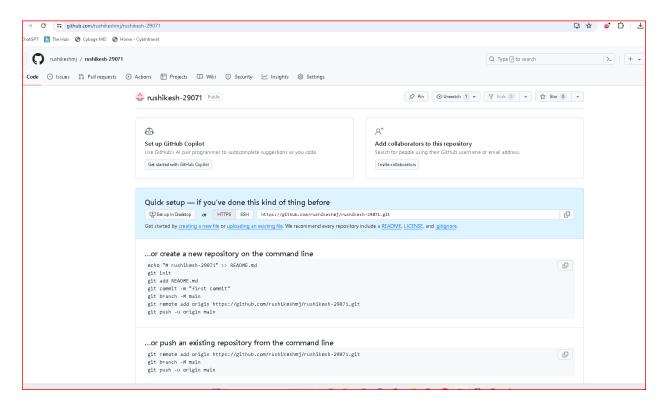
Git and Github

1) Configure Git using git config command

you can set various settings such as your username, email, default text editor

Git config --global user.name "rushikesh"
Git config --global user.email <u>rushikeshja@cybage.com</u>

2) Create a repo on GitHub, naming convention should be <rushikesh-29071>

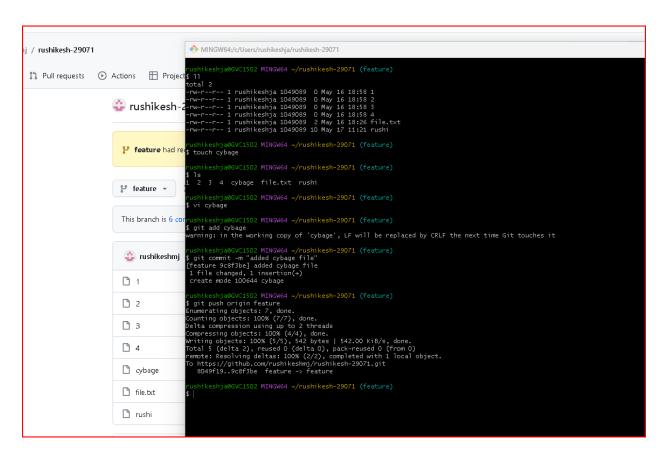


3) Clone the repo in local machine

to create a copy of an existing Git repository onto your local machine

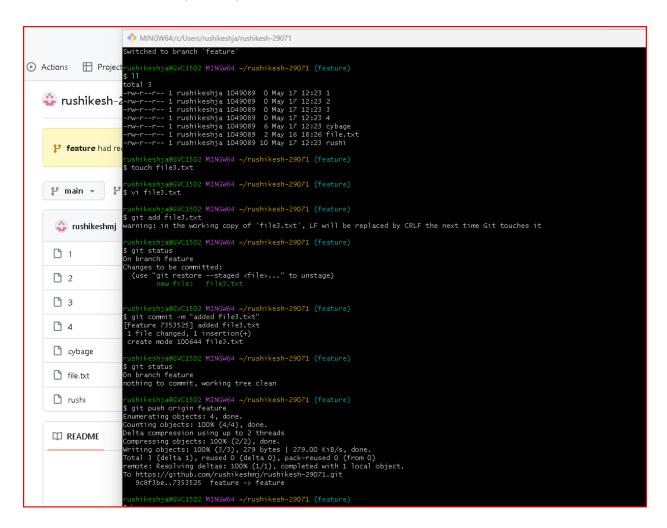
```
        Stypage MIS
        Month of Mind Mode (voluments)
        Mind Mode (voluments)
```

4) Create a text file in that folder using git CLI



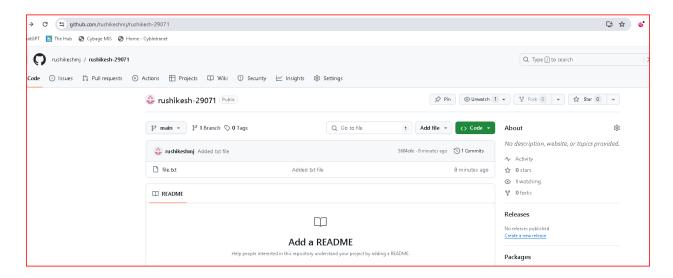
5) Use git status command for showcasing the status of staging area and git repository

used to display the current state of the working directory and the staging area in relation to the Git repository

