

Version 1

Author: Villiam Holger Bo

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GitHub guide

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Good words to know:

Clone:

- Copy a repo from GitHub to a directory on your laptop
- Create a working tree.

Working Tree:

- The directory containing files you can edit

Commit:

- Copy the files from your working tree into your local repo.

Push:

- Copy your local repo to GitHub's repo

Fetch:

- Update your local repo from GitHub's repo

Pull:

- Update your working tree from your local repo.

Branches

Master Branche

The master shall always run/work without bugs. This is the actual project. One shall never work directly on the master branch

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Branche from master

Each task has its own branch.

A branch from master is the working space where you add whatever is needed to complete a task. When your task is done, you shall merge the current master branch into your working branch (someone else may have added something in the meantime). Once your branch is working without bugs with the newest version of the master branch merged. You can merge your working branch into the master.

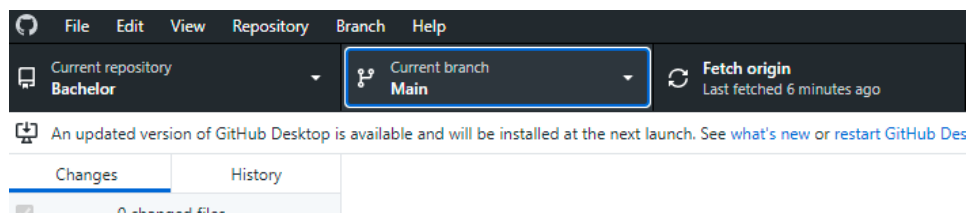
Local repo / online GitHub repo

LOCAL repository is the version of the repository that is on YOUR computer.

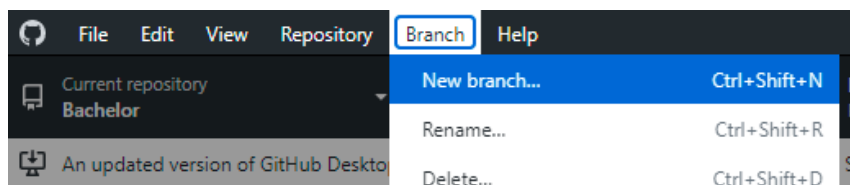
ONLINE repository is the “True” repository we want to update as our work proceeds.

Creation of Branch.

You have a new task to complete. You start by standing in the Main branch



Then create a new branch



Name the branch as follows Task_NameOfTask_MyName. Make sure to branch from the Main branch and NOT one the others. The blue is the chosen branch to branch from.

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Create a branch

×

Name

Task_NameOfTask_MyName

Create branch based on...

Main

The default branch in your repository. Pick this to start on something new that's not dependent on your current branch.

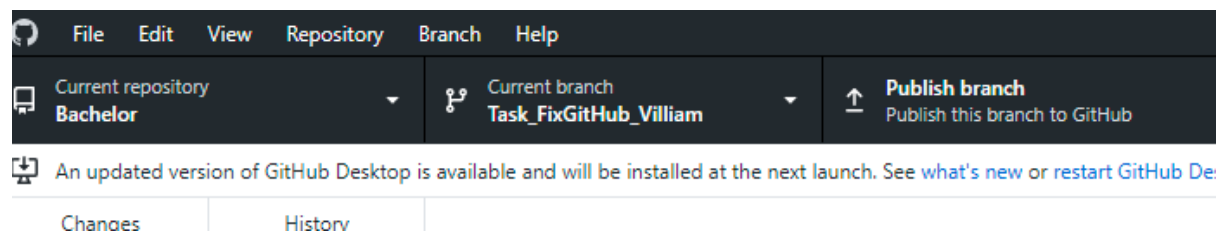
TestBranch_1

The currently checked out branch. Pick this if you need to build on work done on this branch.

