



# GIT & Sandbox

HTML course: Lesson 2

## <h2>IN THIS **LESSON**</h2>

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- GitHub
  - Codesandbox.io
  - Exploring interfaces
  - Interactive practice
-



# Version Control System



Git

- Distributed Version Control
- Commit History & Tracking
- Undo & Rollback Changes
- Branching and Merging
- Hooks for Automation
- Distributed Collaboration

Alternatives:



Mercurial



GNU Bazaar

# Code hosting platforms



[GitHub.com](https://github.com)

- Git repository storage
- Social network
- Forking & Open Source Contribution
- Issue tracking
- Code review via pull requests
- Actions & CI/CD Integration
- Graphical User Interface (GUI) & Web Interface
- Team & Access Management

Alternatives:



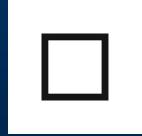
[GitLab.com](https://gitlab.com)



[BitBucket.org](https://bitbucket.org)

- Place for open source projects
- Propose your changes
- Store your portfolio and publish your projects
- Place for your resume

# Cloud development tools



**CodeSandbox**

- Instant Development Environments
- Live Collaboration
- Built-in Dev Server & Hot Reloading
- Focus on Frontend & Full-Stack Development
- Container-Based Sandboxes
- GitHub Integration

Alternatives:



**Github Codespaces**



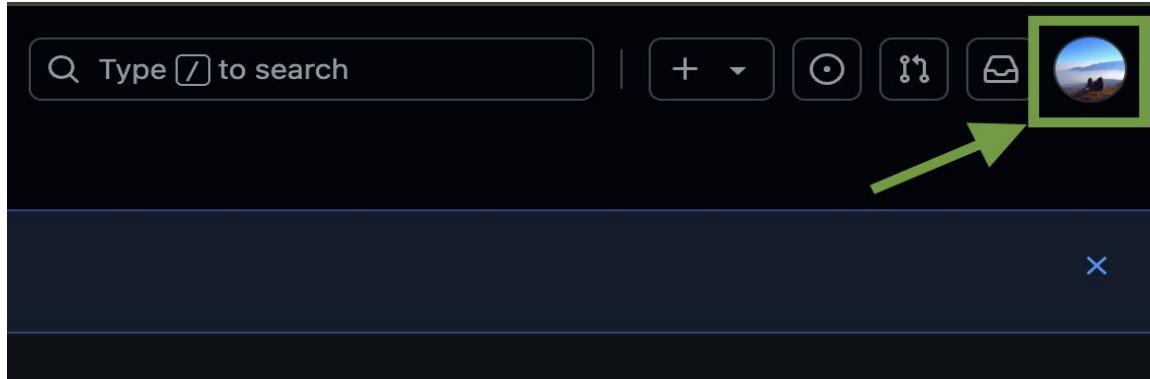
**Codepen**

# CREATE

**LET'S BEGIN  
YOUR HOMEWORK PROJECT: BINABOX**

1

# OPEN ORGANIZATION ON THE GITHUB



A screenshot of the GitHub user profile sidebar. At the top, it shows the user's profile picture, name "alex-koshara", and handle "Alexander". Below this, there are several menu items: "Working from home", "Your profile", "Your repositories", "Your Copilot", "Your projects", "Your stars", "Your gists", "Your organizations" (which is highlighted with a green box), "Your enterprises", "Your sponsors", "Try Enterprise" (with a "Free" badge), "Feature preview", "Settings", and links to "GitHub Website", "GitHub Docs", "GitHub Support", and "GitHub Community". At the bottom, there is a "Sign out" link.

2

# SELECT AN ORGANIZATION

[Go to your personal profile](#)

## Organizations

[New organization](#)

**bro-academy** Member and collaborator on 2 repositories

[Leave](#)

