Practical :-1 Build a branching model to help your team understand the Git workflow for faster integration of work.

Steps:

- ➢ Installing a Git
- ➢ Check its version
    - o $git -version

```
C:\Users\Lenovo>git --version
git version 2.50.0.windows.1
```

- ➢ Configuration
    - o $git config - -global user.name [any name]
    - o $git config --global user.email [any email id]

```
C:\Users\Lenovo>git config --global user.name "disva84"

C:\Users\Lenovo>git config --global user.email "disva.bhalodiya117696@marwad
iuniversity.ac.in"
```

    - o Check it
        - ▪ $git config - -global user.name

```
C:\Users\Lenovo>git config --global user.name "disva84"
```

        - ▪ $git config - -global user.email

```
C:\Users\Lenovo>git config --global user.email
disva.bhalodiya117696@marwadiuniversity.ac.in
```

- ➢ Create a repository
    - o $mkdir [any foldername]   //create a new folder
    - o $cd [foldername]
    - o $git init   //It will create .git folder (hidden folder)

```
C:\Users\Lenovo>mkdir Devops

C:\Users\Lenovo>cd Devops

C:\Users\Lenovo\Devops>git init
Initialized empty Git repository in C:/Users/Lenovo/Devops/.git/
```

➢ Adding file in that folder

```
C:\Users\Lenovo\Devops>git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

C:\Users\Lenovo\Devops>git add welcome.html
fatal: pathspec 'welcome.html' did not match any files
```

    o Create a file "welcome.html" with 1-2 heading content any msg

```
C:\Users\Lenovo\Devops>echo "<h1>Welcome to DevOps</h1>" > welcome.html
```

➢ Check status
    o $git status   // file staged / modified / untracked

```
C:\Users\Lenovo\Devops>git status
On branch master

No commits yet

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

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

➢ Add welcome.html file
    o $git add welcome.html

```
C:\Users\Lenovo\Devops>git add welcome.html

C:\Users\Lenovo\Devops>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   welcome.html
```

➢ Create one more file contact.html and add some content (add 1 line msg) in welcome.html file
  o $git add - -all   / $git add –A
  o $git status

```
C:\Users\Lenovo\Devops>git add --all

C:\Users\Lenovo\Devops>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   contact.html
        new file:   welcome.html
```

➢ Commit
  o $git commit –m "This is First Commit"
  o $git log

```
C:\Users\Lenovo\Devops>git commit -m "This is First Commit"
[master (root-commit) 5369a34] This is First Commit
 2 files changed, 2 insertions(+)
 create mode 100644 contact.html
 create mode 100644 welcome.html

C:\Users\Lenovo\Devops>git log
commit 5369a346bbca44cac6ca0e7e4a4e7b5a5559f546 (HEAD -> master)
Author: disva84 <disva.bhalodiya117696@marwadiuniversity.ac.in>
Date:   Sun Jul 6 18:31:38 2025 +0530

    This is First Commit
```

➢ Work with Git branches
  o $git branch   // check branch status
  o $git branch [new branch name]
  o $git branch

```
C:\Users\Lenovo\devops>git branch
* master

C:\Users\Lenovo\devops>git branch "disva"

C:\Users\Lenovo\devops>git branch
  disva
* master
```

➢ Switching between the branches
- o $git checkout [new branch name]
- o $git branch   //check which is active branch

```
C:\Users\Lenovo\devops>git checkout disva
Switched to branch 'disva'

C:\Users\Lenovo\devops>git branch
* disva
  master
```

➢ In new branch
- o Add some content (add 1 image) in welcome.html file
- o add that image in same directory
- o using $git add command, add these welcome.html and image
- o commit with msg

```
C:\Users\Lenovo\Devops>echo ^<img src="1D.jpg" alt="Git Workflow Image" /^>
>> welcome.html

C:\Users\Lenovo\Devops>git add welcome.html 1D.jpg
fatal: pathspec '1D.jpg' did not match any files

C:\Users\Lenovo\Devops>git commit -m "Added image to welcome.html"
On branch disva
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:   welcome.html

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

➢ Now check both branches

```
C:\Users\Lenovo\Devops>git checkout master
M       welcome.html
Switched to branch 'master'

C:\Users\Lenovo\Devops>type welcome.html
"<h1>Welcome to MU</h1>"
<img src="1D.jpg" alt="Git Workflow Image" />

C:\Users\Lenovo\Devops>
C:\Users\Lenovo\Devops>git checkout disva
M       welcome.html
Switched to branch 'disva'

C:\Users\Lenovo\Devops>type welcome.html
"<h1>Welcome to MU</h1>"
<img src="1D.jpg" alt="Git Workflow Image" />
```

