

# Lab: Branching and Merging (Web UI)

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**Estimated time:** 15 minutes

## Objectives

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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

## Prerequisites

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This 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

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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.

main 1 branch 0 tags Go to file Add file Code

shree1113 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

- 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, and press `Enter` or `return` on your keyboard.

testrepo Public Pin Unwatch 1

main 1 branch 0 tags Go to file Add file Code

Switch branches/tags

Find or create a branch...

Branches

Tags

✓ main default

[View all branches](#)

c59a98f 3 days ago 4 commits

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

Your repository now has two branches: **Main** and **Child\_Branch**. You can click the drop-down menu to see your branches.

testrepo Public Pin Unwatch 1

child 2 branches 0 tags Go to file Add file Code

This branch is up to date with main. Contribute

shree1113 Add files via upload c59a98f 3 days ago 4 commits

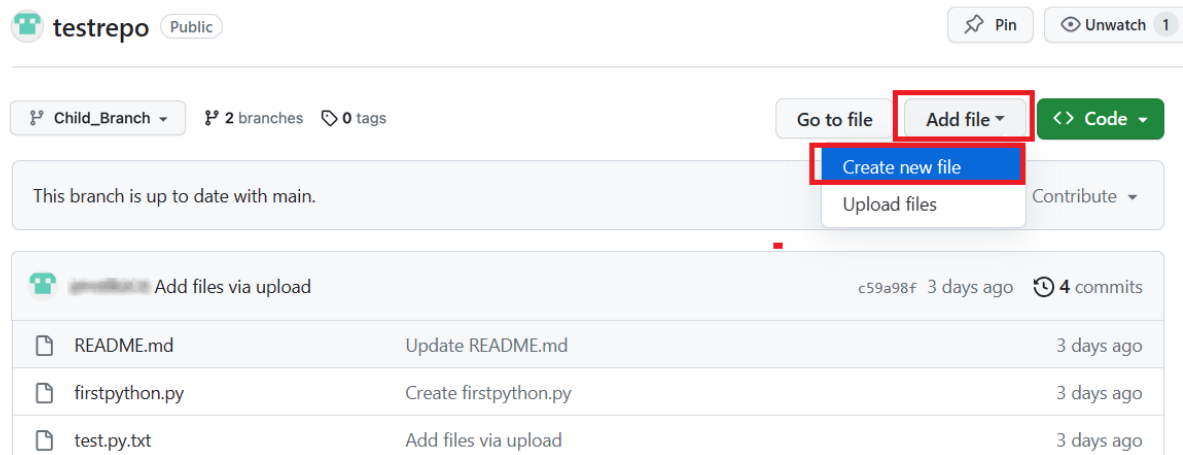
README.md	Update README.md	3 days ago
firstpython.py	Create firstpython.py	3 days ago
test.py.txt	Add files via upload	3 days ago

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.



testrepo Public

Child\_Branch 2 branches 0 tags

Go to file Add file Code

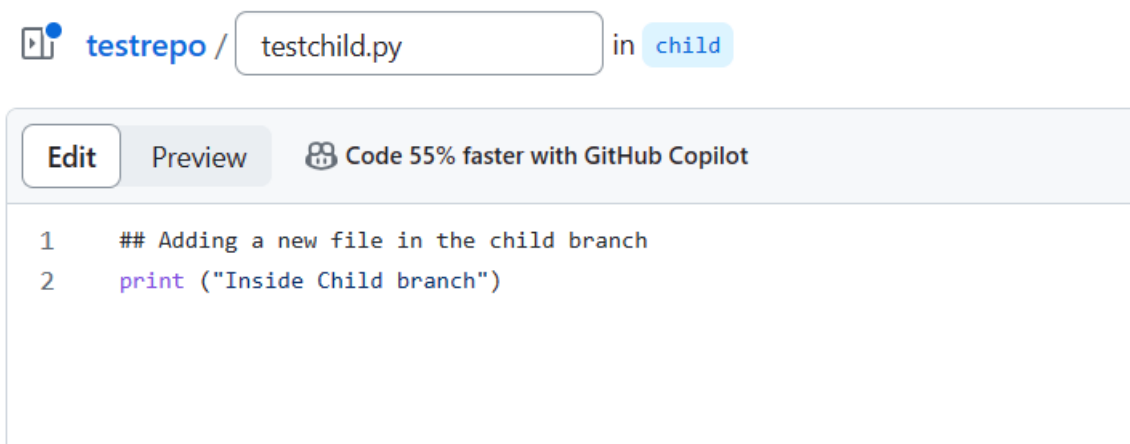
This branch is up to date with main.