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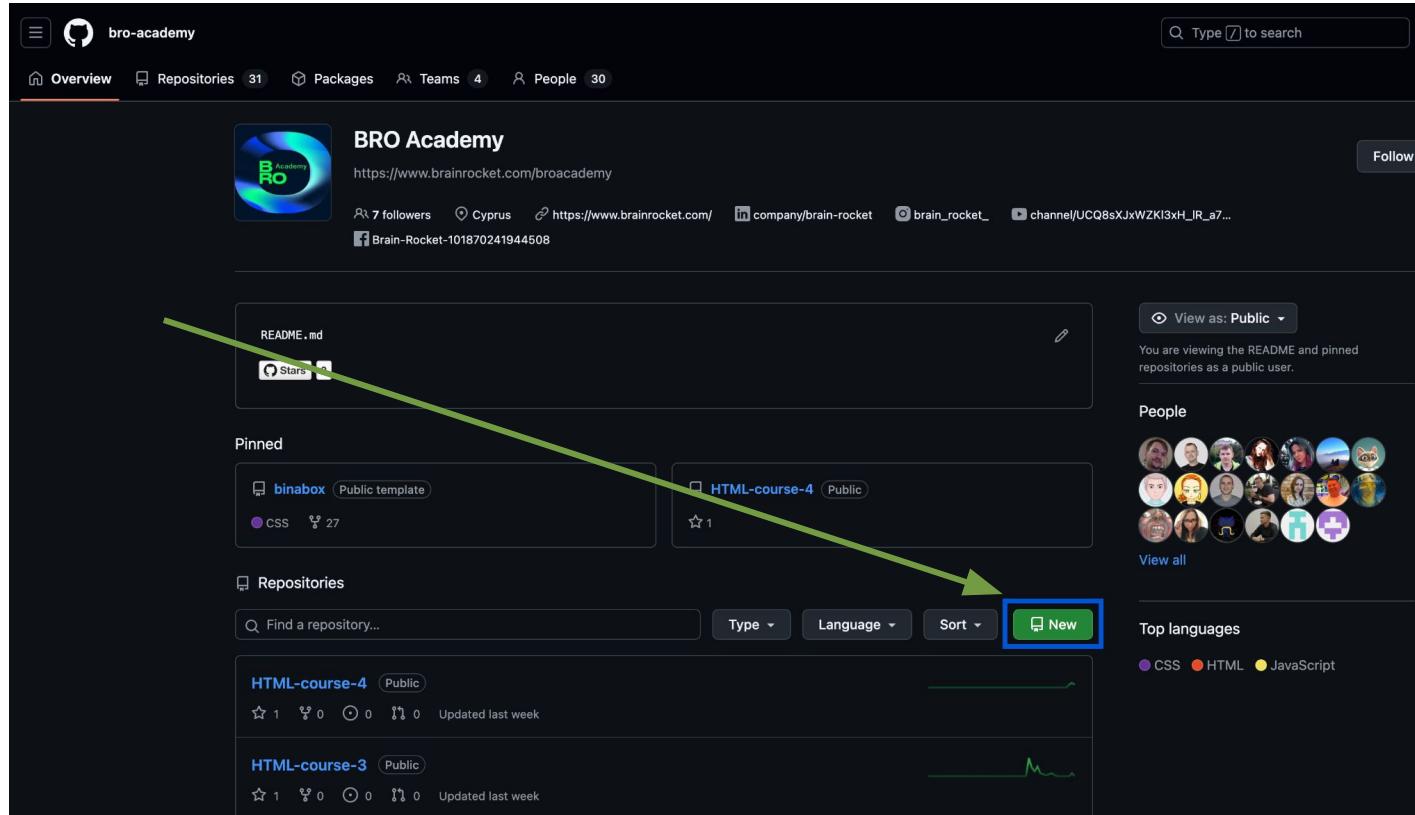
## Transform account

You cannot transform this account into an organization until you leave all organizations that you're a member of.

[Turn alex-koshara into an organization](#)

3

# CLICK THE GREEN NEW BUTTON



4

# SELECT BRO-ACADEMY/BINABOX

## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

---

*Required fields are marked with an asterisk (\*).*

**Repository template**

No template ▾

- No template

 bro-academy/binabox

ontents.

name \*

# NEXT STEPS:

1. Fill repository name field
2. Choose public field
3. Click on the Create repository button

## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Required fields are marked with an asterisk (\*).

### Repository template



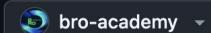
Start your repository with a template repository's contents.

#### Include all branches

Copy all branches from bro-academy/binabox and not just the default branch.

1

### Owner \*



### Repository name \*

your-surname is available.

Great repository names are short and memorable. Need inspiration? How about [refactored-adventure](#) ?

### Description (optional)

2



#### Public

Anyone on the internet can see this repository. You choose who can commit.



#### Private

You choose who can see and commit to this repository.

3  
① You are creating a public repository in the bro-academy organization.