Create branch

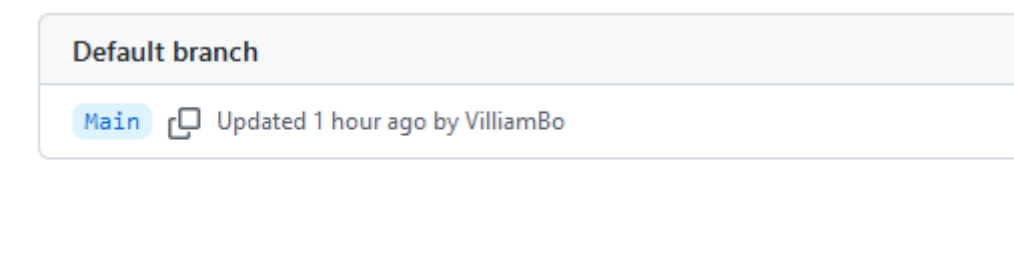
Cancel

A new branch is now created in your LOCAL repository, and you are standing in that branch. “Current branch Task_NameOfBranch_Name”



Note the new branch is NOT in the ONLINE repository. Verify by visit:

<https://github.com/VilliamBo/Bachelor> then click “Code” → “Branch”  1 branch . Here you will see all active branches. But yours is not there yet.

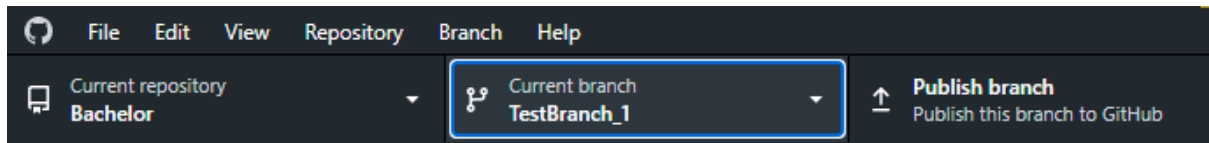


Go to desktop and click “Publish branch”

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On the website you can now see the branches is not only on your LOCAL repository, but on the ONLINE as well.

Default branch				
Main	Updated 1 hour ago by VilliamBo	0 0	Default	
Your branches				
TestBranch_1	Updated 1 hour ago by VilliamBo	0 0	New pull request	
Task_FixGitHub_Villiam	Updated 1 hour ago by VilliamBo	0 0	New pull request	
Active branches				
TestBranch_1	Updated 1 hour ago by VilliamBo	0 0	New pull request	
Task_FixGitHub_Villiam	Updated 1 hour ago by VilliamBo	0 0	New pull request	

Merging

On your local computer your work can be made two places.

1. Directly in the local repository folder.
2. Somewhere else on your computer. (This is a good idea if you are scared to fuckup. But a bit complicated in other situations...)

If you work directly in the local repository folder. It will be easy to commit your work as you proceed. The local repository folder path can be found by clicking “current repository – bachelor” upper left corner in the GitHub desktop. Right click “Bachelor” and click “Copy repo path”. In the picture below these folders shall appear:

