About GitHub CLI

GitHub CLI is an open-source tool for using GitHub from your computer's command line.

GitHub CLI can simplify the process of adding an existing project to GitHub using the command line.

GitHub CLI is a command-line tool that brings pull requests, issues, GitHub Actions, and other GitHub features to your terminal, so you can do all your work in one place.

About GitHub CLI

GitHub CLI is an open-source tool for using GitHub from your computer's command line. When you're working from the command line, you can use the GitHub CLI to save time and avoid switching context.

GitHub CLI includes GitHub features such as:

- View, create, clone, and fork repositories
- Create, close, edit, and view issues and pull requests
- Review, diff, and merge pull requests
- Run, view, and list workflows
- Create, list, view, and delete releases
- Create, edit, list, view, and delete gists
- List, create, delete, and connect to a codespace

For more information about what you can do with GitHub CLI, see the GitHub CLI manual.

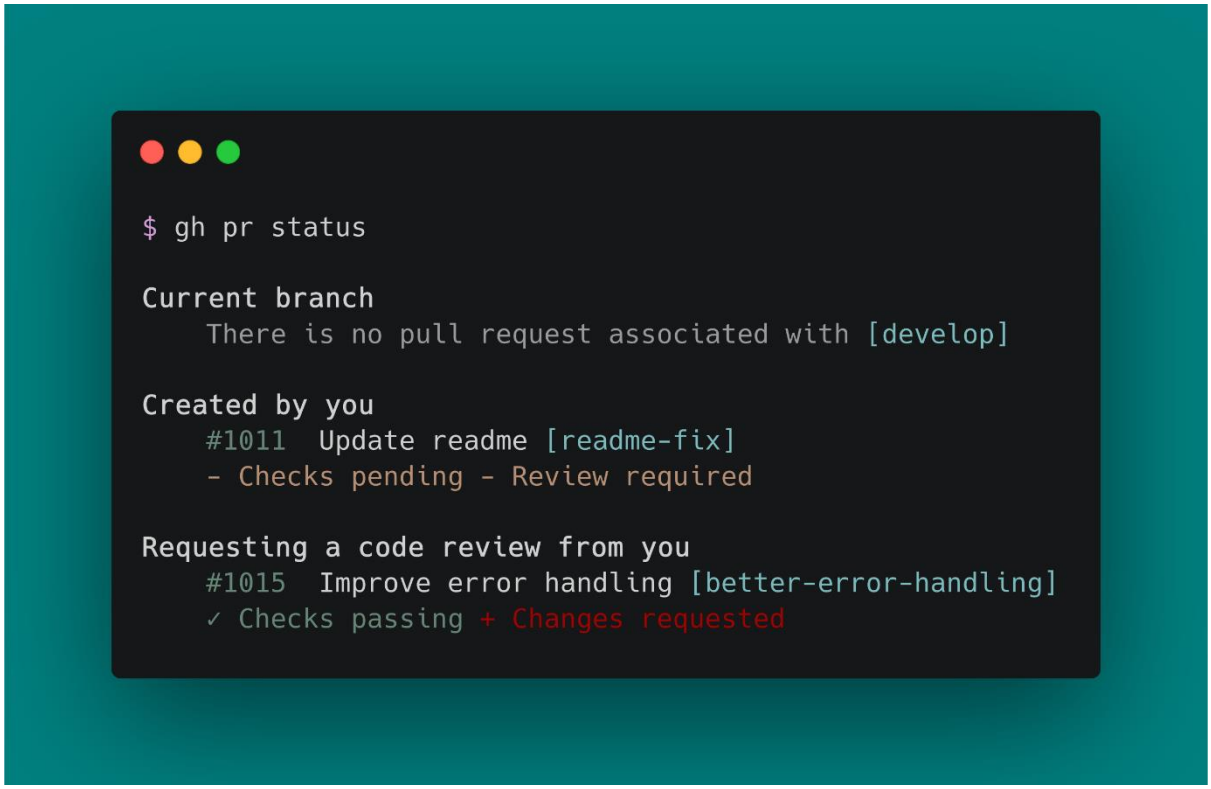
Installing GitHub CLI

For installation instructions for GitHub CLI, see the GitHub CLI repository.

Sharing feedback

If you have feedback or feature requests, you can open an issue in the `cli/cli` repository.

gh is GitHub on the command line. It brings pull requests, issues, and other GitHub concepts to the terminal next to where you are already working with `git` and your code.