3

**Create repository**

# RESULT

The screenshot shows a GitHub repository page with the following details:

- Repository Name:** bro-academy / your-surname
- Type:** Public
- Owner:** your-surname (represented by a blue profile icon)
- Description:** generated from [bro-academy/binabox](#)
- Branches:** main (1 Branch)
- Tags:** 0 Tags
- Commits:** 1 Commit (by alex-koshara, Initial commit, e7fa19a, 2 minutes ago)
- File:** README.md (Initial commit, 2 minutes ago)
- Content of README.md:**

```
Binabox - homework project
```
- Student:** (empty field)
- Mentor:** (empty field)
- Activity:** No description, website, or topics provided.
- Custom Properties:** 0 stars, 3 watching, 0 forks
- Report Repository:** Report repository
- Releases:** No releases published. Create a new release.



**QUESTIONS?**



You Are  
**AWESOME**



# CODESANDBOX

# OPEN CODESandbox.io

The screenshot shows the Codesandbox.io workspace interface. At the top, there's a navigation bar with a user dropdown (alex-koshara), a search bar ("Search in workspace"), and buttons for "Import" (highlighted with a green border) and "+ Create". Below the navigation is a sidebar with links like Recent, Settings, Invite members, Get started, and Upgrade. The main area features a "Welcome to your new Free workspace!" message. It highlights updated features: private Sandboxes, Devboxes, and Repositories; live collaboration with up to 5 workspace members; coding in Devboxes with 400 free credits per month; and AI features and VS Code extension for free. There are "View upgrade options" and "Learn more" buttons. The main content area shows a "Recent" section with a "Create a new branch" button. Below it are sections for "Devboxes and Sandboxes" (Drafts, All folders, Recently deleted) and "Shared with me". A "Pick up where you left off" section is at the bottom.

Welcome to your new Free workspace!

Your Free plan has been updated to our usage-based system. You can now:

- Use private Sandboxes, Devboxes and Repositories.
- Collaborate live with [up to 5 workspace members](#).
- Code in Devboxes using 400 free credits (up to 40 hours) per month.
- Use all of our AI features and our VS Code extension for free.

[View upgrade options](#) [Learn more](#)

## Recent

Create a new branch

Devboxes and Sandboxes

- Drafts
- All folders
- Recently deleted

Shared with me

Pick up where you left off

# CHOOSE **FIND BY URL**

New repository ×

Search in organizations Import from your GitHub organizations

**Find by URL** alex-koshara ▼ /

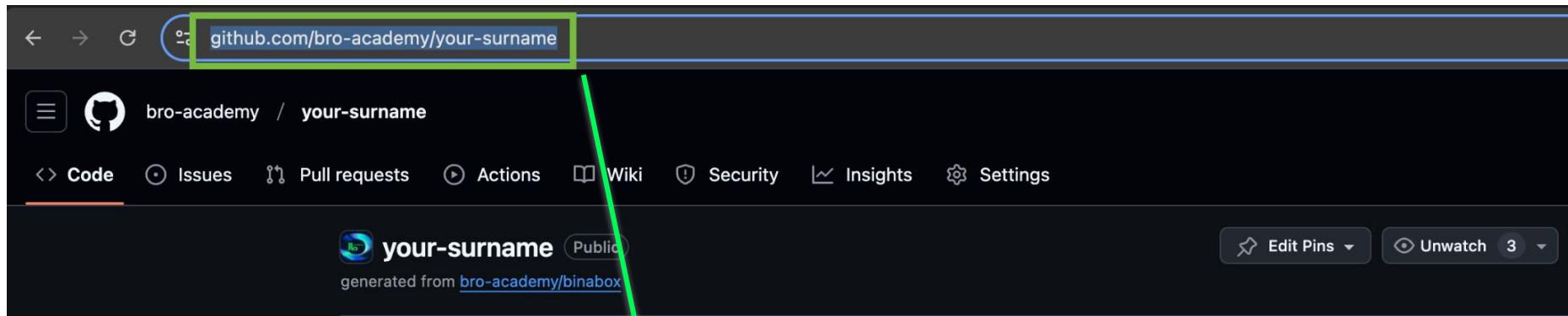
Start from a template

Import template

The screenshot shows the GitHub 'New repository' interface. On the left, there are three main options: 'Find by URL' (highlighted with a green box), 'Start from a template', and 'Import template'. On the right, there's a section titled 'Import from your GitHub organizations' which lists repositories from the user 'alex-koshara'. The first item is 'questions' (3 days ago). Below it are 'PixMart\_as' (5 months ago) and 'pull-actions' (6 months ago). A search bar is also present in the import section.

