Name : Aarya Thakur
T22
Roll No: 114

EXPERIMENT – 3

AIM - To Perform various GIT operations on local and Remote repositories using GIT Cheat- Sheet

15L@203-06 MINGW64 ~/Desktop/aarya-git (master) $
git config --global user.name "aarya"

15L@203-06 MINGW64 ~/Desktop/aarya-git (master)
$ git config --global user.email aarya48.shah@gmail.com

15L@203-06 MINGW64 ~/Desktop/aarya-git (master)
$ git config --global --list
user.name=aarya
user.email=aarya48@gmail.com

15L@203-06 MINGW64 ~/Desktop/aarya-git (master)
$ mkdir git-demo-project

15L@203-06 MINGW64 ~/Desktop/aarya-git (master)
$ cd git-demo-project

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git init
Initialized empty Git repository in C:/Users/15L/Desktop/aarya-git/git-demo-project/.git/

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ ls -a
./ ../ .git/

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ rm -rf .git/

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ rm -rf .git

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ ls -al
total 0
drwxr-xr-x 1 15L 197121 0 Jan 23 13:40 ./
drwxr-xr-x 1 15L 197121 0 Jan 23 13:39 ../

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git init

Initialized empty Git repository in C:/Users/15L/Desktop/aarya-git/git-demo-project/.git/

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git add .

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master

No commits yet

Changes to be committed:
    (use "git rm --cached <file>..." to unstage)
            new file: sample.txt

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git commit -m "first commit"
[master (root-commit) d489bcf] first commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 sample.txt

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master
Untracked files:
    (use "git add <file>..." to include in what will be committed)
            index.html

nothing added to commit but untracked files present (use "git add" to track)

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git add .

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master
Changes to be committed:
    (use "git restore --staged <file>..." to unstage)
            new file: index.html

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git commit -am "express commit"
[master bef012b] express commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 index.html

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master) $
git status On branch master nothing to commit, working tree clean

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git log
commit bef012be210dc3856730420ce2228425d43e58f5 (HEAD -> master)
Author: aarya <aarya48.shah@gmail.com>
Date: Tue Jan 23 13:43:06 2024 +0530

        express commit

commit

d489bcf61da3943db131c6d0274d9eac00737319
Date: Tue Jan 23 13:41:06 2024 +0530
Author: aarya <aarya48.shah@gmail.com>

        first commit

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ nano index.html

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master
Changes not staged for commit:
    (use "git add <file>..." to update what will be committed)
    (use "git restore <file>..." to discard changes in working directory)
            modified: index.html

no changes added to commit (use "git add" and/or "git commit -a")

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git log
commit bef012be210dc3856730420ce2228425d43e58f5 (HEAD -> master)
Author: aarya <aarya48.shah@gmail.com>
Date: Tue Jan 23 13:43:06 2024 +0530

        express commit

commit

d489bcf61da3943db131c6d0274d9eac00737319
Date: Tue Jan 23 13:41:06 2024 +0530
Author: aarya <aarya48.shah@gmail.com>

        first commit

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)

$ touch teststatus

$ git status
On branch master
Changes not staged for commit:
    (use "git add <file>..." to update what will be committed)
    (use "git restore <file>..." to discard changes in working directory)
        modified: index.html

Untracked files:
    (use "git add <file>..." to include in what will be committed)
        teststatus

no changes added to commit (use "git add" and/or "git commit -a")

$ git checkout -- teststatus
error: pathspec 'teststatus' did not match any file(s) known to git

$ git checkout --index.html
error: unknown option `index.html'
usage: git checkout [<options>] <branch>
    or: git checkout [<options>] [<branch>] -- <file>...