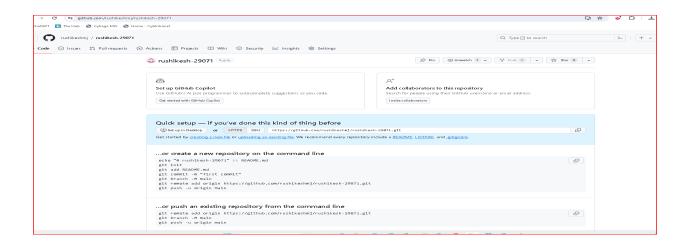


6) Try to add & commit the changes

```
ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git commit -m "Added txt file"
[main (root-commit) 5604e6e] Added txt file
1 file changed, 1 insertion(+)
create mode 100644 file.txt
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git status
On branch main
Your branch is based on 'origin/main', but the upstream is gone.
  (use "git branch --unset-upstream" to fixup)
nothing to commit, working tree clean
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 245 bytes | 245.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/rushikeshmj/rushikesh-29071.git
 * [new branch]
                    main -> main
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
                                           2024 Olthub, Inc. Terms Privacy Security
```

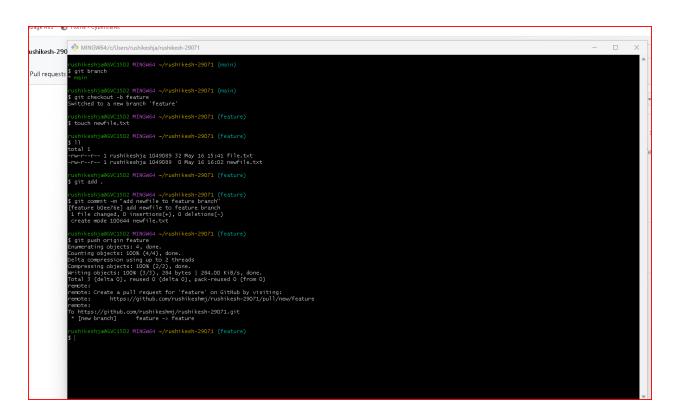


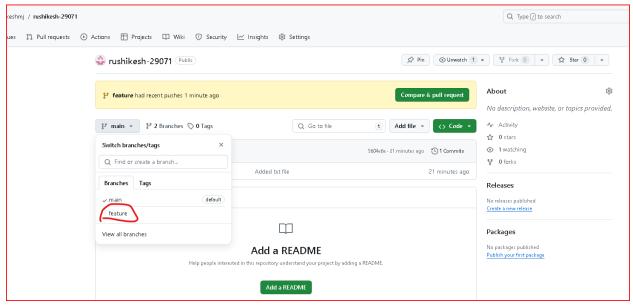
7) Create new repo and initialize it on local machine and add git URL as an alias in local machine



8) Push the code on main branch

9) Create feature branch and add new text file on feature branch (apply branch protection rule on main



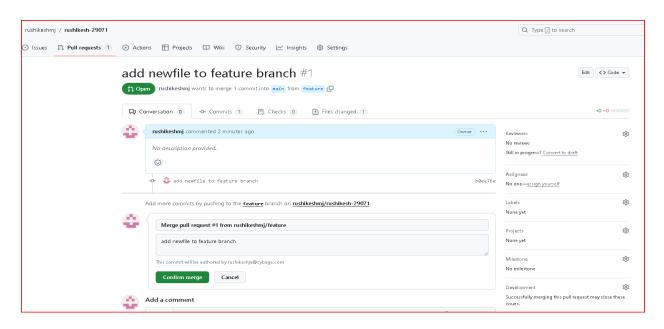


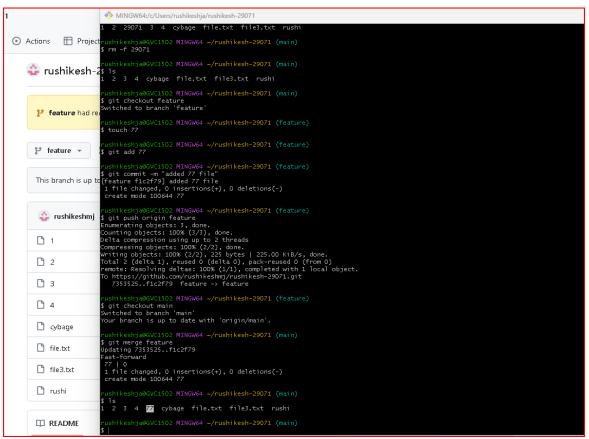
10) Use diff command to showcase the difference between 2 branches

used to show changes between commits, commit and working tree

Create pull request to merge 2 branches and try with other way from git CLI using git merge(both should be used)

