Task 4: Build a Version-Controlled DevOps Project with Git

Objective: Demonstrate your ability to manage a DevOps project using Git version control best practices. This includes using branches, commits, pull requests, tagging, a .gitignore file, and proper documentation.

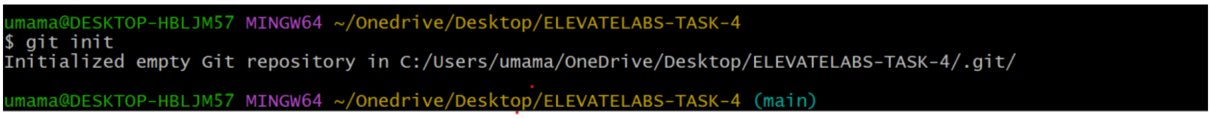
Tools Used

- Git (version control system)
- GitHub (remote repository hosting)

Project Setup

Initialize Git Repository: git init

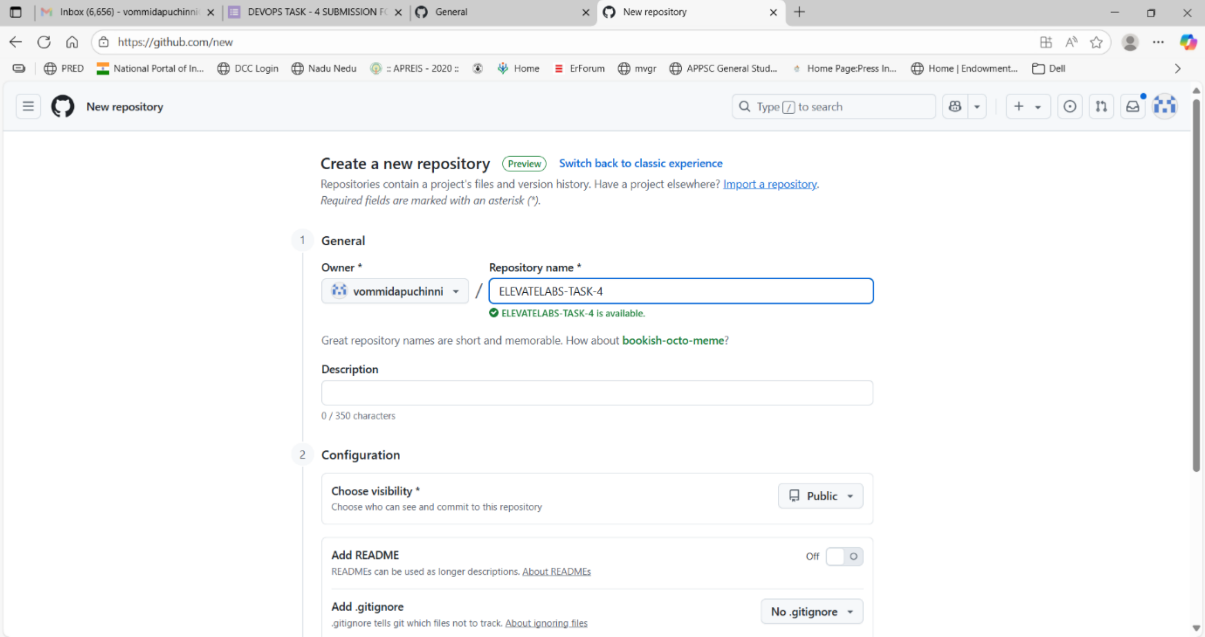
This creates a local .git folder to start tracking changes in your project.



```
umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4
$ git init
Initialized empty Git repository in C:/Users/umama/OneDrive/Desktop/ELEVATELABS-TASK-4/.git/

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
```

Create GitHub Repository

- Repo Name: ELEVATELABS-TASK-4
- No files were added at creation time (no README).



Create a new repository (Preview) Switch back to classic experience

Repositories contain a project's files and version history. Have a project elsewhere? Import a repository.

Required fields are marked with an asterisk (*).

1 General

Owner * vommidapuchinni / Repository name * ELEVATELABS-TASK-4

ELEVATELABS-TASK-4 is available.

Great repository names are short and memorable. How about bookish-octo-meme?

Description

0 / 350 characters

2 Configuration

Choose visibility *
Choose who can see and commit to this repository — Public

Add README
READMEs can be used as longer descriptions. About READMEs — Off

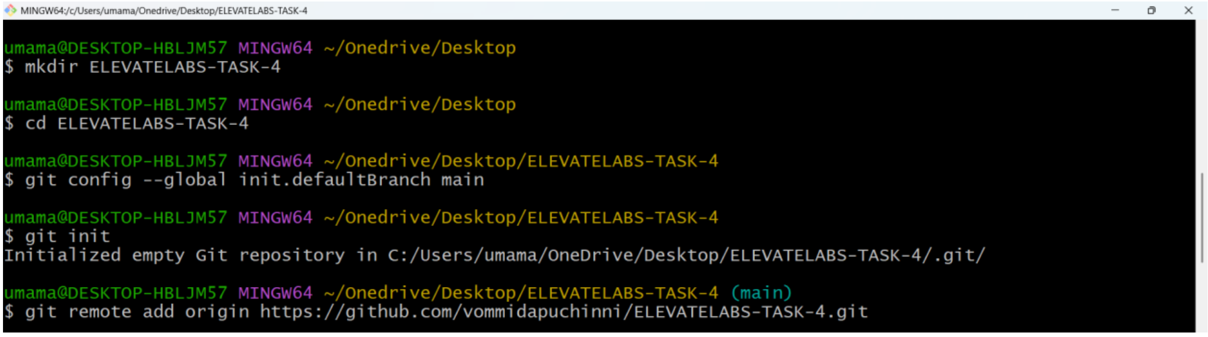
Add .gitignore
.gitignore tells git which files not to track. About ignoring files — No .gitignore

Locally create the repo

Connect Remote Repository

git remote add origin https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git

Links your local repo to GitHub so you can push changes.



```
umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop
$ mkdir ELEVATELABS-TASK-4

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop
$ cd ELEVATELABS-TASK-4

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4
$ git config --global init.defaultBranch main

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4
$ git init
Initialized empty Git repository in C:/Users/umama/OneDrive/Desktop/ELEVATELABS-TASK-4/.git/

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git remote add origin https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
```

