

Git remote summary

What's a remote?

remote is a **COPY OF THE MAIN REPO SOMEWHERE ELSE.**

That means that you can have a remote repo on your local machine.

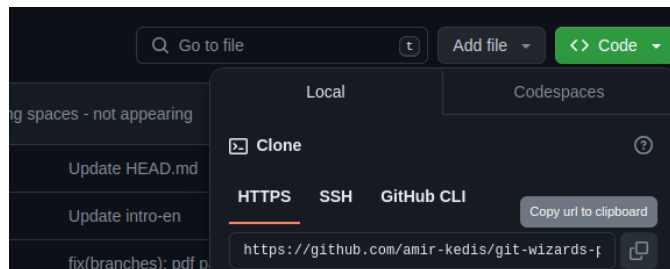
git vs github

github is used with git for online backup.

To link your local repo with a remote one:

```
git init
git remote add <remote-name> <url>
```

or simply



```
git clone <uri> <folder-name>
```

this will create a folder with git initialized in it

git fetch

```
git fetch
```

Here's what happens when you run `git fetch`:

1. Git contacts the remote repository.

2. It retrieves any new commits, branches, or tags that exist on the remote repository but are not present in your local repository.
3. It updates your local repository's remote-tracking branches (e.g., `origin/main`) to reflect the state of the remote repository.

However, the command does not:

- Change the state of your current working branches.
- Merge any changes into your local branches.
- Modify any of your local files or commit history.

In summary: fetch is used to update all of the remote tracking branches as they are not updated automatically



you can then merge these changes using `git merge`

git pull

To merge the remote changes into your local branches:

```
git pull <remote> <branch>
```



git pull is a combination of `git fetch` and `git merge`

git push

It's now the case that you want to upload your changes to the remote repo

```
git push <remote> <branch>
```

merge conflicts

merge conflicts happen when making different changes to the same line of the same file, or when one person edits a file and another person deletes the

same file (**git can't automatically merge**).

This is how files with conflicts look like:

```
<<<<<< HEAD
Hello from local
=====
Hello from remote.
>>>>>> 3481fb2d429347f009646b1456375e6685c1a36e
```

<<<<<< HEAD

Hello from local

=====

Hello from remote.

=====

**Your version has these
changes**

>>>>>>

3481fb2d429347f009646b1456375e6685c1a36e

and the remote has these changes

To resolve a merge conflict you either:

- accept your changes
- accept the remote changes
- combine both
- add completely new line