GitHub CLI is available for repositories hosted on GitHub.com and GitHub Enterprise Server 2.20+, and to install on macOS, Windows, and Linux.

Git Add

The `git add` command adds new or changed files in your working directory to the Git staging area.
`git add` is an important command - without it, no `git commit` would ever do anything. Sometimes, `git add` can have a reputation for being an unnecessary step in development. But in reality, `git add` is an important and powerful tool. `git add` allows you to shape history without changing how you work.

When do you use `git add`?

```
git add README.md
```

As you're working, you change and save a file, or multiple files. Then, before you commit, you must `git add`. This step allows you to choose what you are going to commit. Commits should be logical, atomic units of change - but not everyone works that way. Maybe you are making changes to files that *aren't* logical or atomic units of change. `git add` allows you to systematically shape your commits and your history anyway.

What Does Git Add Do?

`git add [filename]` selects that file, and moves it to the staging area, marking it for inclusion in the next commit. You can select all files, a directory, specific files, or even specific parts of a file for staging and commit.
This means if you `git add` a deleted file the *deletion* is staged for commit. The language of "add" when you're actually "deleting" can be confusing. If you think or use `git stage` in place of `git add`, the reality of what is happening may be more clear. `git add` and `git commit` go together hand in hand. They don't work when they aren't used together. And, they both work best when used thinking of their joint functionality.

How to Use `git add`

Common usages and options for `git add`

- `git add <path>`: Stage a specific directory or file
- `git add .`: Stage all files (that are not listed in the `.gitignore`) in the entire repository
- `git add -p`: Interactively stage hunks of changes

You can see all of the many options with `git add` in git-scm's documentation.

Examples of `git add`

`git add` usually fits into the workflow in the following steps:

1. Create a branch: `git branch update-readme`

2. Checkout to that branch: `git checkout update-readme`
3. Change a file or files
4. Save the file or files
5. Add the files or segments of code that should be included in the next commit: `git add README.md`
6. Commit the changes: `git commit -m "update the README to include links to contributing guide"`
7. Push the changes to the remote branch: `git push -u origin update-readme`

But, `git add` could also be used like:

1. Create a branch: `git branch update-readme`
2. Checkout to that branch: `git checkout update-readme`
3. Change a file or files
4. Save the file or files
5. Add only one file, or one part of the changed file: `git add README.md`
6. Commit the first set of changes: `git commit -m "update the README to include links to contributing guide"`
7. Add another file, or another part of the changed file: `git add CONTRIBUTING.md`
8. Commit the second set of changes: `git commit -m "create the contributing guide"`
9. (Repeat as necessary)
10. Push the changes to the remote branch: `git push -u origin update-readme`

`git add` All Files

Staging all available files is a popular, though risky, operation. This can save time, but the risks are two-fold:

Poorly thought out history

By staging all available changes, the clarity of your history will likely suffer. Being able to shape your history is one of the greatest advantages of using Git. If your commits are too large, contain unrelated changes, or are unclearly described in the commit message, you will lose the benefits of viewing and changing history.

Accidentally staging and committing files

By using an option to add all files at once, you may accidentally stage and commit a file. Most common flags don't add files tracked in the `.gitignore` file. But, any file not listed in the `.gitignore` file will be staged and committed. This applies to large binary files, and files containing sensitive information like passwords or authentication tokens.

Deciding to stage all files

If the time is right to stage all files, there are several commands that you can choose from. As always, it's very important to know what you are staging and committing.

- `git add -A`: stages all files, including new, modified, and deleted files, including files in the current directory *and* in higher directories that still belong to the same git repository
- `git add .`: adds the entire directory recursively, including files whose names begin with a dot
- `git add -u`: stages modified and deleted files only, NOT new files

•	New files	Modified files	Deleted files	Files with names beginning with a dot	Current directory	Higher directories
`git add -A`	Yes	Yes	Yes	Yes	Yes	Yes
`git add .`	Yes	Yes	Yes	Yes	Yes	No
`git add -u`	No	Yes	Yes	Yes	Yes	Yes

`git add` A Folder or Specific File

The safest and clearest way to use `git add` is by designating the specific file or directory to be staged. The syntax for this could look like:

`git add directory/`: Stage all changes to all files within a directory titled `directory`
`git add README.md`: Stage all changes within the `README.md` file

Undo Added Files

Before undoing a `git add`, you should first be sure that you won't lose any work. There's no way to "revert" an add in the same way you can revert a commit, but you can move the files out of the staging area.
For example, if you have a staged file, and then you make more changes to that file in your working directory. Now, the versions in your working directory and your staging area are different. If you take action to remove the changed version of the file from the staging area, the changes that were in your working directory *but not* staged will be overwritten.