Add Files & Make First Commit

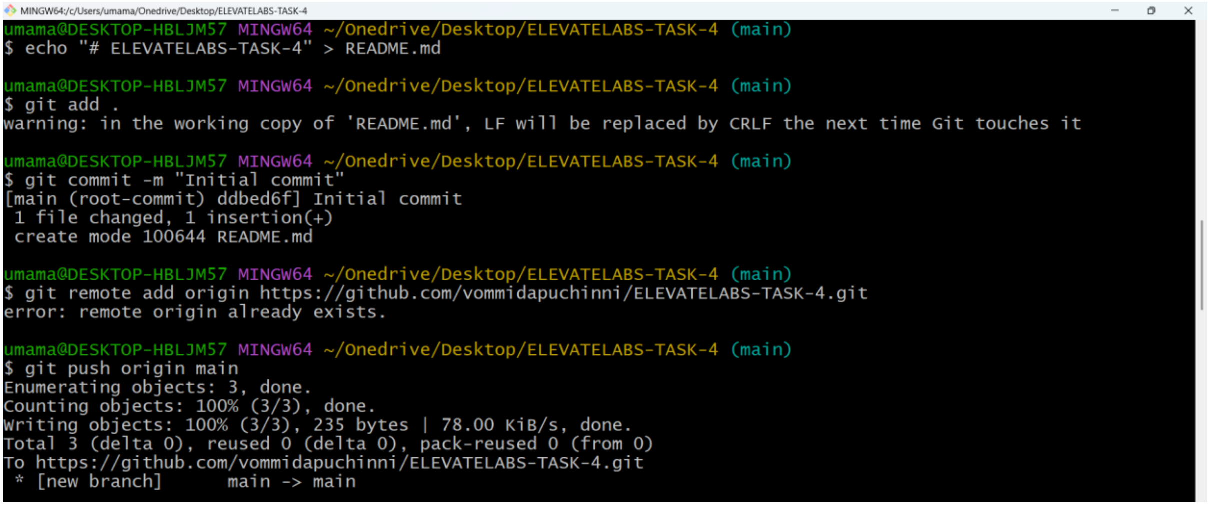
git add .

git commit -m "Initial commit"

Stages and commits all your files with a message describing the changes.

Push to Remote Repository

git push origin main



```
umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ echo "# ELEVATELABS-TASK-4" > README.md

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git add .
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git commit -m "Initial commit"
[main (root-commit) ddbed6f] Initial commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git remote add origin https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
error: remote origin already exists.

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 235 bytes | 78.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
 * [new branch]      main -> main
```

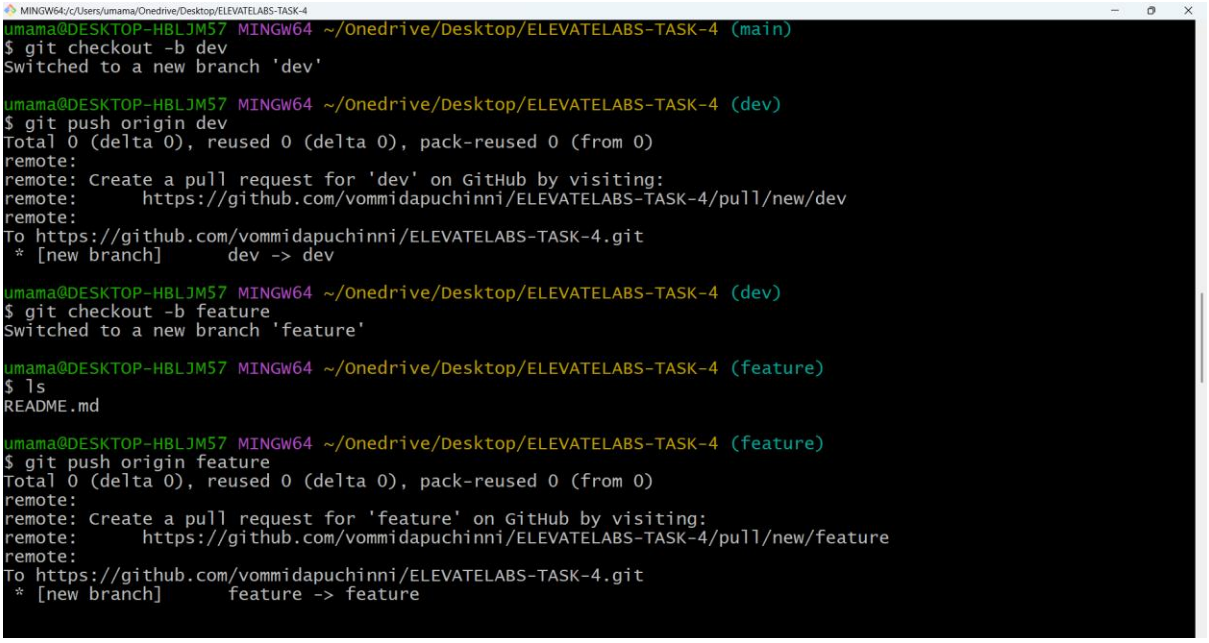
Create New Branches

git checkout -b dev

git push origin dev

git checkout -b feature

git push origin feature



```
umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git checkout -b dev
Switched to a new branch 'dev'

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (dev)
$ git push origin dev
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'dev' on GitHub by visiting:
remote:      https://github.com/vommidapuchinni/ELEVATELABS-TASK-4/pull/new/dev
remote:
To https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
 * [new branch]      dev -> dev

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (dev)
$ git checkout -b feature
Switched to a new branch 'feature'

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ ls
README.md

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ git push origin feature
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature' on GitHub by visiting:
remote:      https://github.com/vommidapuchinni/ELEVATELABS-TASK-4/pull/new/feature
remote:
To https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
 * [new branch]      feature -> feature
```

To simulate a real-world workflow where development happens on feature → dev → main

