

Assignment Number 3

Git Operation

Aim: To perform various Git operations.

LO mapped: LO1, LO2

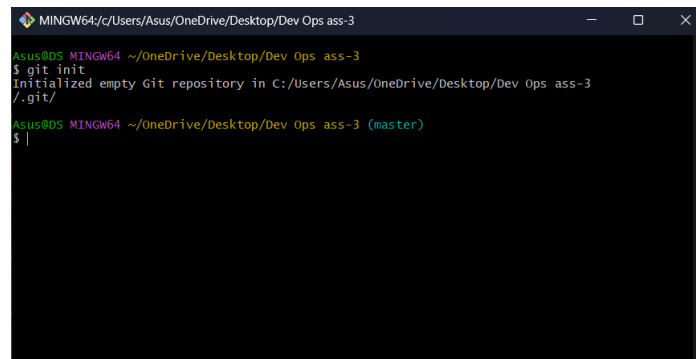
Theory:

There are various git operations performed using git bash and they are mentioned below with their usage and syntax.

1. **git init**

Usage: Initializes a new Git repository in the current directory.

Syntax: git init



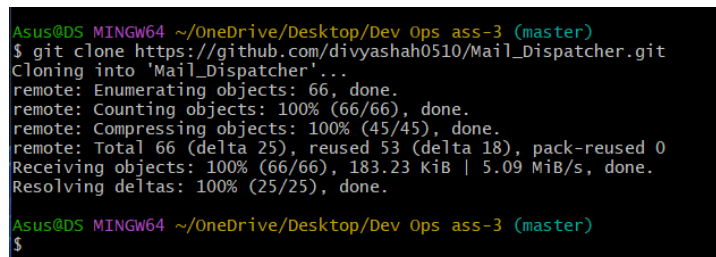
```
MINGW64/c/Users/Asus/OneDrive/Desktop/Dev Ops ass-3
Asus@DS MINGW64 ~/OneDrive/Desktop/Dev Ops ass-3
$ git init
Initialized empty Git repository in C:/Users/Asus/OneDrive/Desktop/Dev Ops ass-3/.git/
Asus@DS MINGW64 ~/OneDrive/Desktop/Dev Ops ass-3 (master)
$ |
```

3.1 Initialized empty git repository

2. **git clone**

Usage: Creates a copy of a remote repository on your local machine.

Syntax: git clone <repository_url>



```
Asus@DS MINGW64 ~/OneDrive/Desktop/Dev Ops ass-3 (master)
$ git clone https://github.com/divyashah0510/Mail_Dispatcher.git
Cloning into 'Mail_Dispatcher'...
remote: Enumerating objects: 66, done.
remote: Counting objects: 100% (66/66), done.
remote: Compressing objects: 100% (45/45), done.
remote: Total 66 (delta 25), reused 53 (delta 18), pack-reused 0
Receiving objects: 100% (66/66), 183.23 KiB | 5.09 MiB/s, done.
Resolving deltas: 100% (25/25), done.
Asus@DS MINGW64 ~/OneDrive/Desktop/Dev Ops ass-3 (master)
$
```

3.2 Cloning existing repository from GitHub

3. **git add**

Usage: Adds changes or new files to the staging area, preparing them for a commit.

Syntax: git add <file_path>


```

MINGW64~/Users/Asus/OneDrive/Desktop/DevOps assignment-3
Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git log
commit 306bb5c8733cc67a14b2a342e883f4b2203dbd84 (HEAD -> master)
Author: Divya Shah <ds3636005@gmail.com>
Date: Thu Aug 10 19:13:31 2023 +0530

    Deleted other.html

commit df03d64dd39ecda7ee29aa5f453767211df58bac (divya)
Author: Divya Shah <ds3636005@gmail.com>
Date: Thu Aug 10 19:07:24 2023 +0530

    Added other.html

commit 38f0102d044b7e6d9204a83f03fc339423334f0b
Author: Divya Shah <ds3636005@gmail.com>
Date: Thu Aug 10 19:02:49 2023 +0530

    Initial Commit

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ |

```

3.6 Display commit's history

7. git push

Usage: Sends local commits to the remote repository.