Create new file 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:

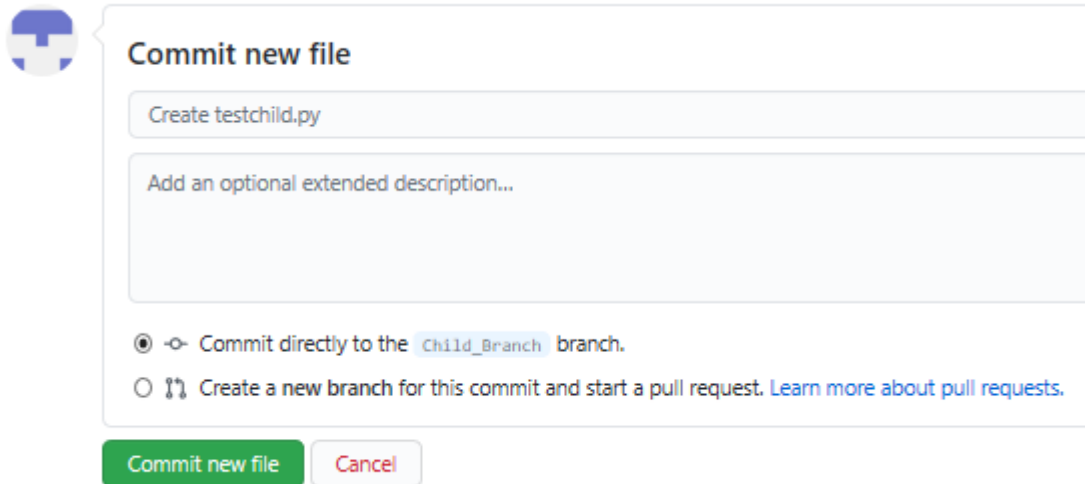


testrepo / testchild.py in child

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**.

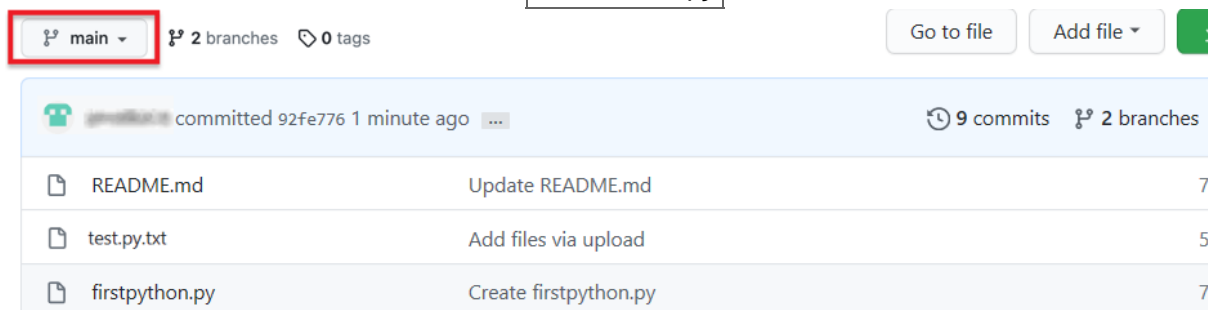


The image shows the GitHub 'Commit new file' dialog. It has a title bar with a GitHub logo. Below the title, there is a text input field containing 'Create testchild.py'. Underneath is a larger text area with the placeholder 'Add an optional extended description...'. At the bottom, there are two radio buttons. The first is selected and labeled 'Commit directly to the Child\_Branch branch.' The second is labeled 'Create a new branch for this commit and start a pull request. Learn more about pull requests.' At the very bottom are two buttons: 'Commit new file' (green) and 'Cancel' (light gray).

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).

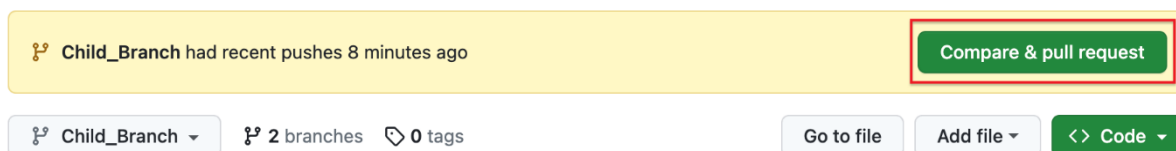


The image shows the GitHub repository view for the 'main' branch. At the top, there is a branch selector showing 'main' with a dropdown arrow, followed by '2 branches' and '0 tags'. To the right are buttons for 'Go to file' and 'Add file'. Below this is a commit summary: 'committed 92fe776 1 minute ago' with a clock icon, '9 commits', and '2 branches'. A table lists the files in the commit:

File	Commit Message	Size
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.



The image shows the GitHub repository view for the 'Child\_Branch'. At the top, there is a yellow banner that says 'Child\_Branch had recent pushes 8 minutes ago'. To the right of the banner is a green button labeled 'Compare & pull request'. Below the banner, there is a branch selector showing 'Child\_Branch' with a dropdown arrow, followed by '2 branches' and '0 tags'. To the right are buttons for 'Go to file', 'Add file', and '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.

```
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 is:pr is:open 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 [RaghuChidrupu](#)


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` 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.




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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**Author:**

- Malika Singla

**Other contributor:**

- Rav Ahuja