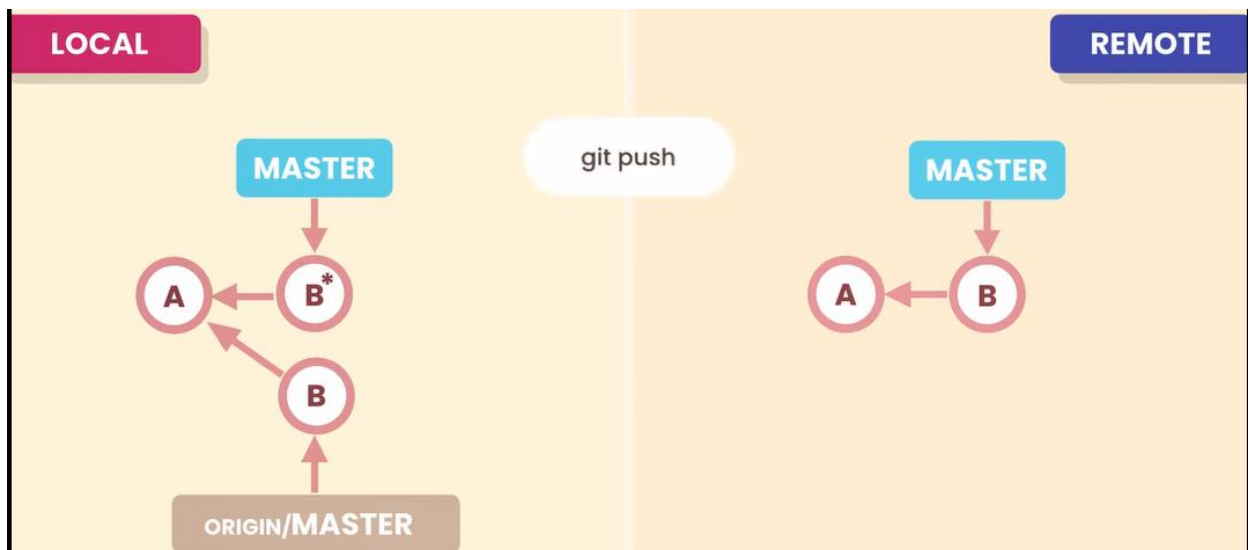
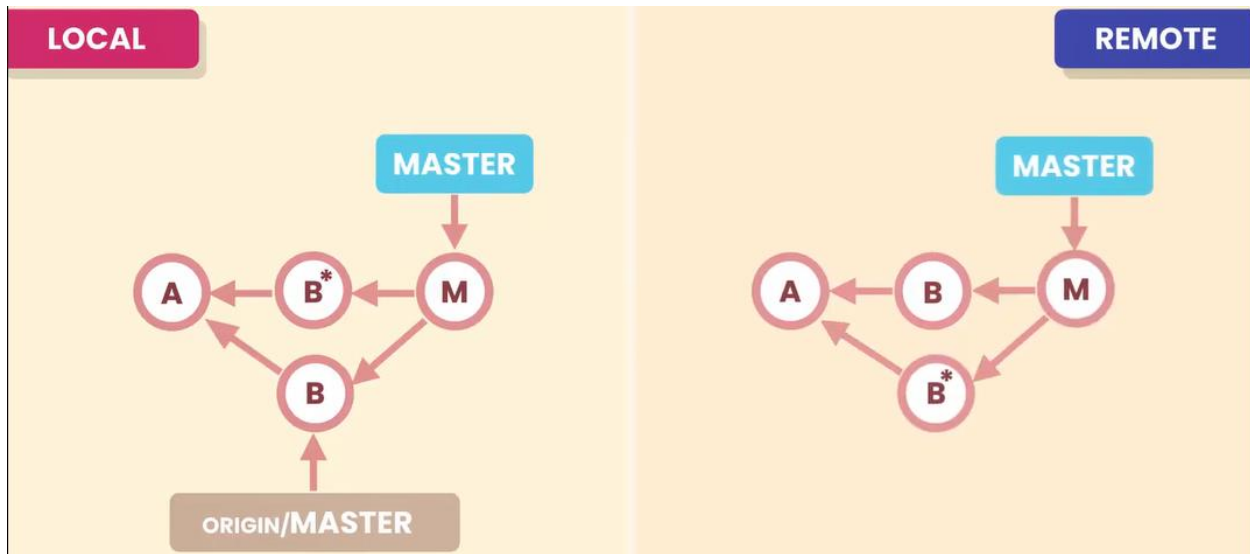**