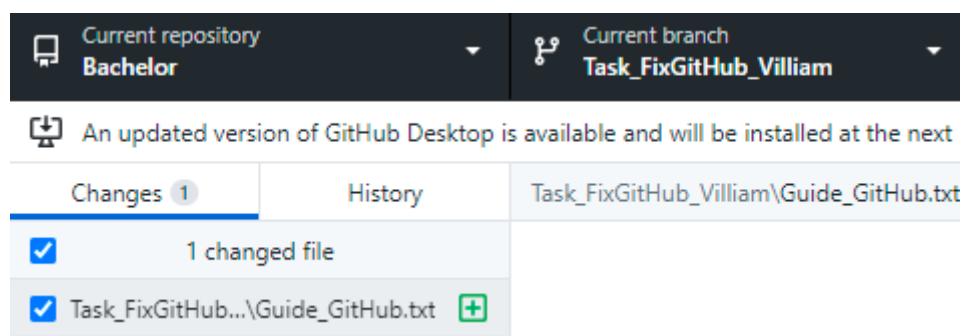
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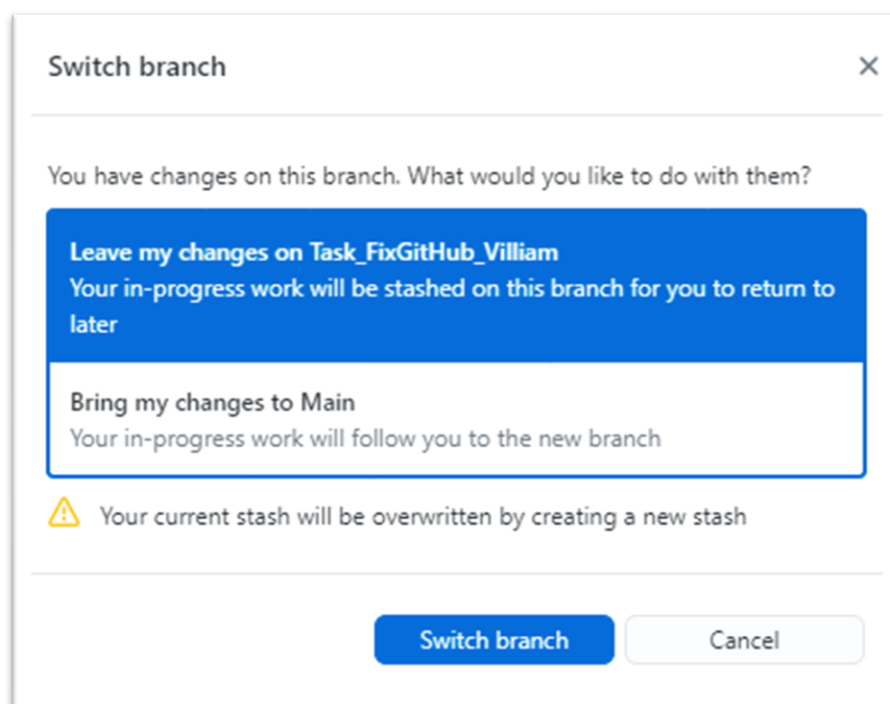
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- DU
- HMU
- Other
- PU
- System

You've added a file (or a folder containing some files) to one of the folders. On GitHub desktop you will see the work you have added under "Changes".



WARNING! DO NOT change branch in GitHub desktop before you have committed your work! (the "Current Branch") If you try do so the warning below will appear. Click "cancel" and commit your work before proceeding. Else you will lose your work!

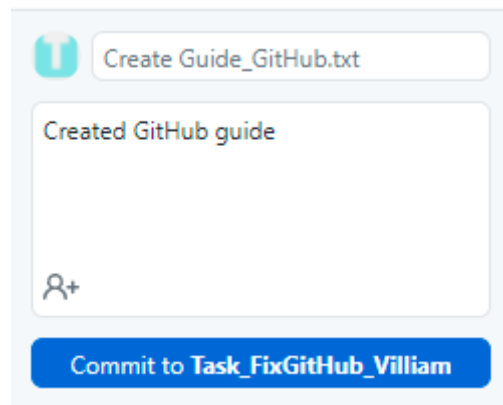


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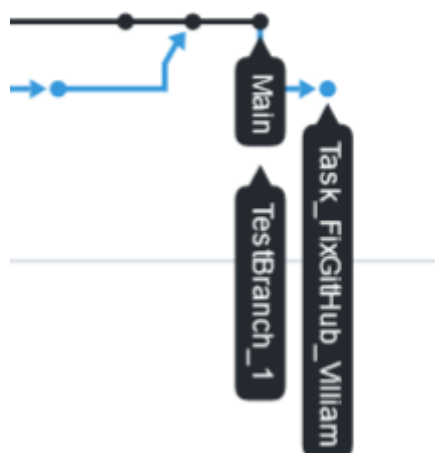
When committing your work, you shall add a comment with what change you did. Make a comment that makes sense if you or others need to reverse the old version of the branch. Get use to it bitch!



Now the work is committed. This means you have added your work to your LOCAL repository. Aka you can switch branches in the GitHub desktop without losing your work. Your work is not on the ONLINE repository yet. You need to Push it by clicking the "Push origin" button



On GitHub website you can follow your branch compared to the others. Go to "insights" -> "Network". Since the branch has branched out of the Main and work has been added to it, the Task branch contains more work than the Main, hence it is now "In front" of the Main branch.



Sometimes the Work may be added to the main branch before you merge your work into it. Therefore, you always need to merge the current master into your work before merging your branch into the master. Make sure everything works as intentional with the new version of the master in your branch, before merging your branch into the master. Els you're a cockhead destroying our project! On the picture below the Task_FixGitHub_Villiam Task is behind the main branch.

