

Lab: Branching and Merging (Web UI)

Estimated time: 15 minutes

Objectives

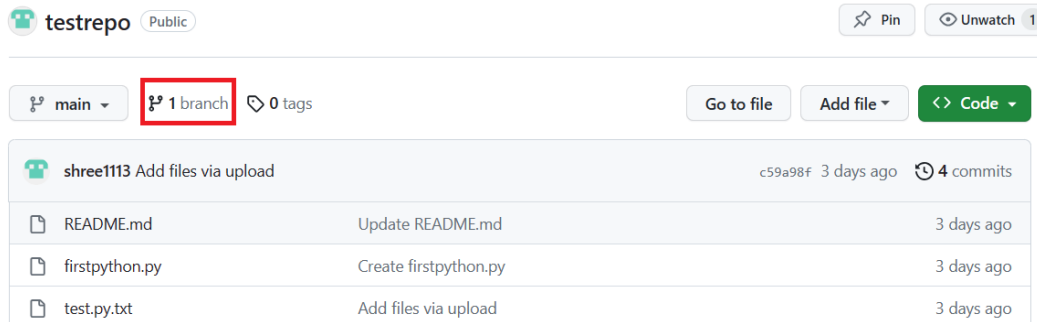
After completing this lab, you will be able to:

1. Create a branch
2. Commit changes to a child branch
3. Open a pull request
4. Merge a pull request into the main branch

PrerequisitesThis hands-on lab requires you to have created a GitHub account with a repository in it, as covered in [Getting started with GitHub](#) lab.NOTE: In the past the default branch in your GitHub repo used the name `master`. Effective Oct 1, 2020, all new GitHub repositories will use the more inclusive term `main` as the name of the default branch instead of `master`.**1. Create a branch**

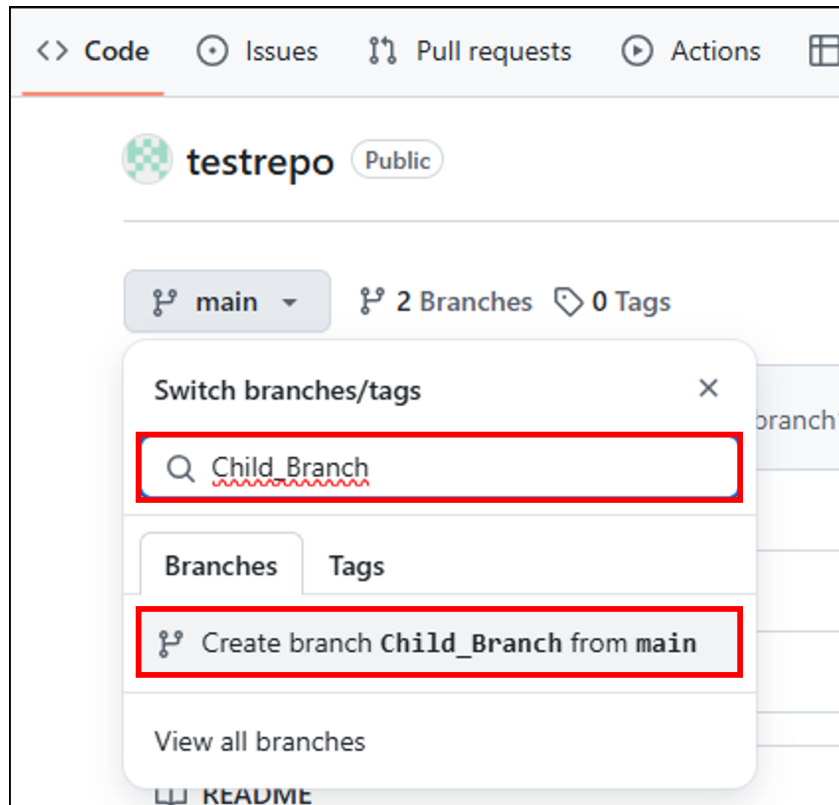
You can create or delete branches using your repository's GitHub web page. To add a branch to your repository, complete the following steps:

1. Go to your repository's main page. Note that when you created your repository, the one branch named `main` was created for you.

