**EXPERIMENT – 3**

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

15L@203-06 MINGW64 ~/Desktop/shrey-git (master)

$ git config --global user.name "shrey"

15L@203-06 MINGW64 ~/Desktop/shrey-git (master)

$ git config --global user.email sshrey30.shah@gmail.com

15L@203-06 MINGW64 ~/Desktop/shrey-git (master)

$ git config --global --list

user.name=shrey

user.email=sshrey30.shah@gmail.com

15L@203-06 MINGW64 ~/Desktop/shrey-git (master)

$ mkdir git-demo-project

15L@203-06 MINGW64 ~/Desktop/shrey-git (master)

$ cd git-demo-project

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

$ git init

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

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

$ ls -a

./ ../ .git/

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

$ rm -rf .git/

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

$ rm -rf .git

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

$ git init

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

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

$ git add .

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

$ git add .

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

$ git status

On branch master

nothing to commit, working tree clean

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

$ git log

commit bef012be210dc3856730420ce2228425d43e58f5 (HEAD -> master)

Author: shrey <sshrey30.shah@gmail.com>

Date: Tue Jan 23 13:43:06 2024 +0530

express commit

commit d489bcf61da3943db131c6d0274d9eac00737319

Author: shrey <sshrey30.shah@gmail.com>

Date: Tue Jan 23 13:41:06 2024 +0530

first commit

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

$ nano index.html

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

$ git log

commit bef012be210dc3856730420ce2228425d43e58f5 (HEAD -> master)

Author: shrey <sshrey30.shah@gmail.com>

Date: Tue Jan 23 13:43:06 2024 +0530

express commit

commit d489bcf61da3943db131c6d0274d9eac00737319

Author: shrey <sshrey30.shah@gmail.com>

Date: Tue Jan 23 13:41:06 2024 +0530

first commit

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

$ touch teststatus

15L@203-06 MINGW64 ~/Desktop/shrey-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

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")

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

$ git checkout -- teststatus

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

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

$ 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/shrey-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/shrey-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/shrey-git/git-demo-project (master)

$ git add teststatus

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

$ git status

On branch master

nothing to commit, working tree clean

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

$ git log

commit 298a0e6689dd8b9d98ebc4e5413441e244b1036d (HEAD -> master)

Author: shrey <sshrey30.shah@gmail.com>

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

express commit

commit bef012be210dc3856730420ce2228425d43e58f5

Author: shrey <sshrey30.shah@gmail.com>

Date: Tue Jan 23 13:43:06 2024 +0530

express commit

commit d489bcf61da3943db131c6d0274d9eac00737319

Author: shrey <sshrey30.shah@gmail.com>

Date: Tue Jan 23 13:41:06 2024 +0530

first commit

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

$ git log --oneline

298a0e6 (HEAD -> master) express commit

bef012b express commit

d489bcf first commit

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

$ git remote add origin https://github.com/shrey-tsec/SEPM.git

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

$ rm -rf ^C

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

$ rm -rf https://github.com/shrey-tsec/SEPM.git

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

$ git remote add origin https://github.com/shrey-tsec/EXP3.git

error: remote origin already exists.

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

$ git origin

git: 'origin' is not a git command. See 'git --help'.

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

$ git remote show origin

\* remote origin

Fetch URL: https://github.com/shrey-tsec/SEPM.git

Push URL: https://github.com/shrey-tsec/SEPM.git

HEAD branch: (unknown)

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

$ git remote remove origin

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

$ git remote add origin https://github.com/shrey-tsec/EXP3.git

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

$ git remote show origin

\* remote origin

Fetch URL: https://github.com/shrey-tsec/EXP3.git

Push URL: https://github.com/shrey-tsec/EXP3.git

HEAD branch: (unknown)

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

$ git branch -M main

15L@203-06 MINGW64 ~/Desktop/shrey-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/shrey-tsec/EXP3.git

\* [new branch] main -> main

branch 'main' set up to track 'origin/main'.

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

$ git pull

Already up to date.

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

$ $ git fetch

bash: $: command not found

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

$ git fetch

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

$ git merge origin/main

Already up to date.

**CONCLUSION:**

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