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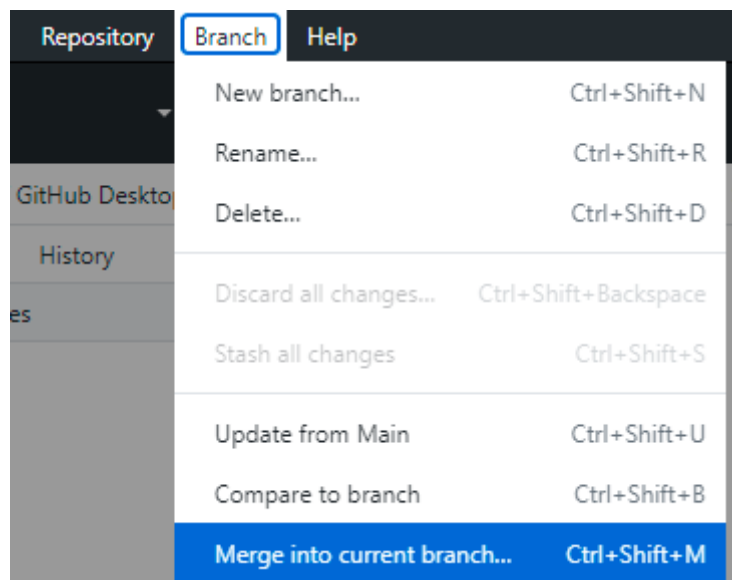
Last update: 29/08/2022



Now your LOCAL repository is not up to date with the ONLINE. Therefore, navigate to master branch in the GitHub desktop. Again, make sure your work in your branch is committed! Click “Pull origin” to update your LOCAL repository’s main branch, to the ONLINE version. If the pull option is not there, it will say “Fetch origin”, click that and the pull option will appear.



Navigate back to your branch and click the “Merge into current branch”

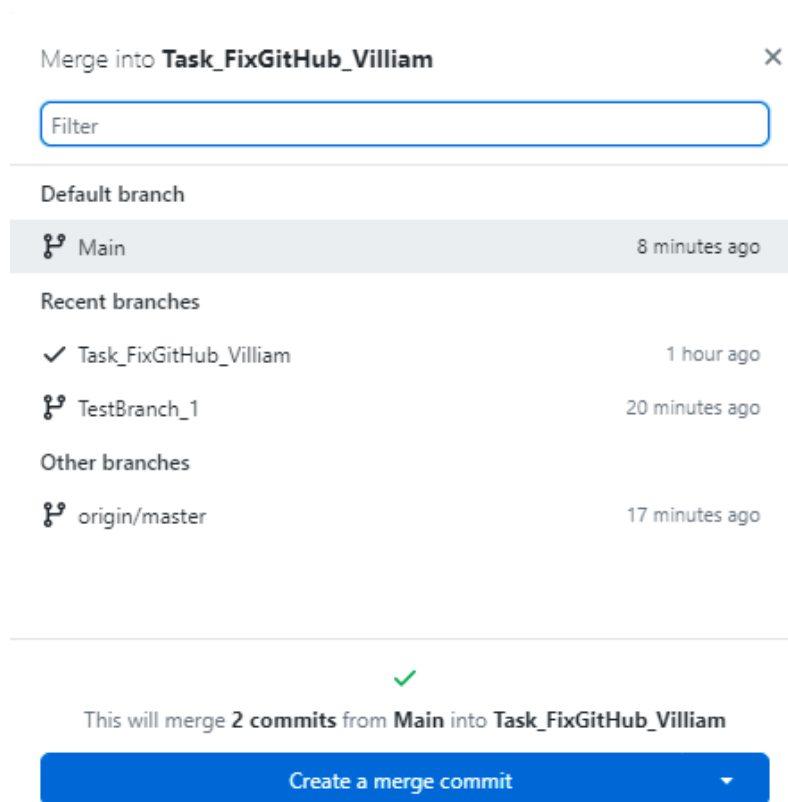


Chose “Main” as the branch which content you want to merge into your branch and click “Create a merge commit”.