Repository	Last Updated
questions	3 days ago
PixMart_as	5 months ago
pull-actions	6 months ago

# COPY URL FROM YOUR REPOSITORY IN GITHUB



A screenshot of a "New repository" modal. On the left, there are navigation links: "New repository", "Search in organizations", "Find by URL", "Start from a template", and "Import template". The "Find by URL" link is highlighted with a green box. In the center, there is a search input field with the placeholder text: "Paste a link or type an owner/name combination to find a public GitHub repository." Below the input field is a button containing the URL `https://github.com/bro-academy/your-surname`. At the bottom of the modal, there is a message from `your-surname` posted 1 hour ago, and a "Import" button.

# CLICK THE YELLOW BUTTON **IMPORT REPOSITORY**

The screenshot shows a dark-themed dialog box titled "Import repository". On the left, there's a sidebar with a user icon and the text "bro-academy" and "your-surname". Below that, it says "Public repository". It also displays a message about write access and workspace permissions. On the right, there are fields for "Name" (set to "bro-academy/your-surname") and "Runtime" (set to "Nano (2 vCPUs, 4 GiB RAM, 20 GB Disk for 10 credits/hour)". A note indicates that better specs are available for Pro workspaces. Under "Integrations", there's a section for "Setup PR previews" which encourages installing the GitHub App to get CodeSandbox links on pull requests. At the bottom, there are two buttons: "Open readonly" and a yellow "Import repository" button, which is highlighted with a green border.

← ×

Import repository

bro-academy  
your-surname

⊕ Public repository

You have write access to this repository.

Once imported, workspace members that also have write access will be able to create branches and commit changes.

Name

bro-academy/your-surname

Runtime

Nano (2 vCPUs, 4 GiB RAM, 20 GB Disk for 10 credits/hour)

Better specs are available for Pro workspaces.

Integrations

Setup PR previews

Install our GitHub App to get CodeSandbox links on each pull request.

Open readonly Import repository

# RESULT

The screenshot shows a dark-themed interface of a code editor or sandbox environment. At the top, there's a yellow notification bar that says "CodeSandbox was updated! >" and a "Feedback" button. On the right, it shows the repository details: "Repository alex-koshara / your-surname main".

The left sidebar is titled "EXPLORER" and shows a folder structure: "YOUR-SURNAME" which contains "README.md". The "README.md" file is currently selected, indicated by a grey background.

The main content area displays the contents of the README.md file:

```
Binabox - homework project
```

Below the file content, there are two sections labeled "Student:" and "Mentor:", each followed by a small icon.



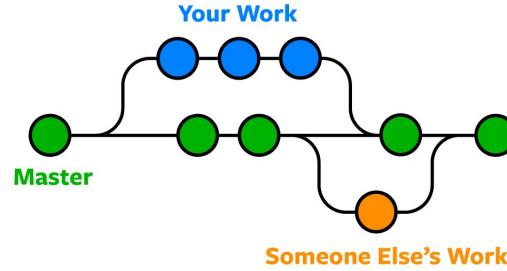
# QUESTIONS?