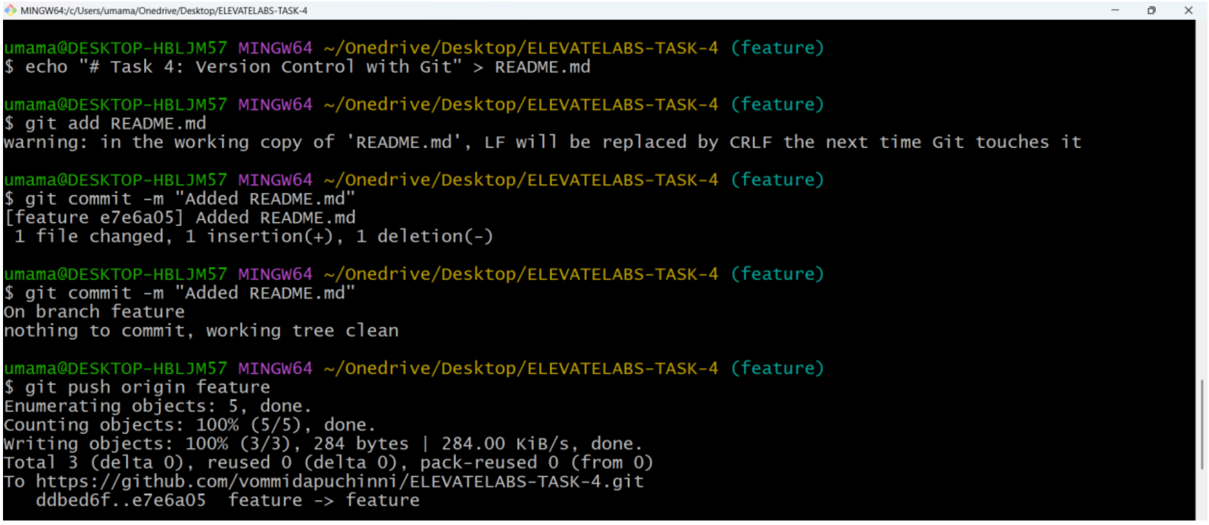
Make a Small Change in feature Branch

echo "# Task 4: Version Control with Git" > README.md

git add README.md

git commit -m "Added README.md"

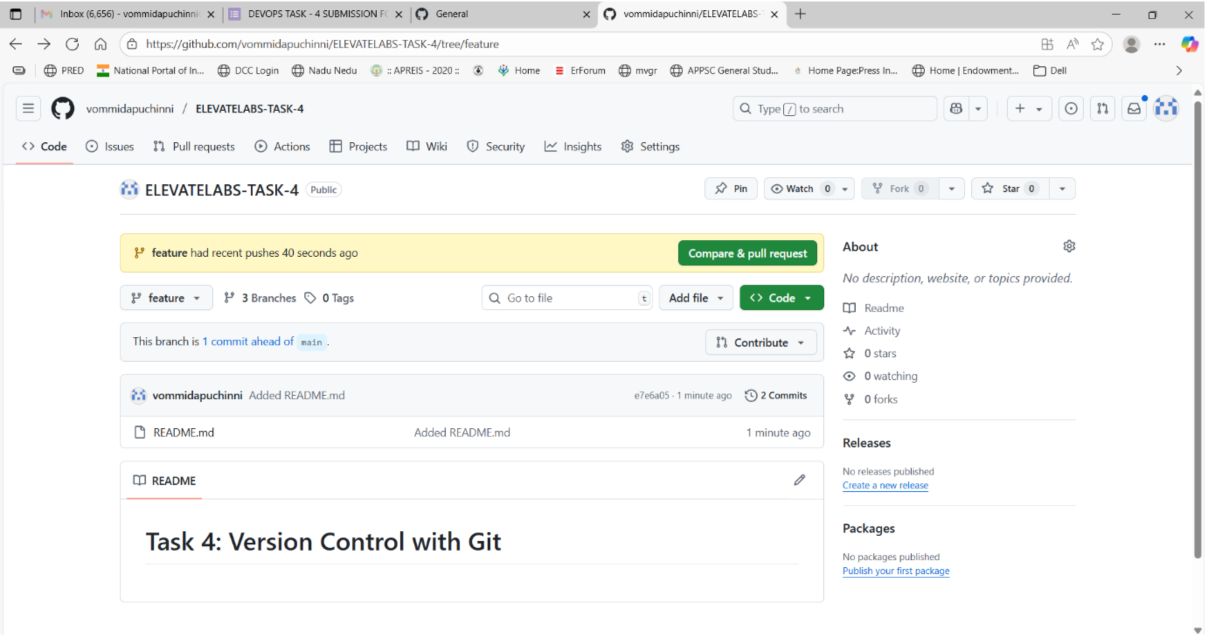
git push origin feature



```
umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ echo "# Task 4: Version Control with Git" > README.md

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ git commit -m "Added README.md"
[feature e7e6a05] Added README.md
 1 file changed, 1 insertion(+), 1 deletion(-)

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ git commit -m "Added README.md"
On branch feature
nothing to commit, working tree clean

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ git push origin feature
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 284 bytes | 284.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
   ddbed6f..e7e6a05  feature -> feature
```

Now Create Pull Request feature → dev

1. Go to your GitHub repository.
2. Click the **Pull Requests** tab.



feature had recent pushes 40 seconds ago

This branch is 1 commit ahead of `main`.

vommidapuchinni Added README.md	e7e6a05 · 1 minute ago	2 Commits
README.md	Added README.md	1 minute ago

No description, website, or topics provided.

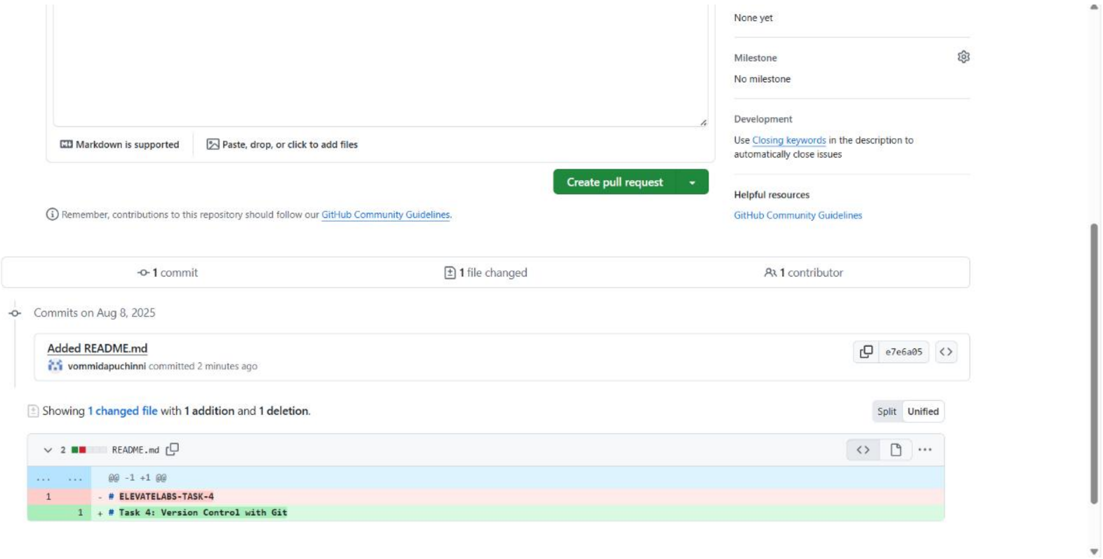
No releases published

No packages published

README

Task 4: Version Control with Git

3. Click **New Pull Request**.
4. Set:
    - Base branch: dev
    - Compare branch: feature
5. You should now see changes!



None yet

No milestone

Use Closing keywords in the description to automatically close issues

Remember, contributions to this repository should follow our GitHub Community Guidelines.