****

Commits Are Immutable, If We Make Modify A Commit Then Git Will Create New One Like B And B*
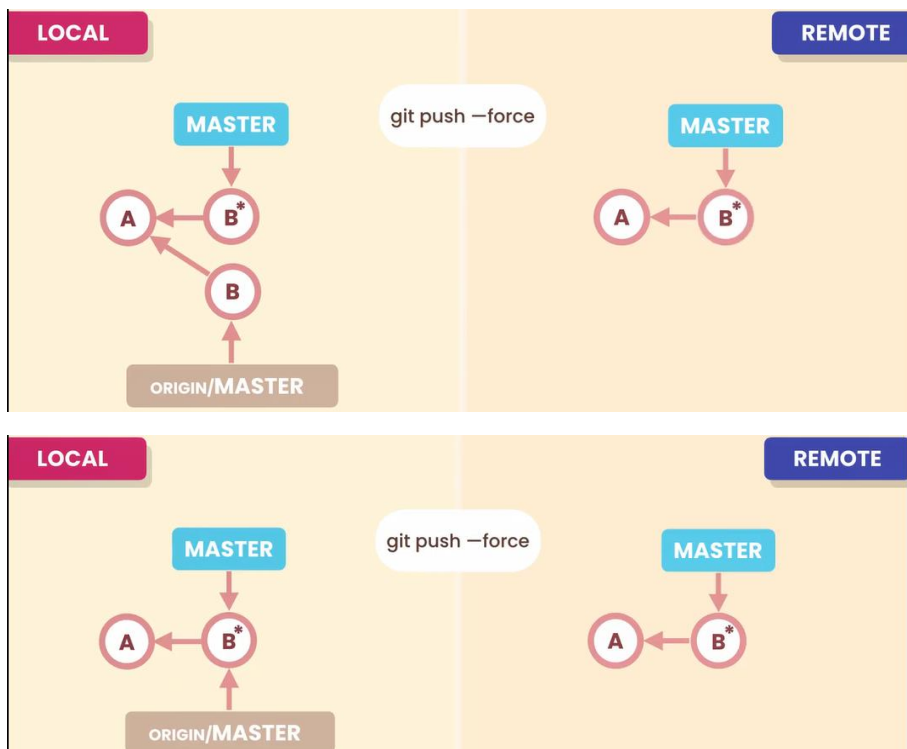
The *push-Command* Will Not Work.

****

First We Must Merge The Commits, Then Push The Changes:

****

The Alternative Solution To Use push --force:

****

The Problem With push-Command, For Other Users:

****
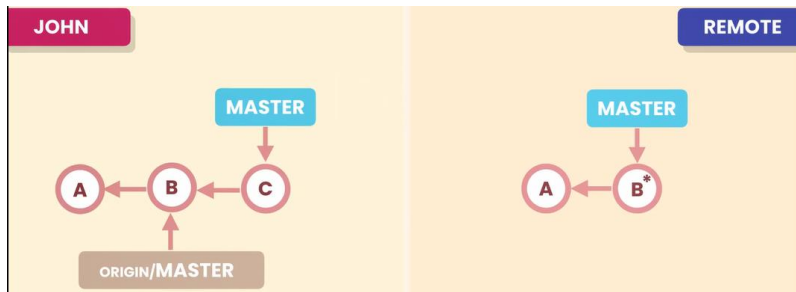
The Solution With *pull-Command*, Then *Merge-Command*, Then *push-Command*:

The Bad Solution, So; We Must Remember: *Don't Re-Write The Public History*.

****

****
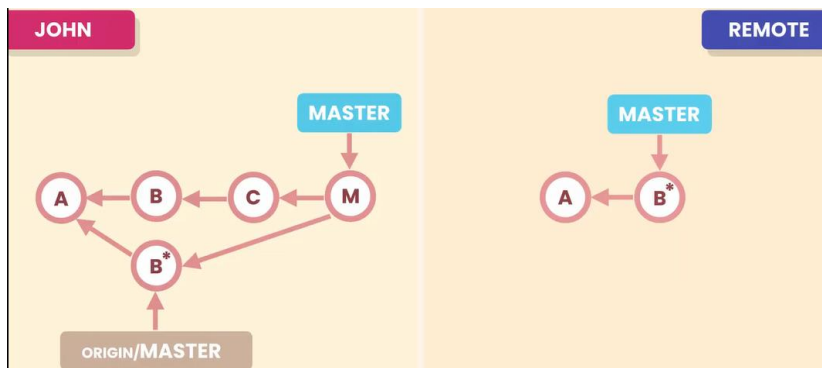
To Revert A Commit, OR A Range Of Commits:

- For Single Commit: *git revert HEAD~1*
- For Range Of Commit With Exclude The Last One:
  - *Run Command*: *git revert HEAD~3..HEAD*
- In The Way Of Picture We **Emit Head**:
- Also; We Can Delete *--no-commit Option*.

```
📁 ~/Projects/Mercury    git  ⑂ master
> ✔   git revert --no-commit HEAD~3..
Removing terms.txt
```

****

```
📁 ~/Projects/Mercury    git  ⑂ master  ⊕
> ✔   git status -s
M  map.txt
M  package.txt
D  terms.txt
```

****

We Use This Command, To Commit The Changes That We Made:

