USING Github

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Pulling from a repository

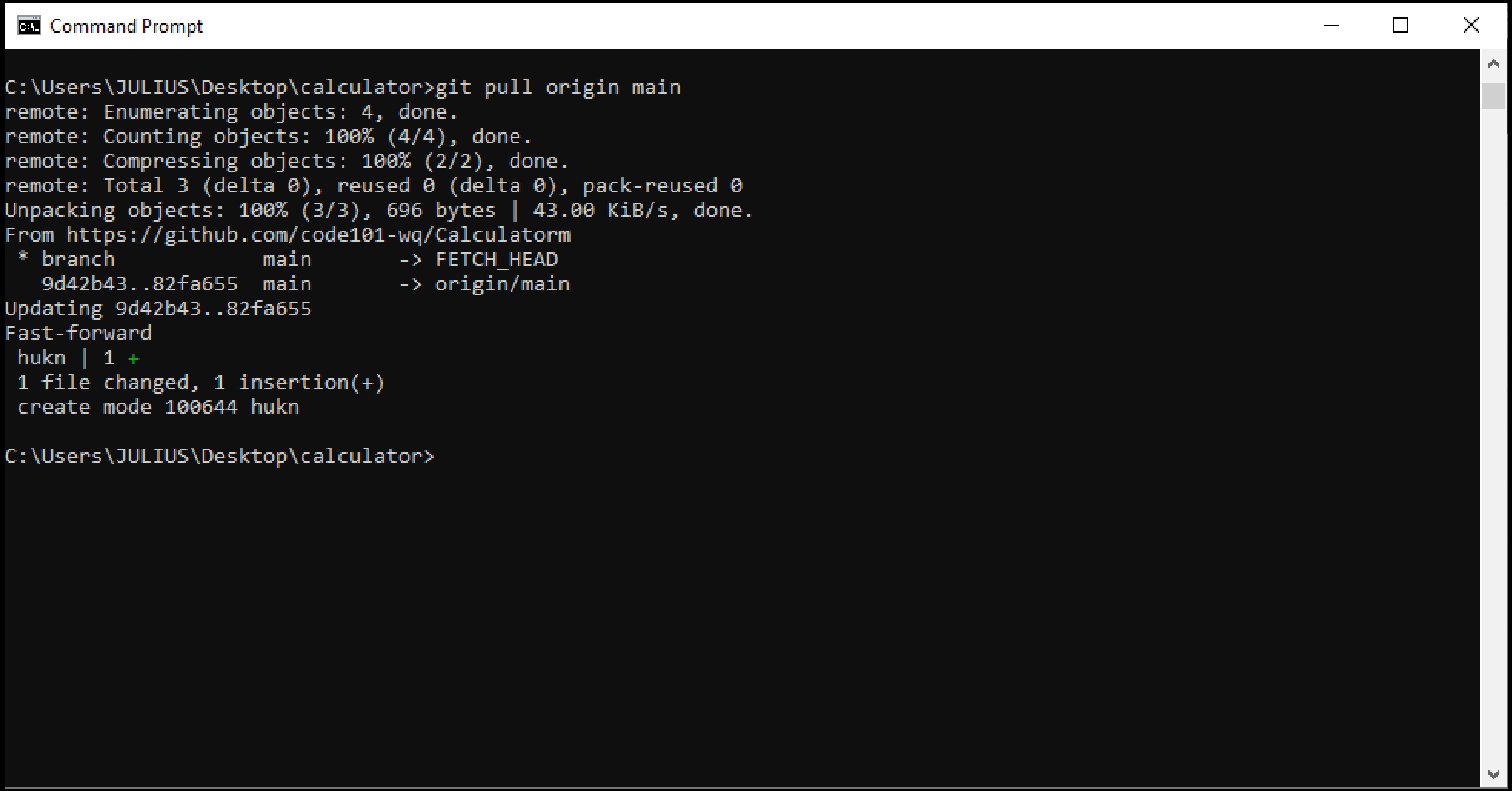
Push takes your branch and copies all its commits to a remote branch. It also creates the branch if it doesn’t exist on the server yet. Pull is just that, but backward; it looks at a remote branch and copies the commits on it to your local repository. It’s just an exchange of commits; push if it’s from local to remote, and pull if it’s from remote to local.

The Syntax is: git pull <remote_name> <branch_name>

For example, if you wanted to get the commits from the master branch on GitHub, you would have to execute the command while checking out the master branch:

```
git pull origin master
```

Pulling from a repository



```
C:\Users\JULIUS\Desktop\calculator>git pull origin main
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 696 bytes | 43.00 KiB/s, done.
From https://github.com/code101-wq/Calculatorm
 * branch            main       -> FETCH_HEAD
   9d42b43..82fa655  main       -> origin/main
Updating 9d42b43..82fa655
Fast-forward
 hukn | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 hukn

C:\Users\JULIUS\Desktop\calculator>
```

Pull request

- This is a widely used feature in GitHub and it enables you to contribute to anyone's project
- Should in case you are not a collaborator to a project you can do a pull request which can grant you access to that project
- What you need to do is to fork the project which is creating a copy of that project in your account
- After forking the project you then clone it in to your local repository
- If you did not find out how to do forking and cloning then check out the fork and clone document.

Pull Request

In the last example, there is a new call to action on the page, right above the list of branches. It shows the name of the branch that you just created, and a big button for creating a PR. Click the button to continue; you should get to the Pull Request creation form,

You can note that the PR creation form is very similar to the issue creation form.

On the right, you can find the same information about assignees and labels; they work exactly the same. On the bottom of the page, you can see the commits to be applied by the Pull Request; and if you scroll down, you'll find the differences between the versions.

After you create a Pull request, the reviewer can then review the changes. After the review, if the changes are great, the branch will be merged with the master branch

Git Merge

The changes made to the data-preprocessing will only be on the branch until we merge the branch with the master branch. To merge the two branches, we use the git merge command,

To do that, run the command below;

1. Git status to check the status of the repository. As shown in the figure below, we are still in the data- preprocessing branch2. Run git log to check the project history.

3. As you can see in the figure above, HEAD now points to the last commit of our new branch; which means that every commit we create will have that as a parent. You will also notice that the master didn’t change; that’s because we only worked on our newly created branch. Now that we are satisfied with our fix, let’s merge the branch to the master branch so we can test it. To merge our branch into master, we have to first check it out. Hence, switch to the master branch by running the git checkout command.

4. Now let’s try to merge the branch into the master branch. Merging just means reproducing all the commits on one branch on another. To do so, we will use the “git merge” command, followed by the name of the branch being merged.

Git Merge

git merge <name>

Since we are looking to merge “data-preprocessing” into “master,” ourcommand to execute on the master branch is;

git merge data-preprocessing

Let's check the history of the repository by running the “git log” command;

As you can see, “HEAD“ now points to “develop” because it’s the checked-out branch. You can also notice that master and data-preprocessing now point to the same commit; that’s because of the merge.

The changes made now are only on the local repository. Therefore, to push the changes to the remote repository, we use the git push command.

git push