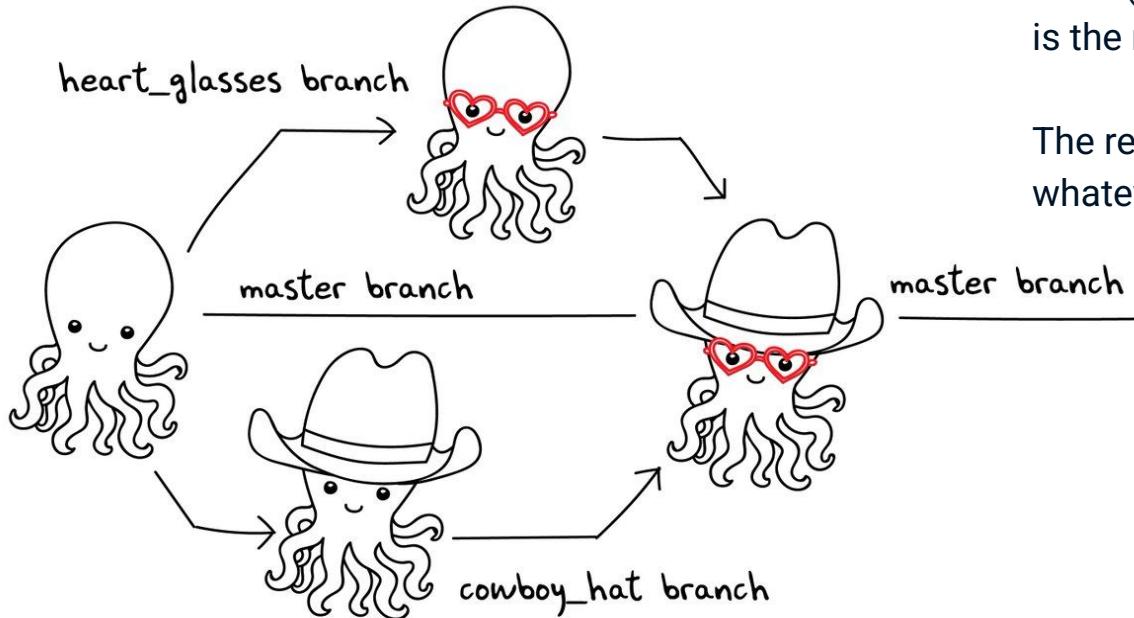
# BRANCH

# BRANCHES

HOW TO WORK **IN PARALLEL**



# git branch



**main** (somewhere still called **master**)  
is the main branch of any repository.

The remaining branches can be called  
whatever you like.

## Good practices

-  Don't commit into target branch (main)
-  Create a branch for each task
-  Use team branching rules

# Branch names

- **Project and Task ID**

BAHC4-74-readme

- **Descriptive names**

login, navbar-overflow

- **Alphanumeric lowercase characters separated by hyphens**

Avoid punctuation, spaces, underscores, or any special characters whenever possible

fix-login-issue

fixLoginIssue or fix\_login\_issue

- **Avoid Unnecessary Hyphens**

feat/new--login-

- **Short and Effective**

BAHC4-74-readme

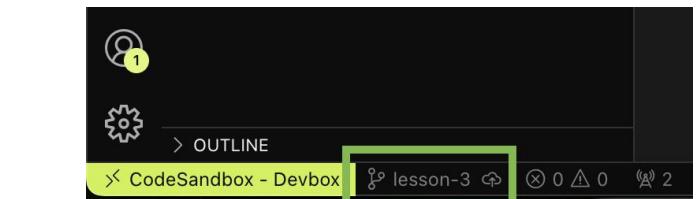
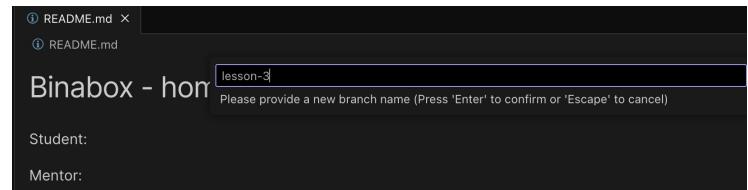
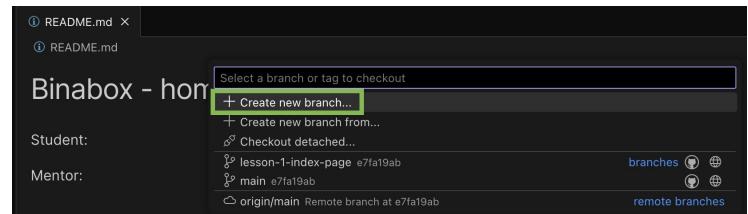
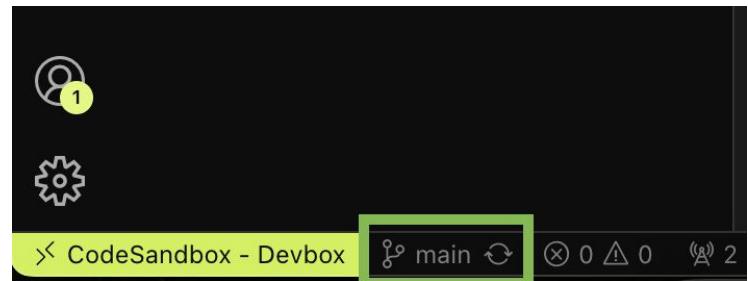
BAHC4-74-lesson-3-readme