To avoid this, first stage all changes, then unstage them together, or commit the changes and reset back before the commit happened.

Using `git reset` to undo `git add`
`git reset` is a flexible and powerful command. One of its many use cases is to move changes *out* of the staging area. To do this, use the "mixed" level of reset, which is the default.
To move staged changes from the staging area to the working directory without affecting committed history, first make sure that you don't have any additional changes to the files in question as mentioned above. Then, type `git reset HEAD` (aka `git reset --mixed HEAD`).

Related Terms

- `git status`: Always a good idea, this command shows you what branch you're on, what files are in the working or staging directory, and any other important information.
- `git checkout [branch-name]`: Switches to the specified branch and updates the working directory.
- `git commit -m "descriptive message"`: Records file snapshots permanently in version history.
- `git push`: Uploads all local branch commits to the remote.

COMMONLY USED GIT COMMANDS IN IT COMPANY :

Install the GitHub cli winget
winget install --id GitHub.cli

Check the version
git –version

Login & Authentication
gh auth login

Show status of relevant pull requests
gh pr status

Clone the Repository
gh repo clone anandjha90/End-To-End-Data-Analytics-Project

Change or go the existing working directory
cd directory_path

Add the files or segments of code that should be included in the next commit:
git add "filename"

Commit the first set of changes:

git commit -m "updating files"

Push the changes to the remote branch:

git push origin main

git push -u origin update-readme

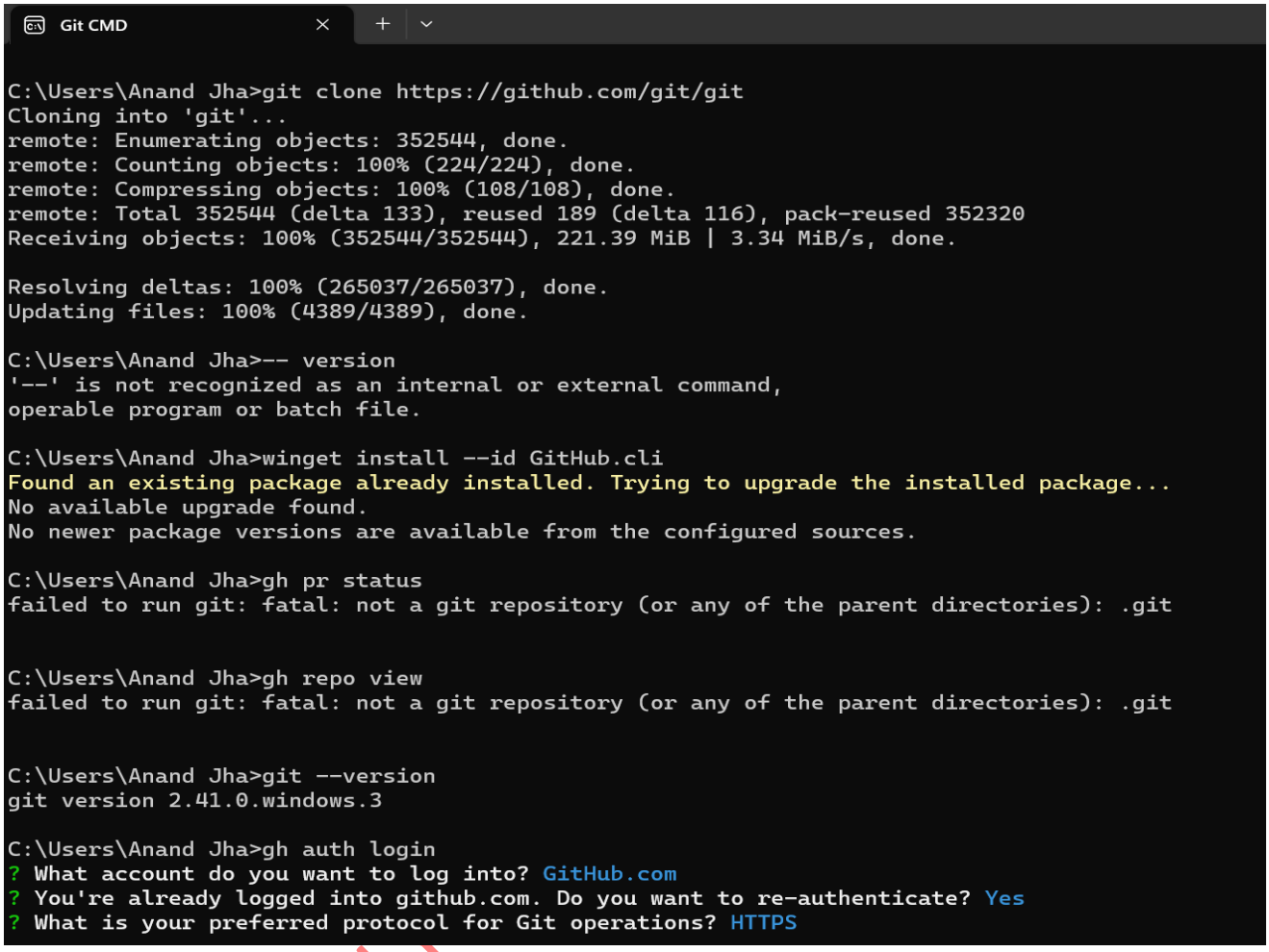
Remove files from repository not from your local system