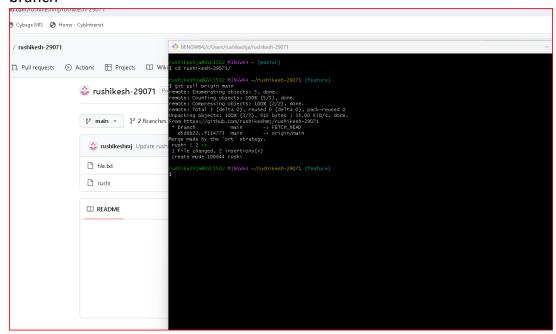
used to propose changes to a repository hosted on a platform like GitHub





12) Use git pull command to fetch the repo and download content from a remote repo and update the local repo to match the content

used to fetch and integrate changes from a remote repository into your current branch



13) Create 4-5 commits and use reset command to go on 2nd commit

```
Date: Thu May 16 16:43:02 2024 +0530

Create rushi

commit 26cc04d9e4f33e07b76c330dcfe13c69edf3a03e (feature)
Author: rushikesh-29071 crushikeshja@cybage.comb
Date: Thu May 16 16:18:52 2024 +0530

commit b0ee76e6b3bef673ad88d4204189047000e57f59
Author: rushikesh-29071 crushikeshja@cybage.comb
Date: Thu May 16 16:04:05 2024 +0530

add newfile to feature branch

commit 5604e6eda3364b9f4688a7d6c5f6e0d072ab8772
Author: rushikesh-29071 crushikeshja@cybage.comb
Date: Thu May 16 15:44:19 2024 +0530

Added txt file

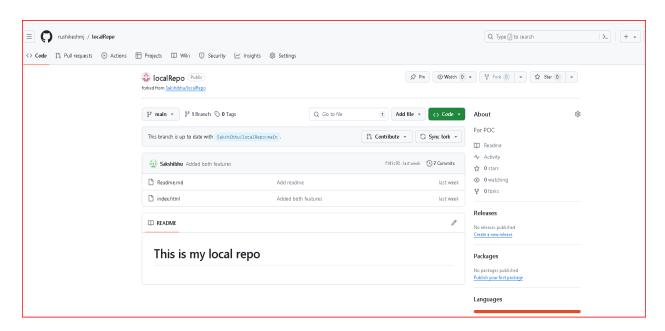
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature2)
$

rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature2)
$ git reset --hard HEAD-2

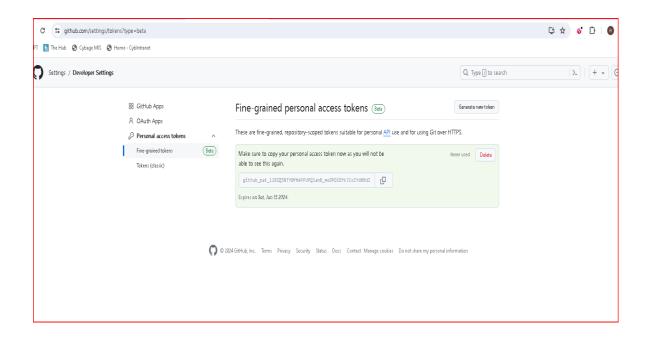
HEAD is now at e66a08c added file3

rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature2)
$ |
```

14) Fork the provided repo - https://github.com/Sakshibhu/localRepo



15) Create PAT token with 30 days expiration date



Git revert - used to undo changes made in a previous commit by creating a new commit that undoes those changes

```
Added txt file

rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)

$ git revert 5604e6eda3364b9f4688a7d6c5f6e0d072ab8772
[feature df35e60] Revert "Added txt file"

1 file changed, 1 deletion(-)
delete mode 100644 file.txt

rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)

$ git status

On branch feature

Changes not staged for commit:
    (use "git add/rm <file>..." to update what will be committed)
    (use "git restore <file>..." to discard changes in working directory)
    deleted: newfile.txt

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

rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)

$ 11
total 0
```