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Now your LOCAL version of your branch is up to date, but not the ONLINE version. Therefore click "Push origin"



On GitHub website, "Insights" -> "Network" you can see the Main branch is merged into your branch. This is a good idea to do a couple of times while working on your task.

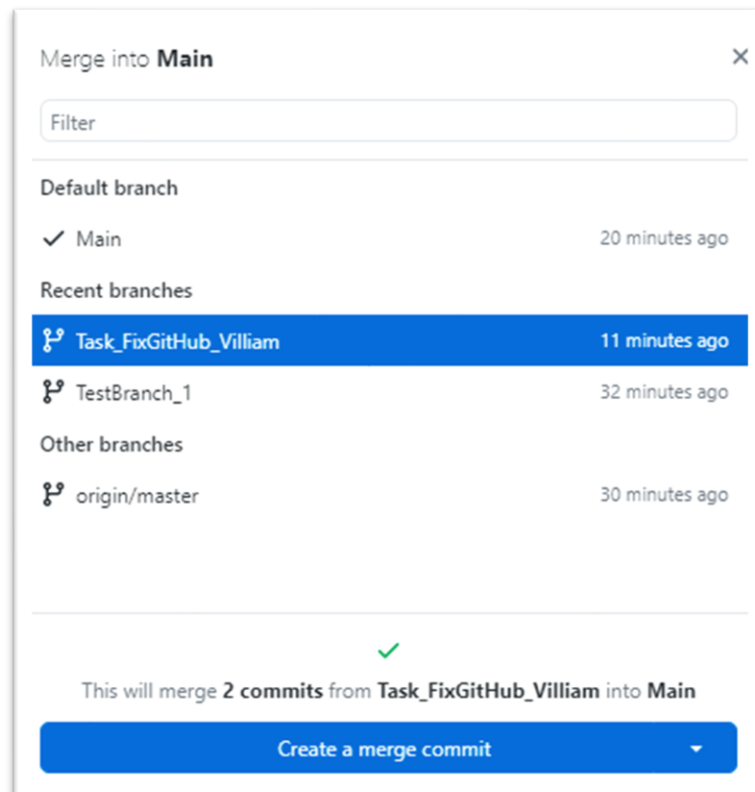


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You have verified everything works as expected. And now your work is ready to be merged into the main branch. Navigate to the Main branch in desktop, click "Branch" -> "Merge into current branch" and choose your working branch.



Click "Create a merge commit" followed by "Push origin" and verify the branches is merged correctly by going to the ONLINE GitHub and ether see the "Network" status or the actual data in the "Main" -> "Code"

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Conflicts

Conflicts may happen when merging. When trying to merge it can be seen as shown on the picture below.

Merge into **Main**

Filter

Default branch

✓ Main2 minutes ago

Recent branches

TestBranch_11 minute ago

Task_FixGitHub_Villiam2 minutes ago

Other branches

origin/master2 hours ago

⚠

There will be **1 conflicted file** when merging **TestBranch_1** into **Main**

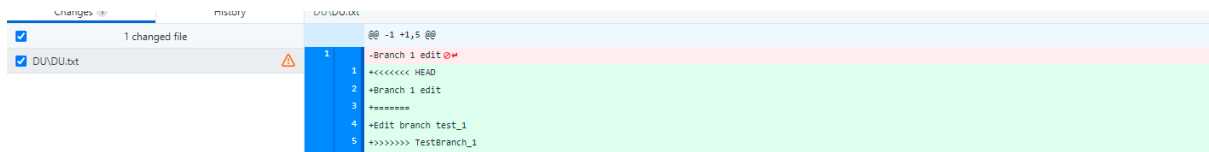
Create a merge commit

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If you click create a merge commit, abort it (There is a button), then you will see where the conflict is and you should edit it manually to be the same as the master, or use a conflict tool.



Example. Open the conflict file

```
DU.txt - Notepad
File Edit Format View Help
<<<<<< HEAD
Branch 1 edit
=====
Edit branch test_1
>>>>>> TestBranch_1
```

Chose on of the solutions and go with that. An editing tool is better for this process. VS code :D

```
DU.txt - Notepad
File Edit Format View Help
Branch 1 edit
```