BAHC4-74-lesson-3-work-with-github-add-readme-md

# Creating branch

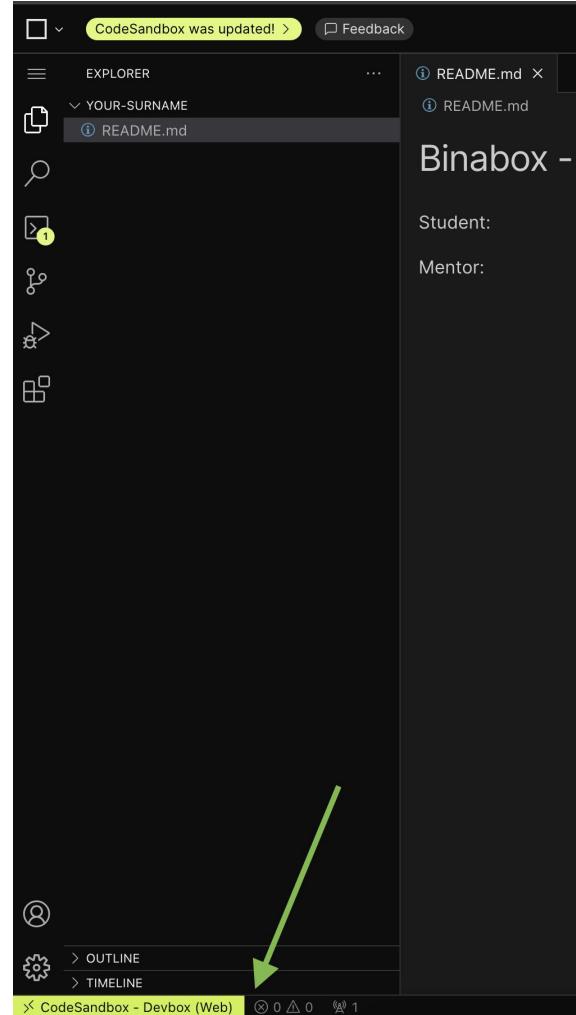
## Using Codesandbox

1. Click on **main** button
2. Type branch name or click on **Create new branch** and type **lesson-number** of lesson
3. Press **Enter**
4. You can look **lesson-** branch in the left bottom corner after creating branch



# ATTENTION

If you don't have a branch  
in the lower left corner,  
reload the page.



