

Experiment No: 02

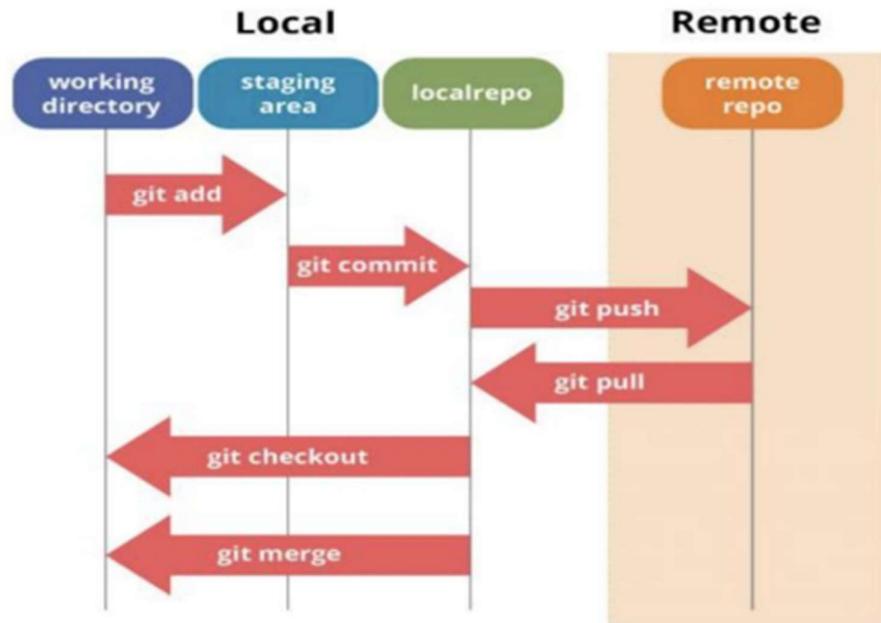
Aim: To understand Version Control System / Source Code Management, install git and create a

GitHub account

Theory:

- Git is a free and open-source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. Git is easy to learn and has a tiny footprint with lightning-fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.
- Some of the basic operations in Git are:
 1. Initialize
 2. Add
 3. Commit
 4. Pull
 5. Push
- Some advanced Git operations are:
 1. Branching
 2. Merging
 3. Rebasing

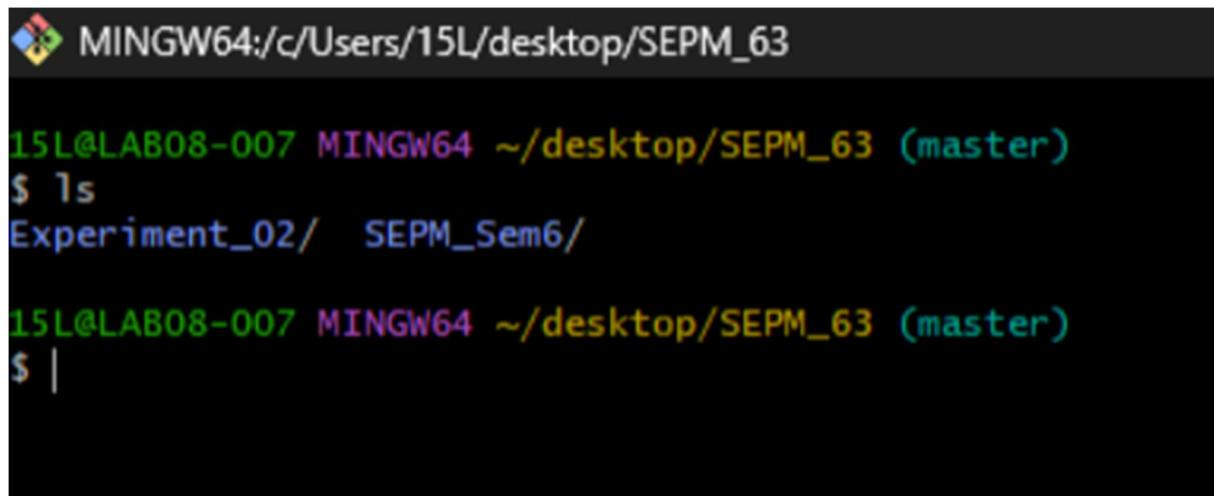
The following diagram depicts the all supported operations in GIT