Syntax: git push <remote_name> <branch_name>

```

SL-LP-DNS-0223+Taha@SL-LP-DNS-0223 MINGW64 ~/git_demo/FirstRepo (master)
$ git push -u origin master
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (7/7), 508 bytes | 254.00 KiB/s, done.
Total 7 (delta 0), reused 0 (delta 0)
To https://github.com/simplilearn-github/FirstRepo.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.

```

3.7 Pushing folder to origin from branch master

8. git pull

Usage: Fetches and merges changes from the remote repository to your local branch.

Syntax: git pull <remote_name> <branch_name>

```

chinmayee.deshpande@SL-LP-DNS-0158 MINGW64 ~/git_demo/Changes (master)
$ git pull https://github.com/simplilearn-github/FirstRepo.git
remote: Enumerating objects: 16, done.
remote: Counting objects: 100% (16/16), done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 16 (delta 1), reused 15 (delta 0), pack-reused 0
Unpacking objects: 100% (16/16), 4.45 MiB | 819.00 KiB/s, done.
From https://github.com/simplilearn-github/FirstRepo
 * branch            HEAD       -> FETCH_HEAD

chinmayee.deshpande@SL-LP-DNS-0158 MINGW64 ~/git_demo/Changes (master)
$ |

```

3.8 Applying Git Pull Command

9. git branch

Usage: Lists all branches in the repository.

Syntax: git branch

```

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git branch
* master

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$

```

3.9 List branch currently present in repository

10. git checkout

Usage: Switches to a different branch or a specific commit.

Syntax: git checkout <branch_name/commit_id>

```
Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git branch divya

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git branch
divya
* master

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git checkout divya
Switched to branch 'divya'

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (divya)
$
```

3.10 Adding new branch into repository

11. git merge

Usage: Combines changes from one branch into another.

Syntax: git merge <source_branch>

```
MINGW64/c/Users/Asus/OneDrive/Desktop/DevOps assignment-3
create mode 100644 other.html

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (divya)
$ git status
On branch divya
nothing to commit, working tree clean

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (divya)
$ git checkout master
Switched to branch 'master'

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git merge divya
Updating 38f0102..df03d64
Fast-forward
 other.html | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 other.html

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$
```

3.11 Merged Two branches

12. git remove

Usage: This removes file from local repository.

Syntax: git rm <file_name>

```
Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ ls
hello.txt  other.html

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git rm other.html
rm 'other.html'

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ ls
hello.txt
```

3.12 Removing file name namely "other.html"

13. git fetch

Usage: Downloads changes from the remote repository without merging.

Syntax: git fetch <remote_name>

```

Lee1aNarasimha@QUAL-LTLEEL MINGW64 /d/projects/gitprojects/git-fetch (main)
$ git fetch origin
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (5/5), 1.26 KiB | 5.00 KiB/s, done.
From https://github.com/leelawebdev/git-fetch
c778c5c..a099c0c  main      -> origin/main
c778c5c..ca9c408  login     -> origin/login

Lee1aNarasimha@QUAL-LTLEEL MINGW64 /d/projects/gitprojects/git-fetch (main)
$

```

3.13 Using git fetch command

14. git reset

Usage: Removes changes from the staging area, but keeps the modifications in the working directory.

Syntax: git reset <file_path>

```

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git reset my.html

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$

```

3.14 Resetting the file "my.html"

15. git revert

Usage: Reverts one or more commits, creating a new commit to undo the changes.

Syntax: git revert <commit_id>

```

MINGW64:/c/Users/Asus/OneDrive/Desktop/DevOps assignment-3
Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git revert 306bb5c8733cc67a14b2a342e883f4b2203dbd84
[master 87d9114] Revert "Deleted other.html"
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 other.html

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git status
On branch master
nothing to commit, working tree clean

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ |

```

3.15 To revert to specific commit

16. git remote

Usage: The git remote command lets you create, view, and delete connections to other repositories.

Syntax: git remote add origin <url_to_be_specified>

```

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ git remote
origin

Asus@DS MINGW64 ~/OneDrive/Desktop/DevOps assignment-3 (master)
$ |

```

3.16 Adding repository to remote origin

Conclusion: By this assignment we learned various kinds of git operations and implement them using git bash.