- *Note*: Also We Have *--abort*.

```
📁 ~/Projects/Mercury    git  ⑂ master  ⊕
> ✔   git revert --continue
[master 3d8e437] Revert bad code.
 3 files changed, 1 insertion(+), 3 deletions(-)
 delete mode 100644 terms.txt
```

****

To Recover The Lost Commits, If We RUN git reset by accident:

- *Run Command*: *git reflog*
  - Each Entry Has Unique Identifier.
    - Like: *HEAD@{1}*, *HEAD@{0}*

```
Tatweer@DESKTOP-9FV4RTN MINGW64 /c/Tests/Github-And-GitLab/Tutorial-02-Code-With-Mosh (main)
$ git reflog
0334557 (HEAD -> main, origin/main) HEAD@{0}: pull: Fast-forward
65b405f (origin/feature/change-password, feature/change-password) HEAD@{1}: merge feature/change-password: Fast-forward
58365db (tag: V1.2, feature/send-email) HEAD@{2}: checkout: moving from feature/change-password to main
65b405f (origin/feature/change-password, feature/change-password) HEAD@{3}: commit: Adding Test File To Branch
58365db (tag: V1.2, feature/send-email) HEAD@{4}: checkout: moving from main to feature/change-password
58365db (tag: V1.2, feature/send-email) HEAD@{5}: checkout: moving from feature/send-email to main
58365db (tag: V1.2, feature/send-email) HEAD@{6}: rebase (finish): returning to refs/heads/feature/send-email
58365db (tag: V1.2, feature/send-email) HEAD@{7}: rebase (start): checkout main
aaca04f HEAD@{8}: checkout: moving from main to feature/send-email
58365db (tag: V1.2, feature/send-email) HEAD@{9}: commit: Pick File From Another Branch
a5a1ed5 (feature/shopping-card) HEAD@{10}: checkout: moving from feature/send-email to main
aaca04f HEAD@{11}: commit: Update File-01.txt
a5a1ed5 (feature/shopping-card) HEAD@{12}: checkout: moving from main to feature/send-email
a5a1ed5 (feature/shopping-card) HEAD@{13}: merge feature/shopping-card: Fast-forward
e595bff HEAD@{14}: checkout: moving from feature/shopping-card to main
a5a1ed5 (feature/shopping-card) HEAD@{15}: rebase (finish): returning to refs/heads/feature/shopping-card
a5a1ed5 (feature/shopping-card) HEAD@{16}: rebase (pick): Adding Cart.txt
e595bff HEAD@{17}: rebase (start): checkout main
705bf96 HEAD@{18}: checkout: moving from main to feature/shopping-card
e595bff HEAD@{19}: commit: Update file-01.txt
ba352bf HEAD@{20}: checkout: moving from feature/shopping-card to main
705bf96 HEAD@{21}: commit: Adding Cart.txt
ba352bf HEAD@{22}: checkout: moving from main to feature/shopping-card
ba352bf HEAD@{23}: commit: Fix The Bug On The Photo Upload Page.
6969780 HEAD@{24}: checkout: moving from bugfix/photo-upload to main
e958bc4 HEAD@{25}: commit: Update File-02.txt
2f259ce HEAD@{26}: commit: Update file-01.txt
6969780 HEAD@{27}: checkout: moving from main to bugfix/photo-upload
6969780 HEAD@{28}: merge bug-fixing-03: Merge made by the 'ort' strategy.
df13941 (bug-fixing-02) HEAD@{29}: checkout: moving from bug-fixing-03 to main
758d0b3 (bug-fixing-03) HEAD@{30}: commit: Changes The File-05.txt To Test Merging
df13941 (bug-fixing-02) HEAD@{31}: checkout: moving from main to bug-fixing-03
df13941 (bug-fixing-02) HEAD@{32}: merge bug-fixing-02: Fast-forward
076b09b HEAD@{33}: checkout: moving from bug-fixing-02 to main
df13941 (bug-fixing-02) HEAD@{34}: commit: Adding New File For Fast-Forward Merging
076b09b HEAD@{35}: checkout: moving from main to bug-fixing-02
076b09b HEAD@{36}: commit (merge): Compare Changes For File-03
9df8a5c HEAD@{37}: checkout: moving from bug-fixing to main
048e6e4 HEAD@{38}: checkout: moving from main to bug-fixing
9df8a5c HEAD@{39}: commit: Adding File-03 With Changes To Main Branch
a6f4fa3 (tag: V1.1) HEAD@{40}: checkout: moving from bug-fixing to main
048e6e4 HEAD@{41}: commit: Adding New Line For File-04
10b7bed HEAD@{42}: checkout: moving from main to bug-fixing
a6f4fa3 (tag: V1.1) HEAD@{43}: reset: moving to HEAD
```

****

Then Solution, Also; By Using *reset-Command*:

****