1 commit | 1 file changed | 1 contributor

Commits on Aug 8, 2025

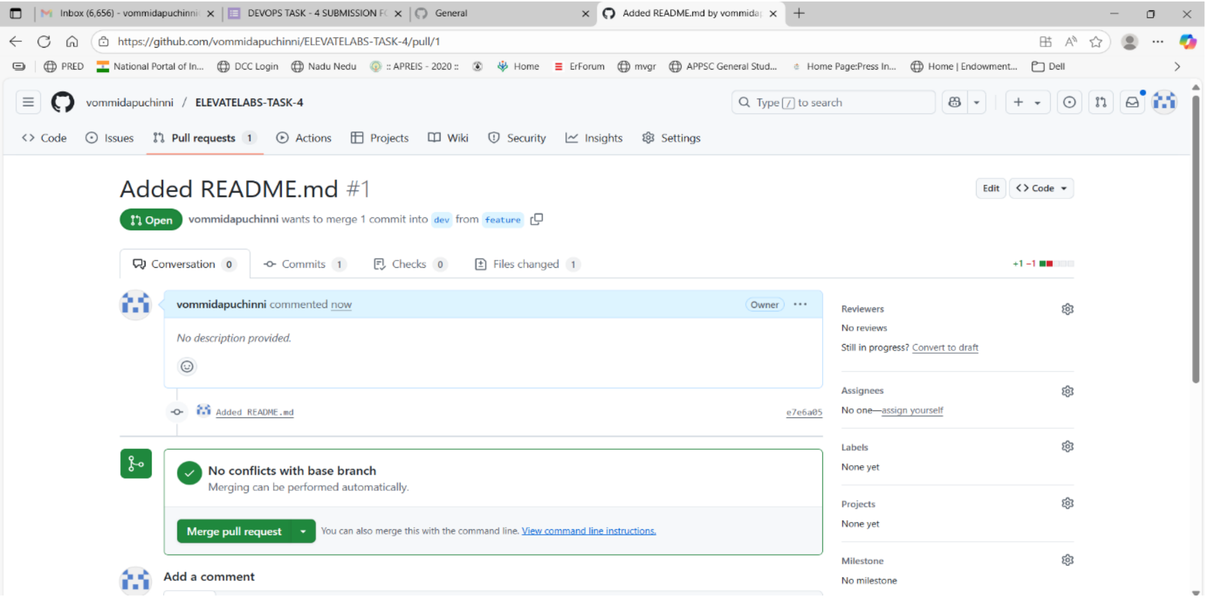
Added README.md
vommidapuchinni committed 2 minutes ago — e7e6a05

Showing 1 changed file with 1 addition and 1 deletion.

```
2 README.md
... ...   @@ -1 +1 @@
1         - # ELEVATELABS-TASK-4
      1   + # Task 4: Version Control with Git
```

6. Click **Create Pull Request → Merge Pull Request → Confirm Merge**

Then Merge dev → main



Added README.md #1

Open vommidapuchinni wants to merge 1 commit into `dev` from `feature`

vommidapuchinni commented now

No description provided.

Added README.md e7e6a05

No conflicts with base branch

Merging can be performed automatically.

You can also merge this with the command line. View command line instructions.

Add a comment

No reviews

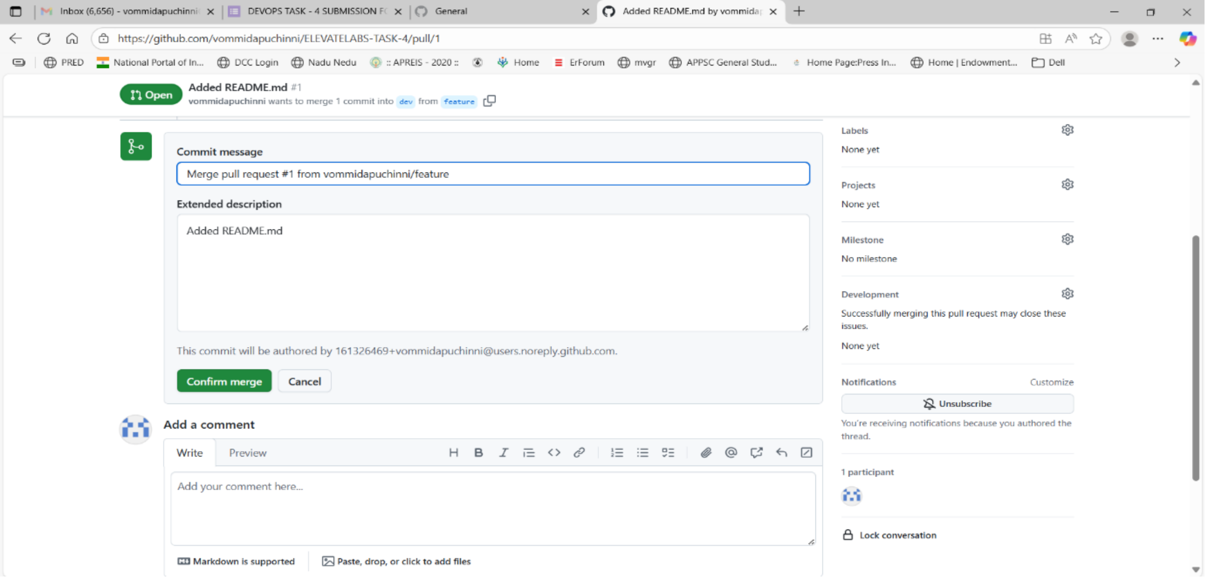
Still in progress? Convert to draft

No one—assign yourself

None yet

None yet

No milestone



Open Added README.md #1

vommidapuchinni wants to merge 1 commit into `dev` from `feature`

Commit message

Merge pull request #1 from vommidapuchinni/feature

Extended description

Added README.md

This commit will be authored by 161326469+vommidapuchinni@users.noreply.github.com.

Add a comment

Add your comment here...

