

Git practice

1.

Created a folder named practice_project and added a file named notes.txt in it.

```
cheshta@cheshta-Latitude-E7470:~$ cd Desktop/
cheshta@cheshta-Latitude-E7470:~/Desktop$ mkdir "Practice_project"
cheshta@cheshta-Latitude-E7470:~/Desktop$ ls
github_practice Practice_project
cheshta@cheshta-Latitude-E7470:~/Desktop$ cd Practice_project/
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ touch notes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ ls
notes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > notes.txt
Today I am practicing git command. I will start with git init and commit and push it to github.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat notes.txt
Today I am practicing git command. I will start with git init and commit and push it to github.
```

Used “git status” command to check status.

Initialised git in the folder and used “git add” and “git commit -m” to add and commit the file.

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
fatal: not a git repository (or any of the parent directories): .git
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git init
Initialized empty Git repository in /home/cheshta/Desktop/Practice_project/.git/
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch master

No commits yet

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

nothing added to commit but untracked files present (use "git add" to track)
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git add notes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   notes.txt

cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git commit -m "create notes"
[master (root-commit) 843b15e] create notes
  1 file changed, 1 insertion(+)
  create mode 100644 notes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch master
nothing to commit, working tree clean
```

Created README.md and also add and commit it.

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ touch README.md
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > README.md
This is a folder which contains notes.txt which will tell everything i am learning.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat README.md
This is a folder which contains notes.txt which will tell everything i am learning.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git branch -M main
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git branch
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git remote add origin git@github.com:cheshtagithub/Practice.git
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git remote -v
origin git@github.com:cheshtagithub/Practice.git (fetch)
origin git@github.com:cheshtagithub/Practice.git (push)
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push -u origin main
Enumerating objects: 6, done.
```

The screenshot shows a GitHub repository page for 'Practice'. At the top, there's a navigation bar with links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. Below the navigation bar, there's a search bar with placeholder text 'Type to search'. The repository name 'Practice' is displayed with a public status. There are buttons for Pin and Watch. The repository has 1 branch and 0 tags. A 'Code' button is highlighted in green. The main area shows the terminal output of the user's commands:

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ touch tasks.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ ls
notes.txt README.md tasks.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > tasks.txt
This is the file where i will write all the tasks i will do.
I will update it everytime i learn something new.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push -u origin main
Enumerating objects: 4, done.
```

The screenshot shows the same GitHub repository 'Practice'. The terminal output now includes the result of the 'git status' command:

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
```

The screenshot shows the GitHub repository 'Practice'. The terminal output now includes the content of the README.md file and the commit history:

```
This is a folder which contains notes.txt which will tell everything i am learning. tasks.txt file contains all the task that will be learned.
```

Commit history:

Author	Commit Message	Date	Commits
cheshtagithub	Delete delete.txt	3dcdf7 · 1 minute ago	6 Commits
	README.md	Information about tasks.txt	17 minutes ago
	notes.txt	create notes	1 hour ago
	tasks.txt	add tasks to do	33 minutes ago

The README.md file content is:

```
This is a folder which contains notes.txt which will tell everything i am learning. tasks.txt file contains all the task that will be learned.
```

Making changes in more than one file and also using “git diff” to check the difference between commits.

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > tasks.txt
I have learned how to commit changes, delete a file and now i will learn committing several files together and what is git diff.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat notes.txt
Today I am practicing git command. I will start with git init and commit and push it to github.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > notes.txt
I have already learned several command.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch main
Your branch is up to date with 'origin/main'.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git commit -m "Add new tasks that are learned"
[main 3601806] Add new tasks that are learned
 2 files changed, 2 insertions(+), 4 deletions(-)
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push
Enumerating objects: 7, done.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git switch -c new_branch
Switched to a new branch 'new_branch'
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ touch changes.txt
```

The screenshot shows a GitHub repository interface. At the top, there's a message: "new_branch had recent pushes 23 seconds ago" with a "Compare & pull request" button. Below that, there are navigation buttons for "main" (selected), "2 Branches", "0 Tags", and search/filter options. A green "Code" button is also present. The main area displays a commit from "cheshtagithub" titled "Add new tasks that are learned" (commit ID 3601806, 32 minutes ago, 7 commits). Below the commit, there's a terminal window showing the user switching branches and merging "new_branch" into "main". The terminal output includes:

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git branch
  main
* new_branch
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git branch
* main
  new_branch
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git merge new_branch
Updating 3601806..664c018
Fast-forward
  changes.txt | 1 +
  1 file changed, 1 insertion(+)
  create mode 100644 changes.txt
```

pushed the changes to github:

```

cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push
Total 0 (delta 0), reused 0 (delta 0)
To github.com:cheshtagithub/Practice.git
  3601806..664c018  main -> main
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