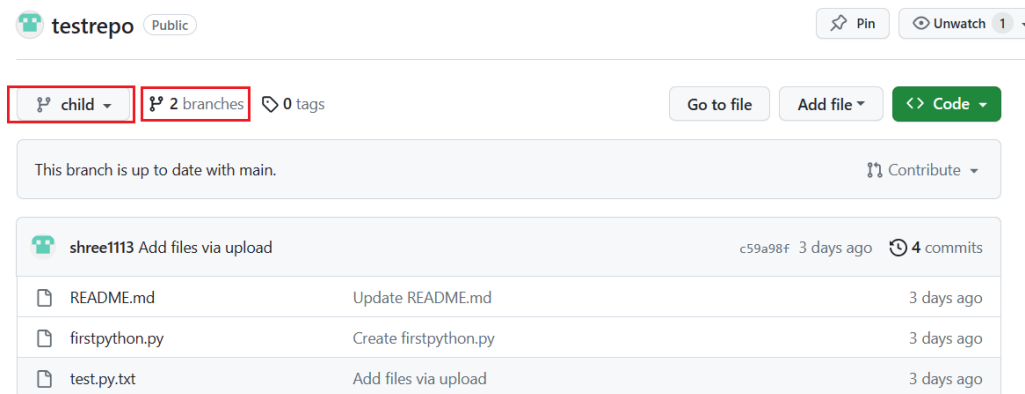


The screenshot shows the GitHub repository 'testrepo' (Public). At the top, there are buttons for 'Pin' and 'Unwatch'. Below the repository name, there is a dropdown menu for 'main' and a red box highlighting '1 branch'. To the right of the dropdown are buttons for 'Go to file', 'Add file', and 'Code'. Below this, there is a list of files: 'README.md', 'firstpython.py', and 'test.py.txt'. Each file has a commit message and a timestamp '3 days ago'.

2. At the top of the file list, locate the **Branch** drop-down menu. (By default, the menu displays **Branch: main**.) Click the drop-down menu, type the name of the branch you want to create, or click on the **Create branch** from `main` or `hit enter` on your keyboard.



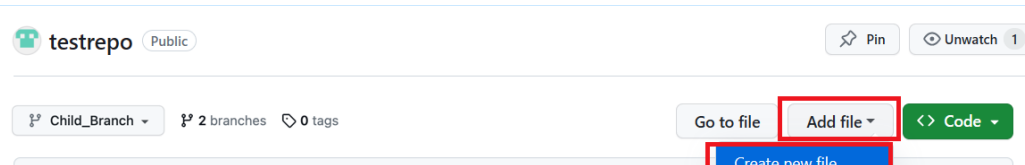
The screenshot shows the 'Switch branches/tags' dialog box in the GitHub repository 'testrepo'. The dialog has a search bar with 'Child_Branch' entered. Below the search bar, there are tabs for 'Branches' and 'Tags'. A red box highlights the search bar, and another red box highlights the option 'Create branch Child_Branch from main'. At the bottom of the dialog, there is a link 'View all branches'.

Your repository now has two branches: `Main` and `Child_Branch`. You can click the drop-down menu to see your branches.

The screenshot shows the GitHub repository 'testrepo' (Public) with the 'child' branch selected. A red box highlights the '2 branches' dropdown menu. Below the repository name, there is a message 'This branch is up to date with main.' and a 'Contribute' button. Below this, there is a list of files: 'README.md', 'firstpython.py', and 'test.py.txt'. Each file has a commit message and a timestamp '3 days ago'.

Any files that were in the `main` branch are reflected in the `Child_Branch`. Note that when you add or edit a file in `Child_Branch`, that change will not automatically reflect in the main branch.**2. Add a file to a branch**To add a file to your new branch, ensure that the name you gave the new branch (which in the case of the example showcased is `Child_Branch`) is displayed in the **Branch** drop-down menu and complete the following steps:

1. Click **Add file** > **Create new file** to create a file in the repository.








The screenshot shows the GitHub repository 'testrepo' (Public) with the 'Child_Branch' selected. A red box highlights the 'Add file' button. Below the repository name, there is a message 'This branch is up to date with main.' and a 'Contribute' button. Below this, there is a list of files: 'README.md', 'firstpython.py', and 'test.py.txt'. Each file has a commit message and a timestamp '3 days ago'.

This branch is up to date with main.


Upload files


Contribute ▾

  Add files via upload c59a98f 3 days ago ⌚ 4 commits

 README.md	Update README.md	3 days ago
 firstpython.py	Create firstpython.py	3 days ago
 test.py.txt	Add files via upload	3 days ago


2. Type a name and extension for the file, for example, `testchild.py`, and add the following lines to the body of the new file:

 testrepo / testchild.py in child

Edit Preview  Code 55% faster with GitHub Copilot


```
1  ## Adding a new file in the child branch
2  print ("Inside Child branch")
```


3. Scroll to the bottom of the page, add a description of the file you are about to add (note that the description is optional), and click **Commit**.

 **Commit new file**

Create testchild.py

Add an optional extended description...

☒  Commit directly to the Child_Branch branch.




☐  Create a new branch for this commit and start a pull request. [Learn more about pull requests.](#)


Commit new file Cancel



The file is added to your child branch.