Git cherry-pick - used to apply a specific commit from one branch onto another branch

```
$ git log
ommit f7c203da90bb736398ffd5abd07efffd744c67fc (HEAD -> feature, origin/main, main)
Author: rushikesh <rushikeshja@cybage.com>
Date: Thu May 16 18:27:09 2024 +0530
      added file with content
 rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
$ git cherry-pick d744c67fc
fatal: bad revision 'd744c67fc'
rushikeshja@GVC1502 MINGW64 <mark>~/rushikesh-29071 (feature)</mark>
$ git cherry-pick f7c203da90bb736398ffd5abd07efffd744c67fc
The previous cherry-pick is now empty, possibly due to conflict resolution.
If you wish to commit it anyway, use:
      git commit --allow-empty
Otherwise, please use 'git cherry-pick --skip'
On branch feature
on braich readure
You are currently cherry-picking commit f7c203d.

(all conflicts fixed: run "git cherry-pick --continue")

(use "git cherry-pick --skip" to skip this patch)

(use "git cherry-pick --abort" to cancel the cherry-pick operation)
 nothing to commit, working tree clean
 rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature|CHERRY-PICKING)
fushikeshjaesvc1302 Minamod Ayrushikesh-23

§ git commit --allow-empty

[feature 90a6c2b] added file with content

Date: Thu May 16 18:27:09 2024 +0530
 rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
$ ls
file.txt
 rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
$ cat file.txt
```

Git rebase - used to integrate changes from one branch onto another by reapplying each commit on top of the target branch

```
MINGW64:/c/Users/rushikeshja/rushikesh-29071
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git checkout feature
Switched to branch 'feature'
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
file.txt
$ cat rushi
cat: rushi: No such file or directory
$ touch rushi
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git rebase feature
Successfully rebased and updated refs/heads/main.
$ git push origin main
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)

To https://github.com/rushikeshmj/rushikesh-29071.git
   f7c203d..90a6c2b main -> main
```

git stash - used to temporarily store changes in your working directory and staging area so that you can work on something else, switch branches, or perform other operations without committing the changes

```
$ git status
On branch main
Your branch is up to date with 'origin/main'.
Changes to be committed:
 (use "git restore --staged <file>..." to unstage)
new file: rushi
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
Saved working directory and index state WIP on main: 90a6c2b added file with content
 ushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
s git stash list
stash@{0}: WIP on main: 90a6c2b added file with content
$ git stash apply
Your branch is up to date with 'origin/main'.
Changes to be committed:
 (use "git restore --staged <file>..." to unstage)
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
Changes to be committed:

(use "git restore --staged <file>..." to unstage)

new file: rushi
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
```

Git sqash - squashing commits involves combining multiple commits into a single commit

```
$ git rebase -i HEAD~3
Successfully rebased and updated refs/heads/feature.
rushikeshja@GVC1502 MINGW64 ~/rushikesh-29071 (feature)
$ git log
   mmit 8049f198658b3a64585a74e2eebf950bb435ed31 (HEAD -> feature, origin/feature)
Author: rushikesh <rushikeshja@cybage.com>
Date: Thu May 16 19:00:12 2024 +0530
    added file4
commit 77f813616990f40485fff67164cd54dd08160bce
Author: rushikesh <rushikeshja@cybage.com>
Date: Thu May 16 18:59:51 2024 +0530
    added file23
commit e919c2e4f8f1c78f3b22128133969d6a90787df0
Author: rushikesh <rushikeshja@cybage.com>
Date: Thu May 16 18:59:22 2024 +0530
    added file2
 ommit 74db4bf5965edbc0b6a75bb21f1799b9fba3b86c
Author: rushikesh <rushikeshja@cybage.com>
Date: Thu May 16 18:58:42 2024 +0530
    added file1
  ommit 90a6c2b54704bbb6e9a7248193750996b9ce49d5 (origin/main)
Author: rushikesh <rushikeshja@cybage.com>
Date: Thu May 16 18:27:09 2024 +0530
     added file with content
```

git log: Show the commit history, including commit messages, authors, and dates