➢ You may delete the branch
  o $git branch –d [new branch name]

```
C:\Users\Lenovo\Devops>git checkout master
M       welcome.html
Switched to branch 'master'

C:\Users\Lenovo\Devops>git branch -d disva
Deleted branch disva (was 5369a34).
```

GitHub Concept
➢ Create a account on https://github.com
➢ Create repository
  o Give any name for repository; make it public or private, add or don't add the README file, just create it the way you want.
➢ PUSH Files into this Repo
  o Copy the your repo URL
    ▪ i.e. https://github.com/disva84/Pract-1
  o Open the CMD and add the command $git remote add origin URL
    ▪ $git remote add origin https://github.com/disva84/Prat-1
  o Push all files in GitHub
    ▪ $git push –u origin [branch_name]

```
C:\Users\Lenovo\Devops>git remote add origin https://github.com/disva84/Prac
t-1.git

C:\Users\Lenovo\Devops>git branch -M master

C:\Users\Lenovo\Devops>git push -u origin master
info: please complete authentication in your browser...
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 348 bytes | 116.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/disva84/Pract-1.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

➢ PULL Files into Local Repo from GitHub
  o Goto GitHub repo and add one file about.html and commited it to GitHub's project
  o $git pull origin   //This file will be available in local folder

```
C:\Users\Lenovo\Devops>git pull origin master
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 986 bytes | 82.00 KiB/s, done.
From https://github.com/disva84/Pract-1
 * branch            master      -> FETCH_HEAD
   5369a34..827c7f4  master      -> origin/master
Updating 5369a34..827c7f4
Fast-forward
 about.html | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 about.html
```

- ➢ Make some changes in about.html
  - o Add some content
- ➢ Again add and commit in cmd
  - o $git add about.html
  - o $git commit –m "updated

```
C:\Users\Lenovo\Devops>echo "<p>This is updated About content</p>" >> about.
html

C:\Users\Lenovo\Devops>git add about.html

C:\Users\Lenovo\Devops>git commit -m "updated about.html"
[master 83934e0] updated about.html
 1 file changed, 1 insertion(+)
```
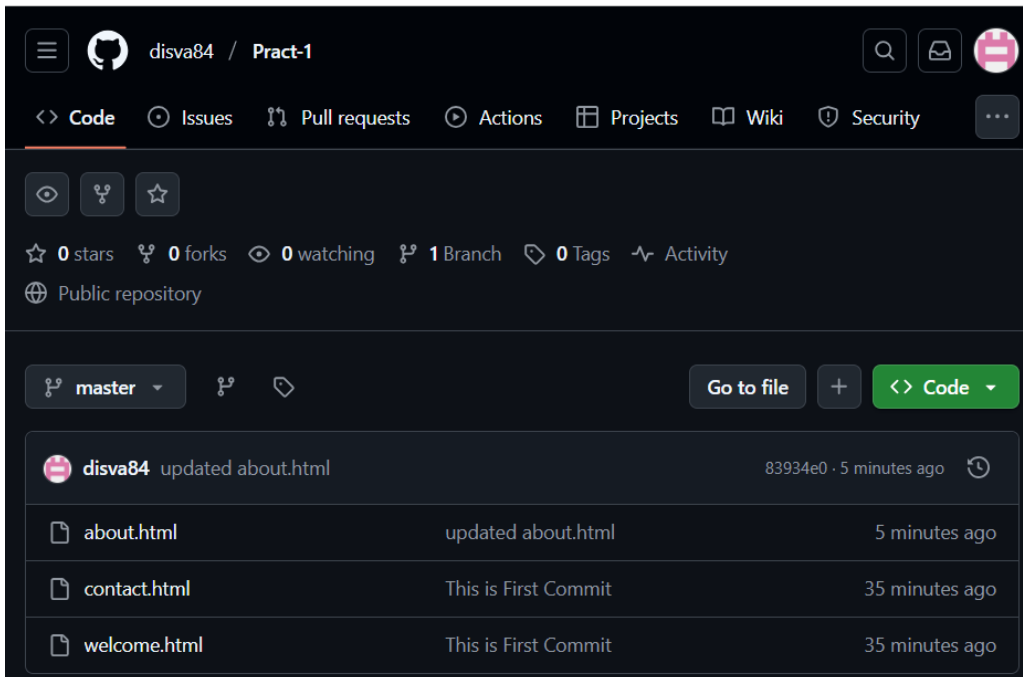
- ➢ Then again push it on GitHub
  - o $git push origin

```
C:\Users\Lenovo\Devops>git push origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 372 bytes | 372.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/disva84/Pract-1.git
   827c7f4..83934e0  master -> master
```

➢ You will find that updated file in GitHub Repo.