git rm --cached "filename"

git commit -m "comments please”

git push origin main

GIT CLI OUTPUT :


Git CMD
C:\Users\Anand Jha>git clone https://github.com/git/git
Cloning into 'git'...
remote: Enumerating objects: 352544, done.
remote: Counting objects: 100% (224/224), done.
remote: Compressing objects: 100% (108/108), done.
remote: Total 352544 (delta 133), reused 189 (delta 116), pack-reused 352320
Receiving objects: 100% (352544/352544), 221.39 MiB | 3.34 MiB/s, done.
Resolving deltas: 100% (265037/265037), done.
Updating files: 100% (4389/4389), done.
C:\Users\Anand Jha>-- version
'--' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\Anand Jha>winget install --id GitHub.cli
Found an existing package already installed. Trying to upgrade the installed package...
No available upgrade found.
No newer package versions are available from the configured sources.
C:\Users\Anand Jha>gh pr status
failed to run git: fatal: not a git repository (or any of the parent directories): .git
C:\Users\Anand Jha>gh repo view
failed to run git: fatal: not a git repository (or any of the parent directories): .git
C:\Users\Anand Jha>git --version
git version 2.41.0.windows.3
C:\Users\Anand Jha>gh auth login
? What account do you want to log into? GitHub.com
? You're already logged into github.com. Do you want to re-authenticate? Yes
? What is your preferred protocol for Git operations? HTTPS
? Authenticate Git with your GitHub credentials? Yes
? How would you like to authenticate GitHub CLI? Login with a web browser
! First copy your one-time code: CBAB-4C9F
Press Enter to open github.com in your browser...
✓ Authentication complete.
- gh config set -h github.com git_protocol https
✓ Configured git protocol
✓ Logged in as anandjha90


```
C:\Users\Anand Jha>gh repo clone anandjha90/Women-s-Clothing-E-Commerce-Reviews
Cloning into 'Women-s-Clothing-E-Commerce-Reviews'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 9 (delta 1), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (9/9), 2.75 MiB | 2.23 MiB/s, done.
Resolving deltas: 100% (1/1), done.

C:\Users\Anand Jha>cd Women-s-Clothing-E-Commerce-Reviews

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git add Introduction to Github.pptx
fatal: pathspec 'Introduction' did not match any files

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git add "Introduction to Github.pptx"

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git commit -m "adding files"
[main fd18e20] adding files
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Introduction to Github.pptx

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git push origin master
error: src refspec master does not match any
error: failed to push some refs to 'https://github.com/anandjha90/Women-s-Clothing-E-Commerce-Reviews.git'

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 1.12 MiB | 1009.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/anandjha90/Women-s-Clothing-E-Commerce-Reviews.git
```

```
C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git rm --cached "Introduction to Github.pptx"
rm 'Introduction to Github.pptx'

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git commit -m "removing file Introduction to GitHub as no longer needed"
[main 1428004] removing file Introduction to GitHub as no longer needed
 1 file changed, 0 insertions(+), 0 deletions(-)
 delete mode 100644 Introduction to Github.pptx

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 254 bytes | 254.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/anandjha90/Women-s-Clothing-E-Commerce-Reviews.git
   fd18e20..1428004  main -> main

C:\Users\Anand Jha\Women-s-Clothing-E-Commerce-Reviews>
```