    -b <branch>   create and checkout a new branch
    -B <branch>   create/reset and checkout a branch
    -l   create reflog for new branch
    --guess   second guess 'git checkout <no-such-branch>' (default)
    --overlay   use overlay mode (default)
    -q, --quiet   suppress progress reporting
    --recurse-submodules[=<checkout>]
                           control recursive updating of submodules
    --progress   force progress reporting
    -m, --merge   perform a 3-way merge with the new branch
    --conflict <style>   conflict style (merge, diff3, or zdiff3)
    -d, --detach   detach HEAD at named commit
    -t, --track[=(direct|inherit)]
                           set branch tracking configuration
    -f, --force   force checkout (throw away local modifications)
    --orphan <new-branch>
                           new unparented branch
    --overwrite-ignore   update ignored files (default)
    --ignore-other-worktrees
                           do not check if another worktree is holding the given ref
    -2, --ours   checkout our version for unmerged files
    -3, --theirs   checkout their version for unmerged files

```
        -p, --patch                          select hunks interactively
        --ignore-skip-worktree-bits
                                             do not limit pathspecs to sparse entries only
        --pathspec-from-file <file>
                                             read pathspec from file
        --pathspec-file-nul          with --pathspec-from-file, pathspec elements are separated
with NUL character
```

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git add index.html
warning: in the working copy of 'index.html', LF will be replaced by CRLF the next
time Git touches it

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master
Changes to be committed:
    (use "git restore --staged <file>..." to unstage)
            modified: index.html

Untracked files:
    (use "git add <file>..." to include in what will be committed)
            teststatus

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git add teststatus

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master
Changes to be committed:
    (use "git restore --staged <file>..." to unstage)
            modified: index.html
            new file: teststatus

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git commit -am "express commit"
[master 298a0e6] express commit
 2 files changed, 1 insertion(+)
 create mode 100644 teststatus

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git status
On branch master
nothing to commit, working tree clean

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master) $
git log commit 298a0e6689dd8b9d98ebc4e5413441e244b1036d (HEAD -> master) Author: aarya <aarya48.shah@gmail.com>

Date: Tue Jan 23 13:48:37 2024 +0530

        express commit

commit

bef012be210dc3856730420ce2228425d43e58f5
Date: Tue Jan 23 13:43:06 2024 +0530
Author: aarya <aarya48.shah@gmail.com>

        express commit

commit

d489bcf61da3943db131c6d0274d9eac00737319
Date: Tue Jan 23 13:41:06 2024 +0530
Author: aarya <aarya48.shah@gmail.com>

        first commit

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git log --oneline
298a0e6 (HEAD -> master) express commit
bef012b express commit
d489bcf first commit

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote add origin https://github.com/aarya-tsec/SEPM.git

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ rm -rf ^C

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ rm -rf https://github.com/aarya-tsec/SEPM.git

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote add origin https://github.com/aarya-tsec/EXP3.git
error: remote origin already exists.

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git origin
git: 'origin' is not a git command. See 'git --help'.

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git show origin
fatal: ambiguous argument 'origin': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:

'git <command> [<revision>...] -- [<file>...]'

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote show origin
* remote origin
        Fetch URL: https://github.com/aarya-tsec/SEPM.git
   Push   URL: https://github.com/aarya-tsec/SEPM.git
   HEAD branch: (unknown)

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote remove origin

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote show origin
fatal: 'origin' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote add origin https://github.com/aarya-tsec/EXP3.git

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git remote show origin
* remote origin
        Fetch URL: https://github.com/aarya-tsec/EXP3.git
   Push   URL: https://github.com/aarya-tsec/EXP3.git
   HEAD branch: (unknown)

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (master)
$ git branch -M main

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main)
$ git push -u origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 20 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (8/8), 691 bytes | 691.00 KiB/s, done.
Total 8 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/aarya-tsec/EXP3.git
 * [new branch]   main -> main
branch 'main' set up to track 'origin/main'.

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main)
$ git pull
Already up to date.

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main) $
git pull remote: Enumerating objects: 5, done. remote: Counting
objects: 100% (5/5), 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), 957 bytes | 239.00 KiB/s, done. From
https://github.com/aarya-tsec/EXP3

298a0e6..7242627 main   -> origin/main
Updating 298a0e6..7242627
Fast-forward
  index.html | 2 +-
  1 file changed, 1 insertion(+), 1 deletion(-)

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main)
$ git log --oneline origin/main
7242627 (HEAD -> main, origin/main) Update index.html
298a0e6 express commit
bef012b express commit
d489bcf first commit

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main)
$ $ git fetch
bash: $: command not found

