

**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. Create a pull request
4. Merge a pull request into the main branch

**Prerequisites**

This hands-on lab requires you to have created a GitHub account with a repository in it, as covered in [Getting started with GitHub](#). 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 1'. Below that, a dropdown menu shows 'main' (selected) and '1 branch'. A red box highlights the '1 branch' button. On the right, there are buttons for 'Go to file', 'Add file', and 'Code'. The main area lists four commits from 'shree1113' made 3 days ago. The commits are: 'Add files via upload' (c59a98f), 'Update README.md' (c59a98f), 'Create firstpython.py' (c59a98f), and 'Add files via upload' (c59a98f).

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` link on your keyboard.

The screenshot shows the 'testrepo' repository again. The dropdown menu at the top now shows 'main' (selected) and '2 Branches'. A red box highlights the '2 Branches' button. A modal window titled 'Switch branches/tags' is open. It has a search bar containing 'Child\_Branch' (highlighted with a red box). Below the search bar are tabs for 'Branches' (selected) and 'Tags'. A red box highlights the 'Create branch Child\_Branch from main' button. At the bottom of the modal, there are buttons for 'View all branches' and 'README'.

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 'testrepo' repository. The dropdown menu at the top now shows 'child' (selected) and '2 branches'. A red box highlights the 'child' button. The main area shows a message: 'This branch is up to date with main.' Below this, there is a list of commits from 'shree1113' made 3 days ago. The commits are: 'Add files via upload' (c59a98f), 'Update README.md' (c59a98f), 'Create firstpython.py' (c59a98f), and 'Add files via upload' (c59a98f).

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 'testrepo' repository. The dropdown menu at the top now shows 'Child\_Branch' (selected) and '2 branches'. A red box highlights the 'Child\_Branch' button. The main area shows a list of files: 'README.md', 'firstpython.py', and 'test.py.txt'. On the right, there are buttons for 'Go to file', 'Add file', and 'Code'. A red box highlights the 'Add file' button. Below the 'Add file' button, a blue box highlights the 'Create new file' link.

This branch is up to date with main.

[Upload files](#) [Contribute ▾](#)

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

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 ▾](#) [Code](#)

committed 92fe776 1 minute ago		...
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](#)

...	...	...	...
...	...	@@ -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 E < > @ ↵

Add your description here...

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

**Create pull request**

① 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 Q 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 [Malika-s](#)

♀ 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  
Want to change in the master branch.

Malika-s added 3 commits 25 minutes ago

- o Create testchild Verified 9767921
- o Delete testchild Verified 48b4479
- o Create testchild.py Verified eb5ced2

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

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  
Want to change in the master branch.

Malika-s added 3 commits 27 minutes ago

- o Create testchild Verified 9767921
- o Delete testchild Verified 48b4479
- o 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

File	Action	Time
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.

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**Skills Network**