```

Practice Public

main ▾ 2 Branches 0 Tags

Go to file Add file Code

cheshtagithub Add file in new branch · 664c018 · 17 minutes ago 8 Commits

README.md	Information about tasks.txt	1 hour ago
changes.txt	Add file in new branch	17 minutes ago
notes.txt	Add new tasks that are learned	35 minutes ago
tasks.txt	Add new tasks that are learned	35 minutes ago

README

This is a folder which contains notes.txt which will tell everything i am learning. tasks.txt file contains all the task that will be learned.

making changes in changes.txt in both main and new_branch :

```

cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > changes.txt
Making the change in the changes.txt in main branch.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git add changes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git commit -m "Made change in main branch"
[main afbd60c] Made change in main branch
 1 file changed, 1 insertion(+), 1 deletion(-)
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 311 bytes | 311.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:cheshtagithub/Practice.git
  664c018..afbd60c  main -> main

```

```

cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git checkout new_branch
Switched to branch 'new_branch'
Your branch is up to date with 'origin/new_branch'.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git branch
  main
* new_branch
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat changes.txt
This is a file in new branch.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat > changes.txt
Making change in file in new_branch branch.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git add changes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git commit -m "Changes made in new_branch"
[new_branch 4d330ce] Changes made in new_branch
 1 file changed, 1 insertion(+), 1 deletion(-)
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 306 bytes | 306.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:cheshtagithub/Practice.git
  664c018..4d330ce  new_branch -> new_branch

```

Github before merging

The screenshot shows a GitHub repository named 'Practice'. The 'main' branch is selected. There are 2 branches and 0 tags. The 'main' branch has 9 commits. A recent commit by 'cheshtagithub' is visible, along with files README.md, changes.txt, notes.txt, and tasks.txt. A note in the README states: 'This is a folder which contains notes.txt which will tell everything i am learning. tasks.txt file contains all the task that will be learned.'

Merging and resolving conflict:

```

cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git branch
* main
  new_branch
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git merge new_branch
Auto-merging changes.txt
CONFLICT (content): Merge conflict in changes.txt
Automatic merge failed; fix conflicts and then commit the result.
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ nano changes.txt

```

.Before resolving the conflict

After

```
GNU nano 4.8
<<<<< HEAD
Making the change in the changes.txt in main branch.
=====
Making change in file in new_branch branch.
>>>>> new_branch
```

resolving the conflict:

```
GNU nano 4.8                                         changes.txt
Making the change in the changes.txt in main branch.
Making change in file in new_branch branch.
```

.commit the change in main branch:

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git add changes.txt
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ cat changes.txt
Making the change in the changes.txt in main branch.
Making change in file in new_branch branch.

cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git commit
[main 00fe49f] Merge branch 'new_branch' into main
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ █
```

push it to github:

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git push
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 363 bytes | 181.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:cheshtagithub/Practice.git
  afbd60c..00fe49f main -> main
```

The screenshot shows a GitHub repository named 'Practice' owned by 'cheshtagithub'. The repository has 2 branches and 0 tags. The main branch is selected. A commit from 'cheshtagithub' merges 'new_branch' into 'main' at commit '00fe49f' (4 minutes ago). The commit message is 'Merge branch 'new_branch' into main'. The commit details show four files: 'README.md', 'changes.txt', 'notes.txt', and 'tasks.txt', all updated 53 minutes ago. Below the commit log, there is a 'README' file content box containing the text: 'This is a folder which contains notes.txt which will tell everything i am learning. tasks.txt file contains all the task that will be learned.'

log of all the commits in oneline:

```
cheshta@cheshta-Latitude-E7470:~/Desktop/Practice_project$ git log --oneline
00fe49f (HEAD -> main, origin/main) Merge branch 'new_branch' into main
4d330ce (origin/new_branch, new_branch) Changes made in new_branch
afbd60c Made change in main branch
664c018 Add file in new branch
3601806 Add new tasks that are learned
3dcacf7f Delete delete.txt
40ead48 Add file to understand how delete from repo works
3a72709 Information about tasks.txt
afb603b add tasks to do
96d04cf create readme file
843b15e create notes
```