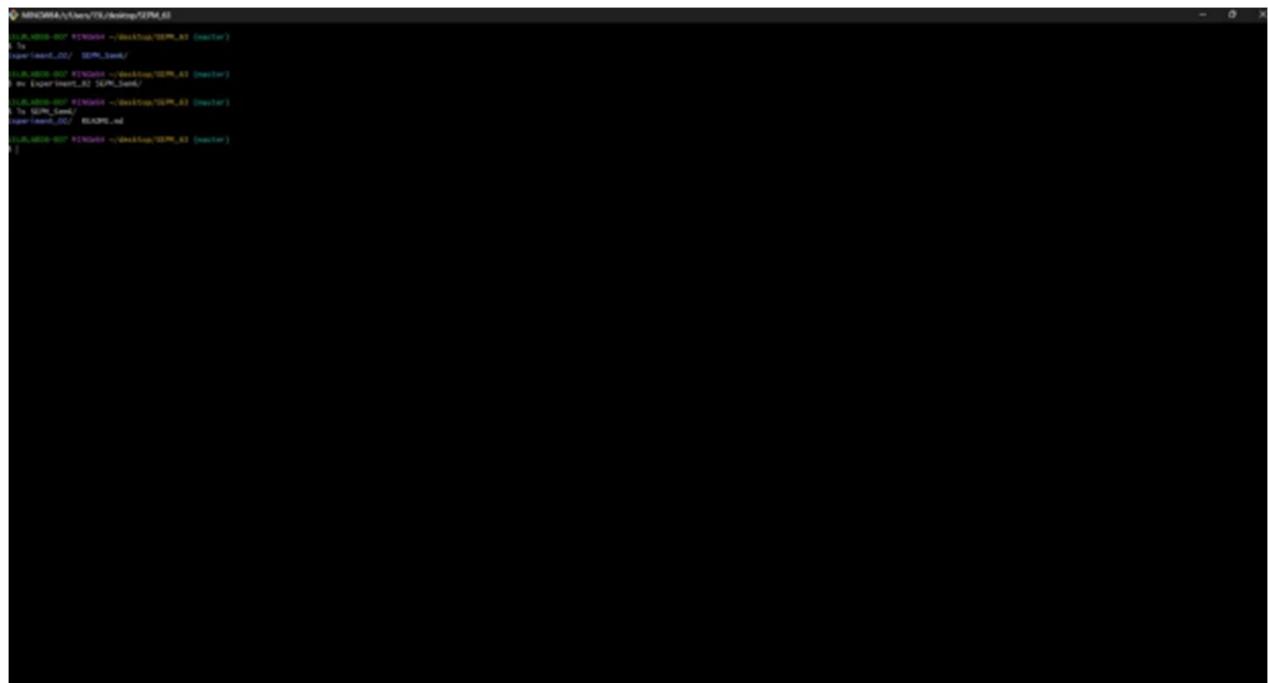
- Installation of GIT

- 1) In windows, download GIT from <https://git-scm.com/> and perform the straightforward installation.
- 2) In Ubuntu, install GIT using `$sudo apt install git`,
Confirm the version after installation using command `$git --version`

```
MINGW64:/c/Users/bisha
bisha@Bishal MINGW64 ~
$ git --version
git version 2.49.0.windows.1
bisha@Bishal MINGW64 ~
$ |
```



```
MINGW64:/c/Users/15L/Desktop/SEPM_63
15L@LAB08-007 MINGW64 ~/Desktop/SEPM_63 (master)
$ ls
Experiment_02/  SEPM_Sem6/
15L@LAB08-007 MINGW64 ~/Desktop/SEPM_63 (master)
$ |
```



```
MINGW64:/c/Users/15L/Desktop/SEPM_63
15L@LAB08-007 MINGW64 ~/Desktop/SEPM_63 (master)
$ ls
Experiment_02/  SEPM_Sem6/
15L@LAB08-007 MINGW64 ~/Desktop/SEPM_63 (master)
$ |
```

```
MINGW64 /Users/TK/Desktop/GIT/Git/Sample_Social
$ git clone https://github.com/KaranShejwal/Sample_Social.git
$ cd Sample_Social
$ git add .
$ git commit -m "Initial Commit"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git add Experiment_001
$ git commit -m "Adding Experiment_001"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git add Experiment_002
$ git commit -m "Adding Experiment_002"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git add Experiment_003
$ git commit -m "Adding Experiment_003"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
```

```
MINGW64 /Users/TK/Desktop/GIT/Git/Sample_Social
$ git clone https://github.com/KaranShejwal/Sample_Social.git
$ cd Sample_Social
$ git add .
$ git commit -m "Initial Commit"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git add Experiment_001
$ git commit -m "Adding Experiment_001"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git add Experiment_002
$ git commit -m "Adding Experiment_002"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git add Experiment_003
$ git commit -m "Adding Experiment_003"
$ git push origin master
$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
$ git pull origin master
From https://github.com/KaranShejwal/Sample_Social
 * branch          master      -> FETCH_HEAD
$ git merge origin/master
Auto-merging Experiment_003
CONFLICT (content): Merge conflict in Experiment_003.pdf
Automatic merge failed; fix conflicts and then commit the result.
$ git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
Unmerged paths:
  (use "git add/rm -p" to stage specific files)
    new file:   Experiment_003.pdf
$ git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
Unmerged paths:
  (use "git add/rm -p" to stage specific files)
    new file:   Experiment_003.pdf
```

Conclusion: Successfully performed Version Control System / Source Code Management, install git and create a GitHub account