3. Open a pull request

The file that you added to your child branch is not automatically added to the **main** branch. (You can check this by using the **Branch** drop-down menu to go to the **main** branch; note that there is no `testchild.py` file in the file list).

 main ▾  2 branches  0 tags


Go to file Add file ▾ 



 committed 92fe776 1 minute ago ... ⌚ 9 commits  2 branches


 README.md	Update README.md	7
 test.py.txt	Add files via upload	5
 firstpython.py	Create firstpython.py	7

You can also compare the two branches and open a pull request, which will enable you to merge the changes that you've made in the child branch - in this case, adding a new file - to the **main** branch.

1. In **Child_Branch**, click the **Compare & pull request** button.

 Child_Branch had recent pushes 8 minutes ago **Compare & pull request**

 Child_Branch ▾  2 branches  0 tags

Go to file Add file ▾  Code ▾

2. Scroll to the bottom of the page and note that there is **1 changed file** listed and the changes are highlighted in green.

± Showing 1 changed file with 2 additions and 0 deletions. Unified Split


testchild.py


```
... @@ -0,0 +1,2 @@
1 + ## Adding a new file in child branch
2 + print ("Inside Child branch")
```

3. Scroll up and note that GitHub is comparing the **main** and **Child_Branch** branches and that there are no conflicts between the two. Optionally, you can add a comment to the pull request. Click **Create pull request**.

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).









 base: main

 compare: Child_Branch

✓ Able to merge. These branches can be automatically merged.

Child branch


Write Preview

H B I        

Add your description here...

Attach files by dragging & dropping, selecting or pasting them.

Create pull request

 Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

The pull request has been successfully created and is now ready to be merged by a repository administrator. For all the repositories that you create, you automatically have administrative rights.

4. Merge a pull request

To merge a pull request into a project, complete the following steps:

1. Click the **Pull requests** tab. A list of pending pull requests is displayed.

Issues

Pull requests 1

Actions


Projects

Wiki

Security








Insights


Settings

Filters  ispr isopen


Labels 9 Milestones 0 **New pull request**

☐ 1 Open ✓ 1 Closed

Author  Label  Projects  Milestones  Reviews  Assignee  Sort 


☐  Create testchild.py





#2 opened 2 minutes ago by [RaghuSankar](#)


 **ProTip!** Exclude everything labeled `bug` with `-label:bug`.


2. Click the pull request that you want to merge into the main project. Review the changes, click **Merge pull request** to accept the pull request and merge the updates. (You can optionally add a comment.)

Child branch #1


 Open Malika-s wants to merge 3 commits into `master` from `Child_Branch`


 Conversation 0  Commits 3  Checks 0  Files changed 1

 Malika-s commented 2 minutes ago


Owner  ...

Want to change in the master branch.


 Malika-s added 3 commits 25 minutes ago

 Create testchild

Verified 9767921


 Delete testchild

Verified 48b4479


 Create testchild.py

Verified eb5ced2

Add more commits by pushing to the `Child_Branch` branch on [Malika-s/testrepo](#).

 Continuous integration has not been set up

[GitHub Actions](#) and several other apps can be used to automatically catch bugs and enforce style.

 This branch has no conflicts with the base branch


Merging can be performed automatically.





Merge pull request


You can also open this in [GitHub Desktop](#) or view [command line instructions](#).


3. When you click **Merge pull request**, a **Confirm merge** button is displayed. Click that button to complete the merge.

Child branch #1

 Open Malika-s wants to merge 3 commits into `master` from `Child_Branch`

 Conversation 0  Commits 3  Checks 0  Files changed 1

 Malika-s commented 4 minutes ago

Owner  ...

Want to change in the master branch.

Malika-s added 3 commits 27 minutes ago

Create testchild

Delete testchild

Create testchild.py

Verified

9767921

Verified

48b4479

Verified

eb5ced2

Add more commits by pushing to the `Child_Branch` branch on Malika-s/testrepo.

Merge pull request #1 from Malika-s/Child_Branch

Child branch

Confirm merge

Cancel

The pull request has now been merged successfully. Note that you can delete the child branch because your changes have been incorporated into the `main` branch.

Pull request successfully merged and closed

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

Delete branch

Check the list of files in the `main` branch to confirm that it now includes the file that you added in the pull request.

main

2 branches

0 tags

Go to file

Add file

Code

committed 7a7c576 3 minutes ago

8 commits

2 branches

0 tags

README.md	Update README.md	3 hours ago
test.py.txt	Add files via upload	1 hour ago
firstpython.py	Create firstpython.py	3 hours ago
testchild.py	Create testchild.py	21 minutes ago

Summary

Congratulations! You've now learned how to create a branch, edit and commit changes in that branch, open a pull request, and merge the pull request into your main project. We encourage you to continue to experiment with branches and pull requests to become more familiar with the concepts and processes.

Author details

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