

EXPERIMENT – 3

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

```
MINGW64/c/Users/15L/desktop/ashish

15L@203-014 MINGW64 ~
$ git version
git version 2.41.0.windows.3

15L@203-014 MINGW64 ~
$ cd desktop

15L@203-014 MINGW64 ~/desktop
$ git
usage: git [-v | --version] [-h | --help] [-C <path>] [-c <name>=<value>]
          [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
          [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--bare]
          [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
          [--config-env=<name>=<envvar>] <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
  clone      Clone a repository into a new directory
  init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
  add        Add file contents to the index
  mv         Move or rename a file, a directory, or a symlink
  restore    Restore working tree files
  rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
  bisect     Use binary search to find the commit that introduced a bug
  diff       Show changes between commits, commit and working tree, etc
  grep       Print lines matching a pattern
  log        Show commit logs
  show       Show various types of objects
  status     Show the working tree status

grow, mark and tweak your common history
  branch     List, create, or delete branches
  commit     Record changes to the repository
  merge      Join two or more development histories together
  rebase     Reapply commits on top of another base tip
  reset      Reset current HEAD to the specified state
  switch     Switch branches
  tag        Create, list, delete or verify a tag object signed with GPG

collaborate (see also: git help workflows)
  fetch      Download objects and refs from another repository
  pull       Fetch from and integrate with another repository or a local branch
  push       Update remote refs along with associated objects

'git help -a' and 'git help -g' list available subcommands and some
concept guides. See 'git help <command>' or 'git help <concept>'
to read about a specific subcommand or concept.
See 'git help git' for an overview of the system.
```

```
15L@203-014 MINGW64 ~/desktop
$ mkdir ashish
```

```
15L@203-014 MINGW64 ~/desktop
$ cd ashish
```

```
15L@203-014 MINGW64 ~/desktop/ashish
$ git config --global user.name "Ashish"
```

```
15L@203-014 MINGW64 ~/desktop/ashish
$ git config --global user.email "ashish88505@gmail.com"
```

```
15L@203-014 MINGW64 ~/desktop/ashish
$ cat ~/.gitconfig
cat: /c/Users/15L/.: Is a directory
cat: gitconfig: No such file or directory
```

```
15L@203-014 MINGW64 ~/desktop/ashish
$ cat ~/.gitconfig
[user]
    name = Ashish
    email = ashish88505@gmail.com
```

```
15L@203-014 MINGW64 ~/desktop/ashish
$ git init
Initialized empty Git repository in C:/Users/15L/Desktop/ashish/.git/
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ ls -a
./  ../  .git/ 'Screenshot 2025-02-06 114826.png'
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ ls -al
total 24
drwxr-xr-x 1 15L 197121    0 Feb 12 10:55 ./
drwxr-xr-x 1 15L 197121    0 Feb 12 10:43 ../
drwxr-xr-x 1 15L 197121    0 Feb 12 10:50 .git/
-rw-r--r-- 1 15L 197121 9812 Feb  6 11:48 'Screenshot 2025-02-06 114826.png'
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git commit -m "First commit"
On branch master

Initial commit

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Screenshot 2025-02-06 114826.png

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

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git add .
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   Screenshot 2025-02-06 114826.png
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git commit -m "First commit"
[master (root-commit) 373a227] First commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Screenshot 2025-02-06 114826.png
```

```
15L@203-014 MINGW64 ~/desktop/ashish (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.txt

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

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git add .
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git commit -am "express commit"
[master 31048f2] express commit
1 file changed, 9 insertions(+)
create mode 100644 index.html
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git add teststatus.txt
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   teststatus.txt

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
```



```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git add .

15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   index.html
    new file:   teststatus.txt
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git commit -am "express commit"
[master 69aa10b] express commit
 2 files changed, 2 insertions(+), 2 deletions(-)
 create mode 100644 teststatus.txt
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git status
On branch master
nothing to commit, working tree clean
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git log
commit 69aa10b8e46bce04ab547606f78ea26978265a61 (HEAD -> master)
Author: Ashish <ashish88505@gmail.com>
Date:   Wed Feb 12 11:08:04 2025 +0530

    express commit

commit 31048f28a4e979c6c875ddbd2f9a17ae51d1fb22
Author: Ashish <ashish88505@gmail.com>
Date:   Wed Feb 12 11:03:34 2025 +0530

    express commit

commit 373a227a6bf7dd326c8792bae661d4ab619d4303
Author: Ashish <ashish88505@gmail.com>
Date:   Wed Feb 12 10:57:27 2025 +0530

    First commit
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git log --oneline
69aa10b (HEAD -> master) express commit
31048f2 express commit
373a227 First commit
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git log --oneline teststatus
fatal: ambiguous argument 'teststatus': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git log --oneline teststatus.txt
69aa10b (HEAD -> master) express commit
```

```
15L@203-014 MINGW64 ~/desktop/ashish (master)
$ git log --oneline -n 2
69aa10b (HEAD -> master) express commit
31048f2 express commit
```

```

MINOWM4/c/Users/15L/git-dvcs/git-dem-project
15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ ls
ISR0/ index.html teststatus

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote add origin https://github.com/Adityadikonda/ISR0.git

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote show origin
* remote origin
  Fetch URL: https://github.com/Adityadikonda/ISR0.git
  Push URL: https://github.com/Adityadikonda/ISR0.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 push -u origin master

15L0203-010 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote add origin
usage: git remote add [<options>] <name> <url>

    -f, --fetch           fetch the remote branches
    --tags               import all tags and associated objects when fetching
                        or do not fetch any tag at all (--no-tags)
    -t, --track <branch> branch(es) to track
    -m, --master <branch> master branch
    --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.

```

```

MINOWM4/c/Users/15L/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 ~/dev/15/git-dvcs/git-dem-project
15.02.2013-01.0 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

15.02.2013-01.0 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.

15.02.2013-01.0 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.

15.02.2013-01.0 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote add origin https://github.com/Adityadikonda/TSRO.git

15.02.2013-01.0 MINGW64 ~/git-dvcs/git-dem-project (master)
$ git remote show origin
* remote origin
Fetch URL: https://github.com/Adityadikonda/TSRO.git
Push URL: https://github.com/Adityadikonda/TSRO.git
HEAD branch: main
Remote branch:
main new (next fetch will store in remotes/origin)

15.02.2013-01.0 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/TSRO
 * [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.