EXPERIMENT: 3

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

THEORY:

Git is a distributed version control system (DVCS) that helps developers track and manage changes to their codebase over time. Git allows you to record the history of your code, revert to previous versions, and collaborate with other developers. Git is designed to handle everything from small to very large projects with speed and efficiency. It allows you to record the history of your code, revert to previous versions, and collaborate with other developers. Some of the basic git operations are: Initialize, Add, Commit, Pull, and Push.

- **Initialize:** Creates a new, empty Git repository in the specified directory.
- **Add:** Stages changes in the working directory to be included in the next commit.
- **Commit:** Saves the staged changes along with a descriptive message, creating a new point in the project's history.
- **Pull:** Fetches and integrates changes from a remote repository to the local repository.

- **Push:** Sends committed changes from the local repository to a remote repository.

OUTPUT:


```
MINGW64:/c/Users/HP 15L/Desktop/T11_22/SEPM_Vinay_22

HP 15L@805-27 MINGW64 ~
$ cd Desktop/

HP 15L@805-27 MINGW64 ~/Desktop
$ cd T11_22

HP 15L@805-27 MINGW64 ~/Desktop/T11_22
$ cd SEPM_Vinay_22

HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22
$ git init
Initialized empty Git repository in C:/Users/HP 15L/Desktop/T11_22/SEPM_Vinay_22
/.git/

HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ |
```

```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git config --local user.email "vinaydawani2200@gmail.com"

HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git config --local user.name "vinaydawani24"
```

```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git add .
```

```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
```

```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git commit -m "first commit"
[master (root-commit) 9b21d37] first commit
 1 file changed, 13 insertions(+)
 create mode 100644 index.html
```

```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git log
commit 9b21d3747b58d0ade3f1670727cfdbc431ef9836 (HEAD -> master, origin/master)
Author: vinaydawani24 <vinaydawani2200@gmail.com>
Date:   Thu Jan 30 13:34:44 2025 +0530

    first commit
```
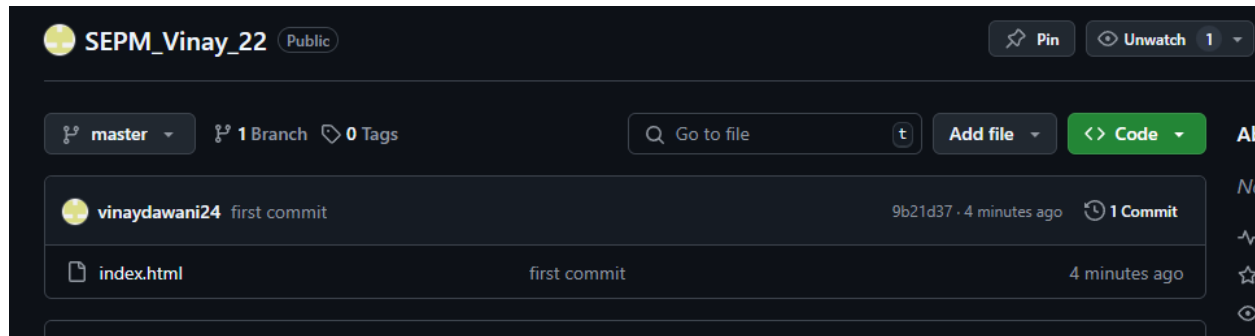
```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

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

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

SEPM_Vinay_22 (Public)   Pin   Unwatch 1 ▾

master ▾   1 Branch   0 Tags   Go to file   t   Add file ▾   <> Code ▾   Ab

                                                                                    No
vinaydawani24 first commit   9b21d37 · 4 minutes ago   1 Commit
                                                                                    ─╱─
index.html   first commit   4 minutes ago   ☆
                                                                                    👁

```
HP 15L@805-27 MINGW64 ~/Desktop/T11_22/SEPM_Vinay_22 (master)
$ git push -u origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 24 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 413 bytes | 413.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/vinaydawani24/SEPM_Vinay_22.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

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