

120A3051**Shreya Idate****Batch: E3**

Experiment No: 3

AIM: To Perform various GIT operations on local and Remote repositories.

THEORY:

Configuring local username and user-email:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git config --local user.email shreyaideate761@gmail.com

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git config user.name "ShreyaIdate"
```

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git config user.name
ShreyaIdate
```

Convert a local directory into a repository:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git init
Reinitialized existing Git repository in C:/Users/exam/Desktop/120A3051/DevopsLab/.git/
```

Add and commit local changes:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git add .

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git commit -m "First commit"
[main 2474d04] First commit
1 file changed, 2 insertions(+)
```

Add a remote:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git remote add origin https://github.com/ShreyaIdate/DevopsLab.git
error: remote origin already exists.

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git push -u origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (6/6), 457 bytes | 228.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShreyaIdate/DevopsLab.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git remote show origin
* remote origin
  Fetch URL: https://github.com/ShreyaIdate/DevopsLab.git
  Push URL: https://github.com/ShreyaIdate/DevopsLab.git
  HEAD branch: main
  Remote branch:
    main tracked
  Local branch configured for 'git pull':
    main merges with remote main
  Local ref configured for 'git push':
    main pushes to main (up to date)
```

Download the latest changes in the project:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git pull origin main
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 672 bytes | 5.00 KiB/s, done.
From https://github.com/ShreyaIdate/DevopsLab
 * branch            main          -> FETCH_HEAD
   2474d04..5317893  main          -> origin/main
Updating 2474d04..5317893
Fast-forward
 file2.txt | 4 ++++
 1 file changed, 4 insertions(+)
 create mode 100644 file2.txt
```

Create a new branch:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git branch
* main

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git checkout -b master
Switched to a new branch 'master'

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ git branch
main
* master

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ git branch -M main
```

See git log:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git log
commit 5317893fff3f58b4fe0afc2dc9281f11fa9e00f6 (HEAD -> main, origin/main)
Author: Shreya Idade <109936268+ShreyaIdade@users.noreply.github.com>
Date: Sun Jul 24 21:22:58 2022 -0700

    Create file2.txt

commit 2474d04e800a1dccfb03c64005c7cc47905179bd
Author: Shreya Idade <shreyaide761@gmail.com>
Date: Sun Jul 24 21:04:47 2022 -0700

    First commit

commit f41ddcf72ba127ebabb730ca2a30e819c50fac9b
Author: exam <exam@siesgst.local>
Date: Sun Jul 24 20:57:12 2022 -0700

    First Commit
```

Create a branch and commit new changes:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git checkout -b master
Switched to a new branch 'master'

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ ls
'file 1.txt'  file2.txt

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ git add .
```

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ git add .

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ git commit -m "New branch commit"
[master c631010] New branch commit
1 file changed, 3 insertions(+)
```

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 329 bytes | 329.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:   https://github.com/ShreyaIdate/DevopsLab/pull/new/master
remote:
To https://github.com/ShreyaIdate/DevopsLab.git
 * [new branch]      master -> master

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (master)
$ |
```

Change branch and Merge the two branches:

```
exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (newbranch)
$ git branch -M main

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git merge newbranch
merge: newbranch - not something we can merge

Did you mean this?
    origin/newbranch

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git checkout newbranch
Switched to a new branch 'newbranch'
branch 'newbranch' set up to track 'origin/newbranch'.

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (newbranch)
$ git checkout main
Switched to branch 'main'

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$ git merge newbranch
Already up to date.

exam@IT67 MINGW64 ~/Desktop/120A3051/DevopsLab (main)
$
```

CONCLUSION: Successfully performed various GIT operations on local and remote repositories.