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main)
$ git fetch

15L@203-06 MINGW64 ~/Desktop/aarya-git/git-demo-project (main)
$ git merge origin/main
Already up to date.

```
MINGW64:/c/Users/TSU/git-dvcs/git-dem-project                                    —  □  ×

PS C:\Users\Lab805_3\Desktop\sepm>
PS C:\Users\Lab805_3\Desktop\sepm> git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)
PS C:\Users\Lab805_3\Desktop\sepm> git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        1.txt

nothing added to commit but untracked files present (use "git add" to track)
PS C:\Users\Lab805_3\Desktop\sepm> git add *
PS C:\Users\Lab805_3\Desktop\sepm> git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   1.txt

PS C:\Users\Lab805_3\Desktop\sepm> git add -m "first commit"
    --mirror[=(push|fetch)]
                            set up remote as a mirror to push to or fetch from

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote rm origin

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git push -u origin master
fatal: 'origin' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git pull
There is no tracking information for the current branch.
Please specify which branch you want to merge with.
See git-pull(1) for details.
```



```
MINGW64:/c/Users/TSU/git-dvcs/git-dem-project                                    —  □  ×

15L0203-010 MINGW64 ~/git-dvcs (master)
$ git config --global user.name "Aditya"

15L0203-010 MINGW64 ~/git-dvcs (master)
$ git config --global user.email "adikonda8@gmail.com"

15L0203-010 MINGW64 ~/git-dvcs (master)
$ git config --global --list
color.ui=true
user.name=Aditya
user.email=adikonda8@gmail.com

15L0203-010 MINGW64 ~/git-dvcs (master)
$ mkdir git-demo-project
mkdir: cannot create directory 'git-demo-project': File exists

15L0203-010 MINGW64 ~/git-dvcs (master)
$ rm git-demo-project
rm: cannot remove 'git-demo-project': Is a directory

15L0203-010 MINGW64 ~/git-dvcs (master)
$ rmdir git-demo-project
rmdir: failed to remove 'git-demo-project': Directory not empty

15L0203-010 MINGW64 ~/git-dvcs (master)
$ rmdir -f git-demo-project
rmdir: unknown option -- f
Try 'rmdir --help' for more information.

15L0203-010 MINGW64 ~/git-dvcs (master)
$ rmdir --help
Usage: rmdir [OPTION]... DIRECTORY...
Remove the DIRECTORY(ies), if they are empty.

      --ignore-fail-on-non-empty
                  ignore each failure that is solely because a directory
                  is non-empty
  -p, --parents   remove DIRECTORY and its ancestors; e.g., 'rmdir -p a/b/c' is
                  similar to 'rmdir a/b/c a/b a'
  -v, --verbose   output a diagnostic for every directory processed
      --help      display this help and exit
      --version   output version information and exit

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report any translation bugs to <https://translationproject.org/team/>
Full documentation <https://www.gnu.org/software/coreutils/rmdir>
or available locally via: info '(coreutils) rmdir invocation'

15L0203-010 MINGW64 ~/git-dvcs (master)
$ rm -rf git-demo-project

15L0203-010 MINGW64 ~/git-dvcs (master)
```

```
MINGW64 /c/Users/TSU/git-dvcs/git-dem-project
15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git pull
There is no tracking information for the current branch.
Please specify which branch you want to merge with.
See git-pull(1) for details.

    git pull <remote> <branch>

If you wish to set tracking information for this branch you can do so with:

    git branch --set-upstream-to=<remote>/<branch> master


15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git push -u origin master
fatal: 'origin' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote show origin
fatal: 'origin' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote add origin https://github.com/Adityadikonda/ISRO.git

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote show origin
* remote origin
  Fetch URL: https://github.com/Adityadikonda/ISRO.git
  Push  URL: https://github.com/Adityadikonda/ISRO.git
  HEAD branch: main
  Remote branch:
    main new (next fetch will store in remotes/origin)

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git pull
remote: Enumerating objects: 26, done.
remote: Counting objects: 100% (26/26), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 26 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (26/26), 461.85 KiB | 1.68 MiB/s, done.
From https://github.com/Adityadikonda/ISRO
 * [new branch]      main       -> origin/main
There is no tracking information for the current branch.
Please specify which branch you want to merge with.
See git-pull(1) for details.
```

CONCLUSION:

Thus, we have successfully studied and performed various GIT operations on local and Remote repositories using GIT Cheat-Sheet.