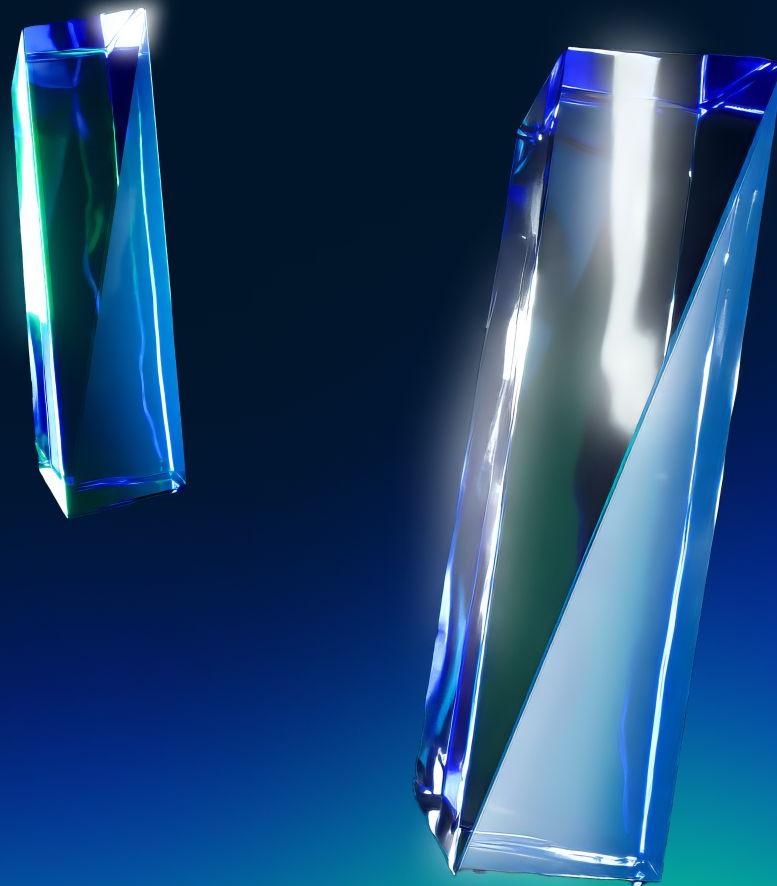


**QUESTIONS?**





**BREAK TIME**



# FLOW

# WORKFLOW

HOW TO WORK **IN PARALLEL**

# Git Terms

## Fork

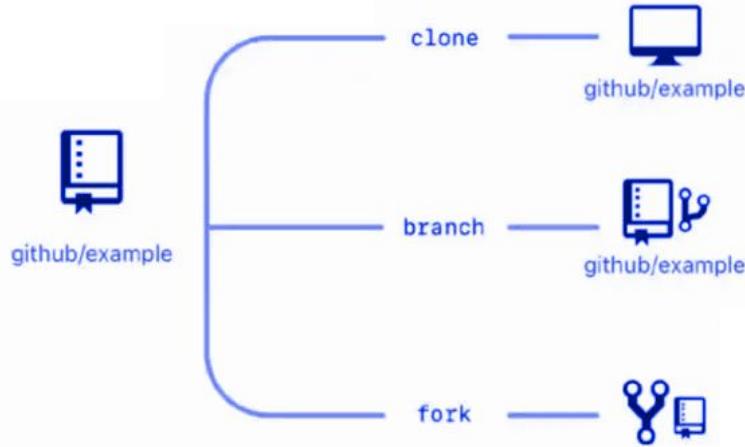
- A copy of a repository  
(to your github account)

## Clone

- Copying a repository to your computer  
(⬇️ download to your computer)

## Branch

- A parallel "branch" in the repository



# Git Terms

## Commit

- Saving changes, the current state of the project.

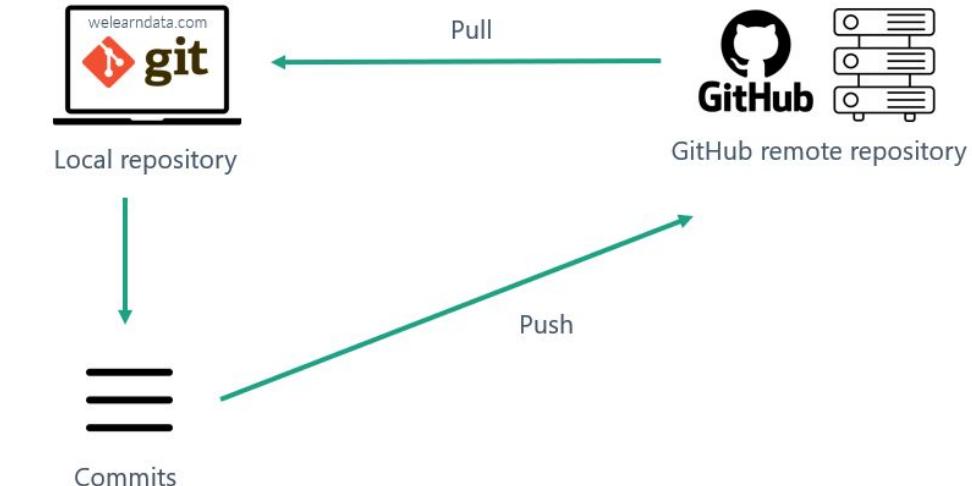


## Pull

- Downloading the latest saved changes from the remote repository.

## Push

- Sending new commits to the remote repository.



# Git Terms

## Pull Request

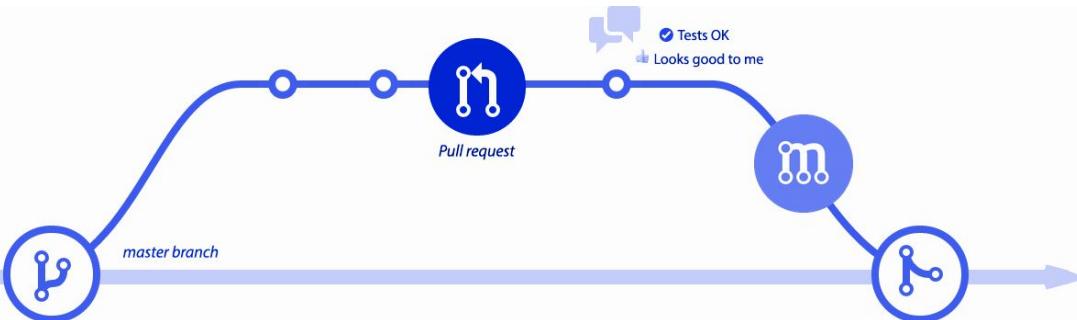
- Request to merge the main repository with its fork (or to merge branches)

## Code Review

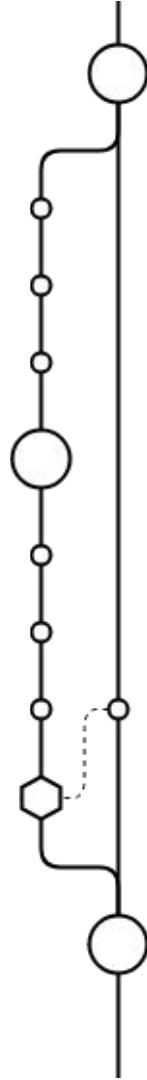
- Checking code (appearance, functionality, and requirement compliance).