Markdown is supported

Paste, drop, or click to add files

None yet

None yet

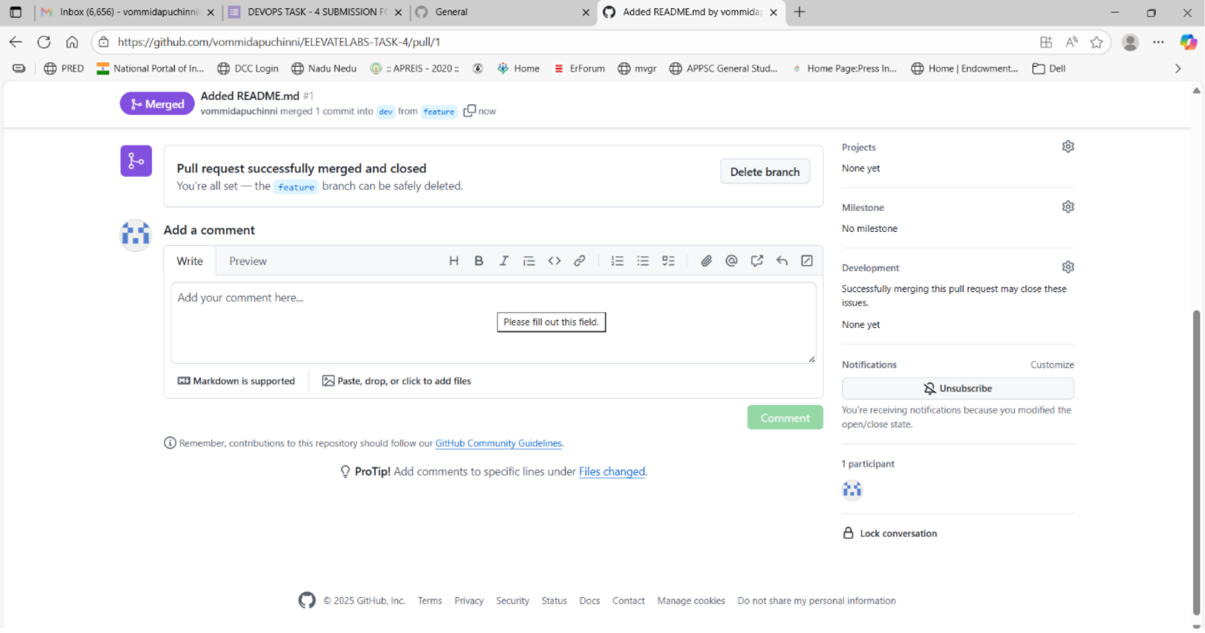
No milestone

Successfully merging this pull request may close these issues.

None yet

You're receiving notifications because you authored the thread.

1 participant



Merged Added README.md #1

vommidapuchinni merged 1 commit into `dev` from `feature` now

Pull request successfully merged and closed

You're all set — the `feature` branch can be safely deleted.

Add a comment

Add your comment here...

Please fill out this field.

Markdown is supported

Paste, drop, or click to add files

Remember, contributions to this repository should follow our GitHub Community Guidelines.

ProTip! Add comments to specific lines under Files changed.

None yet

No milestone

Successfully merging this pull request may close these issues.

None yet

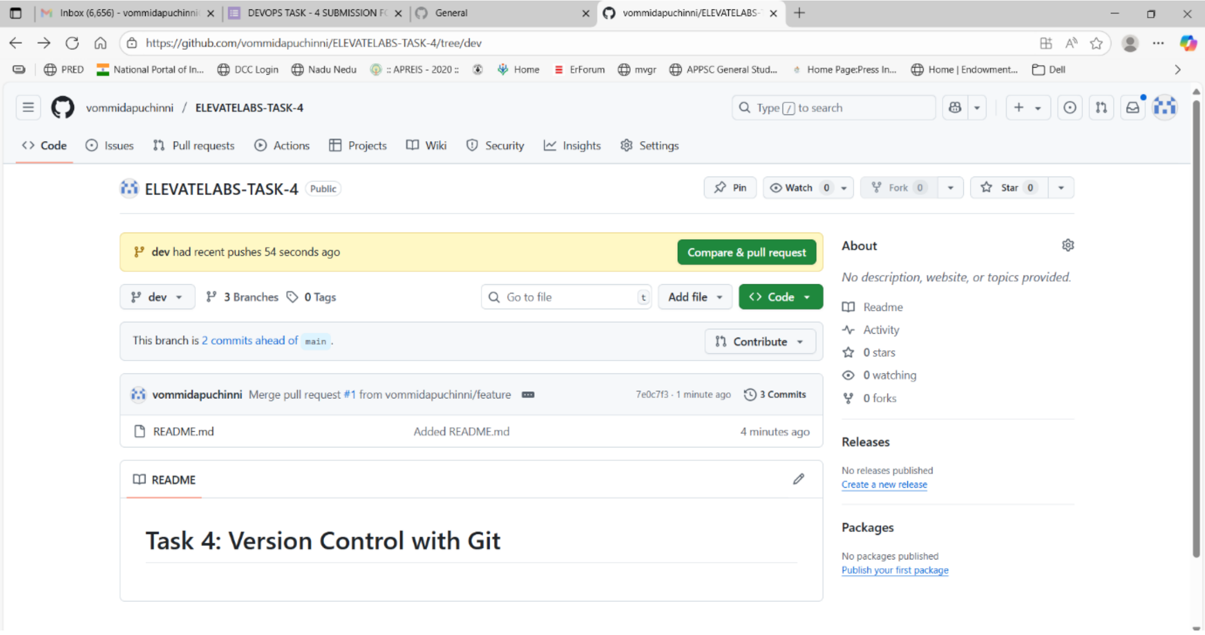
You're receiving notifications because you modified the open/close state.

1 participant

© 2025 GitHub, Inc. Terms Privacy Security Status Docs Contact Manage cookies Do not share my personal information

Repeat the same:

1. New Pull Request



ELEVATELABS-TASK-4 Public

Pin | Watch 0 | Fork 0 | Star 0

dev had recent pushes 54 seconds ago — Compare & pull request

dev | 3 Branches | 0 Tags | Go to file | Add file | Code

This branch is 2 commits ahead of main. — Contribute

vommidapuchinni Merge pull request #1 from vommidapuchinni/feature — 7e0c7f3 · 1 minute ago — 3 Commits

README.md — Added README.md — 4 minutes ago

README

Task 4: Version Control with Git

About

No description, website, or topics provided.

Readme
Activity
0 stars
0 watching
0 forks

Releases

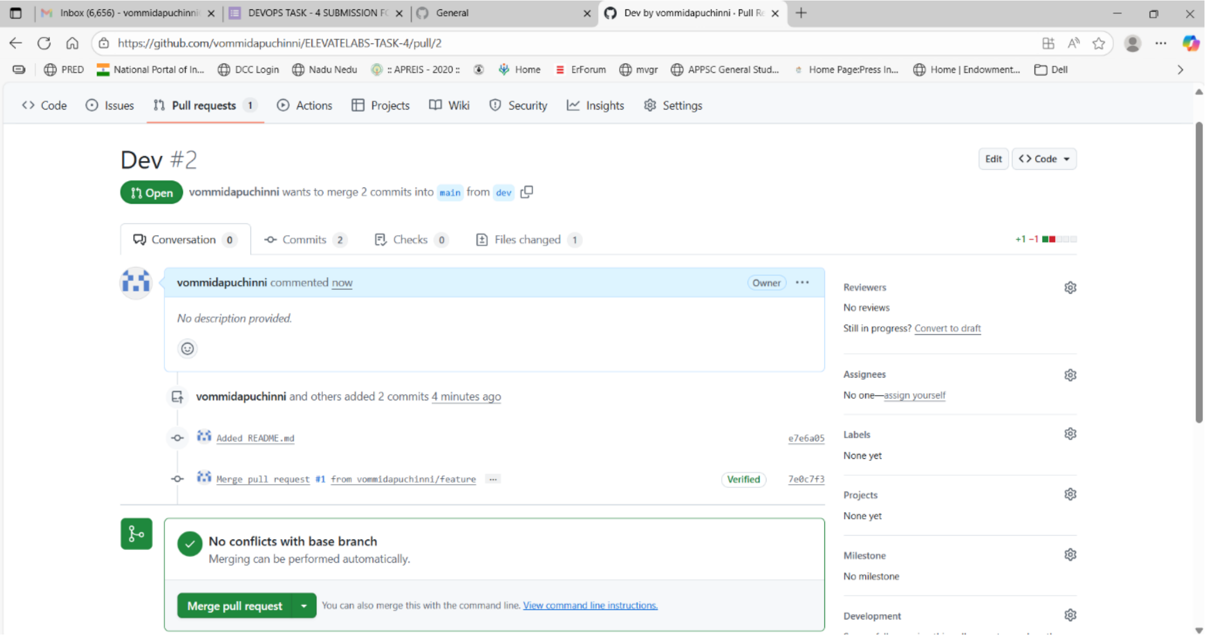
No releases published
Create a new release

Packages

No packages published
Publish your first package

2. Base: main

3. Compare: dev



Dev #2

Open — vommidapuchinni wants to merge 2 commits into main from dev

Conversation 0 | Commits 2 | Checks 0 | Files changed 1 — +1 −1

vommidapuchinni commented now — Owner

No description provided.

vommidapuchinni and others added 2 commits 4 minutes ago

Added README.md — e7e6a05

Merge pull request #1 from vommidapuchinni/feature — Verified — 7e0c7f3

No conflicts with base branch
Merging can be performed automatically.

Merge pull request — You can also merge this with the command line. View command line instructions.

Reviewers
No reviews
Still in progress? Convert to draft

Assignees
No one—assign yourself

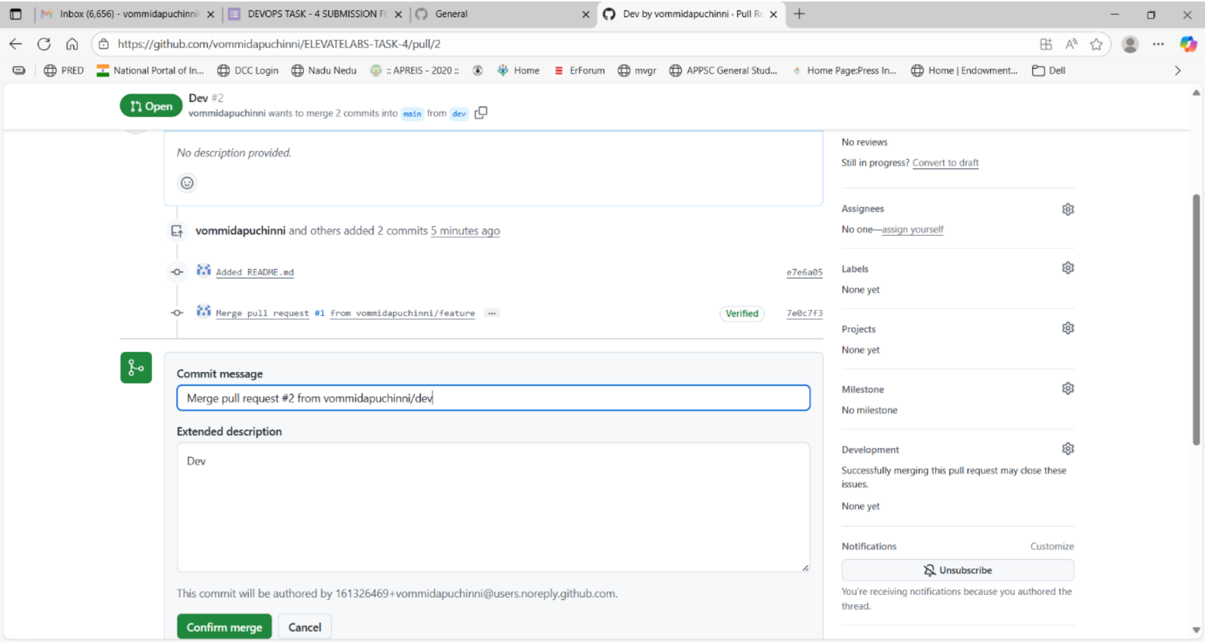
Labels
None yet

Projects
None yet

Milestone
No milestone

Development

4. Merge → Confirm



https://github.com/vommidapuchinni/ELEVATELABS-TASK-4/pull/2

Dev #2

vommidapuchinni wants to merge 2 commits into `main` from `dev`

No description provided.

vommidapuchinni and others added 2 commits 5 minutes ago

`Added README.md` e7e6a05

`Merge pull request #1 from vommidapuchinni/feature` ··· Verified 7e0c7f3

Commit message

Merge pull request #2 from vommidapuchinni/dev

Extended description

Dev

This commit will be authored by 161326469+vommidapuchinni@users.noreply.github.com.

No reviews

Still in progress? Convert to draft

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

Milestone

No milestone

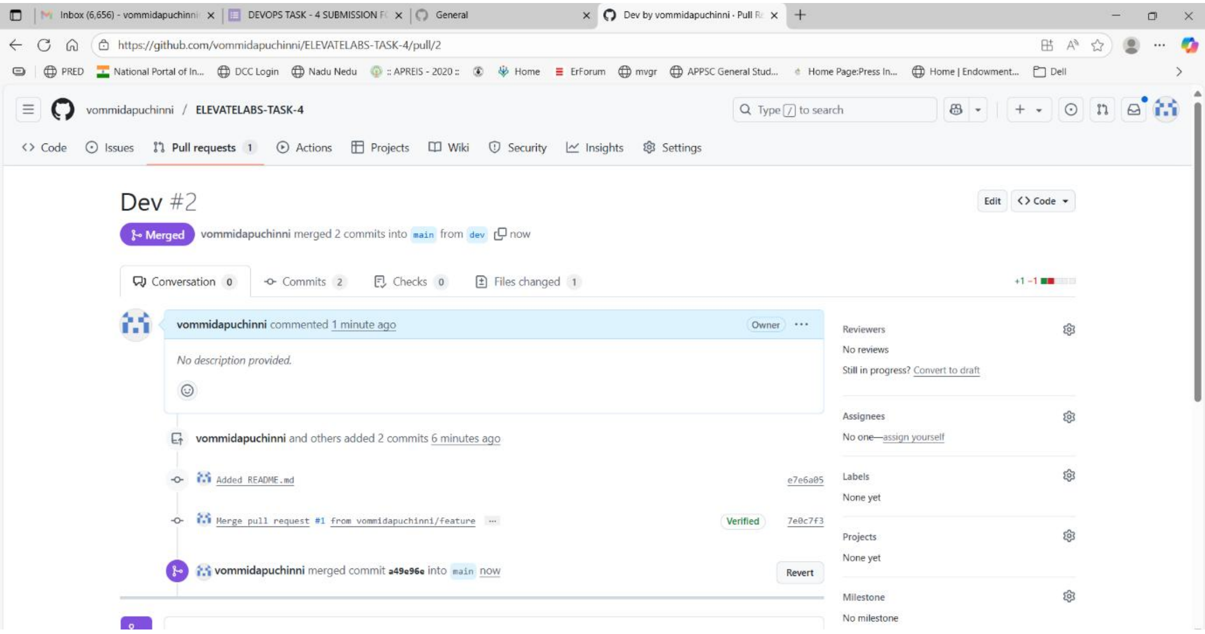
Development

Successfully merging this pull request may close these issues.

None yet

Notifications

You're receiving notifications because you authored the thread.



https://github.com/vommidapuchinni/ELEVATELABS-TASK-4/pull/2

vommidapuchinni / ELEVATELABS-TASK-4

Dev #2

vommidapuchinni merged 2 commits into `main` from `dev` now

vommidapuchinni commented 1 minute ago

No description provided.

vommidapuchinni and others added 2 commits 6 minutes ago

`Added README.md` e7e6a05

`Merge pull request #1 from vommidapuchinni/feature` ··· Verified 7e0c7f3

vommidapuchinni merged commit a49e96e into `main` now

Reviewers

No reviews

Still in progress? Convert to draft

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

Milestone

No milestone

Switch to main Locally

Since you merged everything into main, now switch your local branch:

git checkout main

Pull Latest Changes (Optional but Safe)

Make sure your local main is up-to-date:

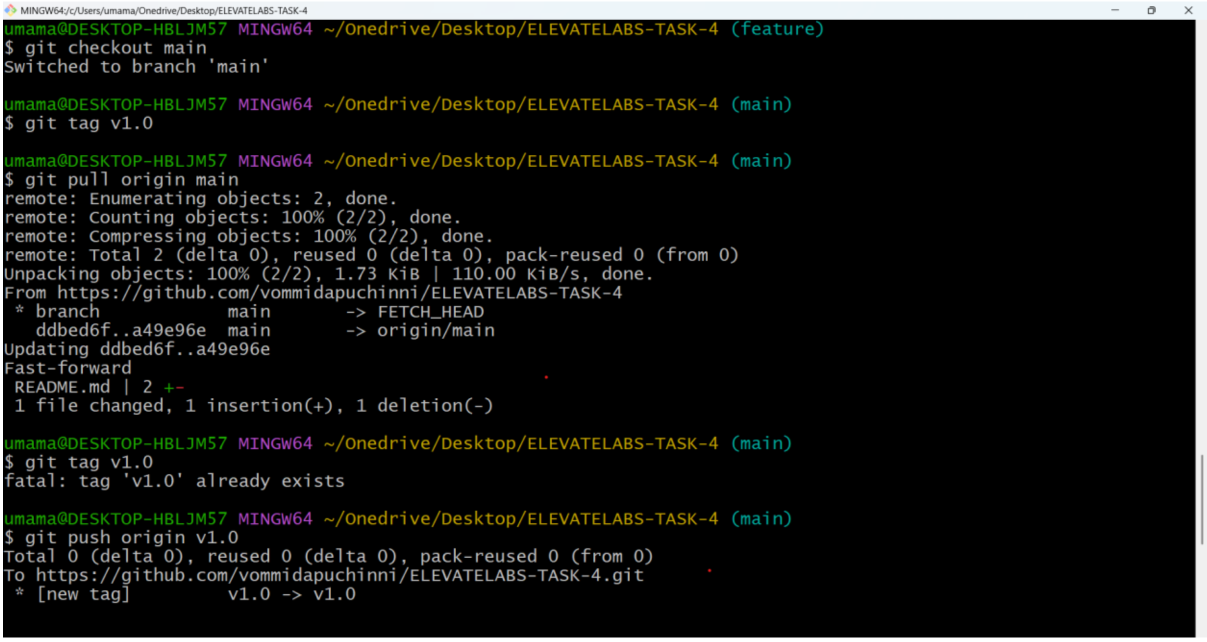
git pull origin main

Create a Tag

Now tag your current main branch (a version marker):

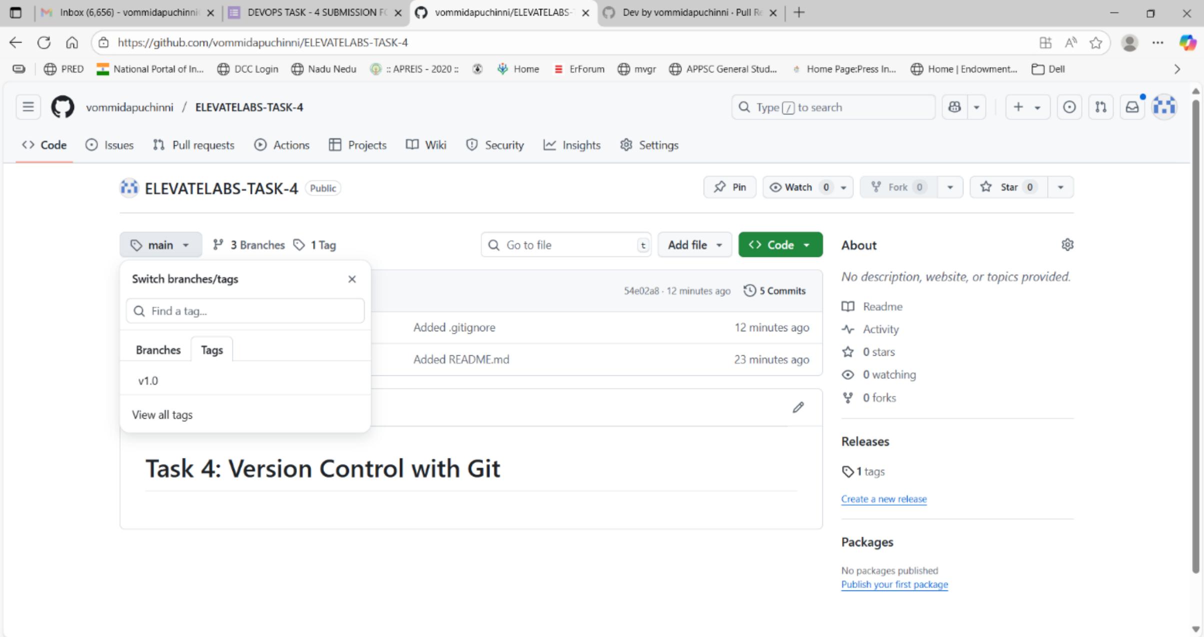
git tag v1.0

git push origin v1.0



MINGW64:/c/Users/umama/Onedrive/Desktop/ELEVATELABS-TASK-4

```
umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (feature)
$ git checkout main
Switched to branch 'main'

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git tag v1.0

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git pull origin main
remote: Enumerating objects: 2, done.
remote: Counting objects: 100% (2/2), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 2 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (2/2), 1.73 KiB | 110.00 KiB/s, done.
From https://github.com/vommidapuchinni/ELEVATELABS-TASK-4
 * branch            main       -> FETCH_HEAD
   ddbed6f..a49e96e  main       -> origin/main
Updating ddbed6f..a49e96e
Fast-forward
 README.md | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git tag v1.0
fatal: tag 'v1.0' already exists

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git push origin v1.0
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
 * [new tag]         v1.0 -> v1.0
```



https://github.com/vommidapuchinni/ELEVATELABS-TASK-4

vommidapuchinni / ELEVATELABS-TASK-4

ELEVATELABS-TASK-4 Public

main · 3 Branches · 1 Tag

Switch branches/tags

Branches | Tags

v1.0

View all tags

54e02a8 · 12 minutes ago · 5 Commits

Added .gitignore	12 minutes ago
Added README.md	23 minutes ago

Task 4: Version Control with Git

About

No description, website, or topics provided.

Readme

Activity

0 stars

0 watching

0 forks

Releases

1 tags

Create a new release

Packages

No packages published

Publish your first package

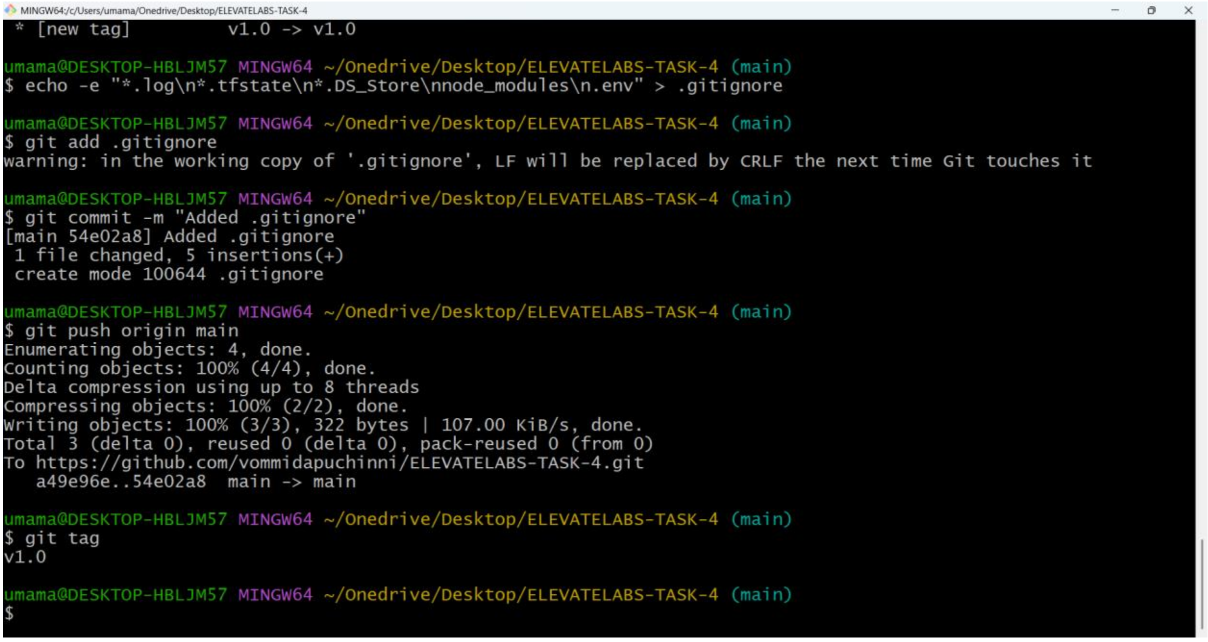
Add a .gitignore File

echo -e "*.log\n*.tfstate\n*.DS_Store\nnode_modules\n.env" > .gitignore

git add .gitignore

git commit -m "Added .gitignore"

git push origin main



```
 * [new tag]         v1.0 -> v1.0

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ echo -e "*.log\n*.tfstate\n*.DS_Store\nnode_modules\n.env" > .gitignore

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git add .gitignore
warning: in the working copy of '.gitignore', LF will be replaced by CRLF the next time Git touches it

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git commit -m "Added .gitignore"
[main 54e02a8] Added .gitignore
 1 file changed, 5 insertions(+)
 create mode 100644 .gitignore

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git push origin main
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% (3/3), 322 bytes | 107.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/vommidapuchinni/ELEVATELABS-TASK-4.git
   a49e96e..54e02a8  main -> main

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$ git tag
v1.0

umama@DESKTOP-HBLJM57 MINGW64 ~/Onedrive/Desktop/ELEVATELABS-TASK-4 (main)
$
```

Tag marks a specific point in history, like a version release.

Git & GitHub Terminology:

- Git: A tool that tracks changes in your code.
- GitHub: A website to store and share your code online.
- Repository (Repo): A project folder that Git tracks.
- Remote: The online version of your Git repo on GitHub.
- Clone: Copy a GitHub repo to your computer.
- Init: Start a new Git project in your folder.
- Add: Select files to include in the next commit.
- Commit: Save your changes with a message.
- Push: Upload your changes to GitHub.
- Pull: Download updates from GitHub to your computer.
- Branch: A separate copy of your code to work on something new.
- Checkout: Switch between branches.
- Merge: Combine changes from one branch into another.
- Pull Request (PR): Ask to merge your branch into another.
- Tag: A label to mark a specific version or release.
- Release: A package of your code at a tagged version.
- .gitignore: A file that tells Git to skip certain files.

Conclusion: This project helped me learn and apply Git and GitHub basics with real-world version control practices.