## Merge

- Combining changes made in a branch or fork

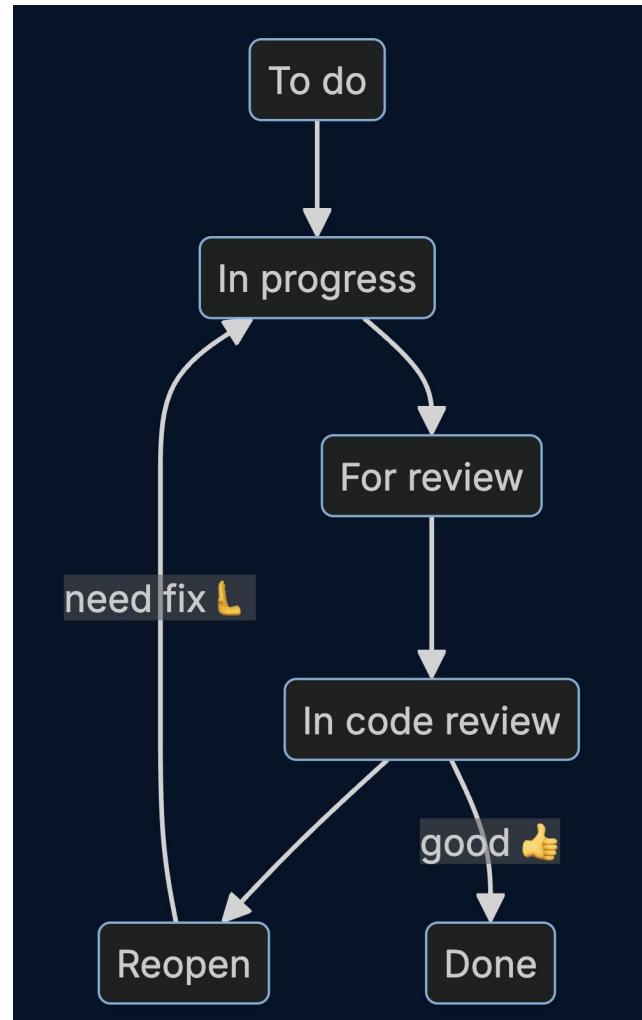


# Git workflow for a task:



1. Create a new branch for a current lesson.  
↓
2. Write some code.  
↓
3. Commit the changes, specifying what was done in a commit message.  
↓
4. Push the changes to the repository.  
↓
5. Create a pull request.  
↓
6. Change the status in Jira to "In review".  
Include a link to the open pull request in the URL task field.  
↓
7. If the task is reopened, repeat the process from step 2.  
A new branch is not needed.  
↓
8. Merge PR after approve  
↓
9. Pull changes from remote master to local master

# Usual Jira task workflow:



# WORK WITH CODE

# Ignore redundant files

## What to ignore

- Generated files
- Debug logs

[Official docs](#)  
[Generator](#)

One file path per line

**Global: `~/.gitignore_global`**

[Collection of useful global ignores](#)

System files, your editor settings

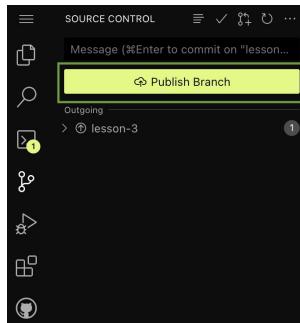
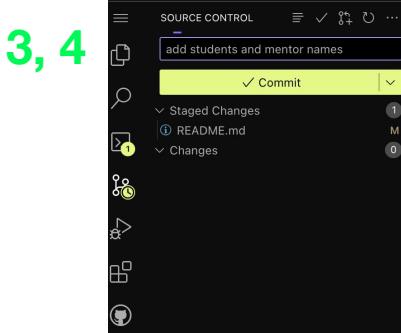
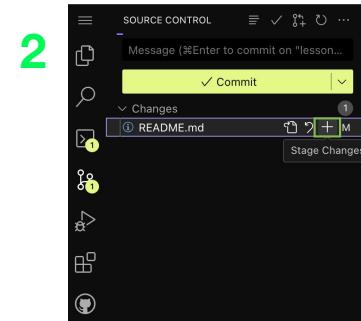
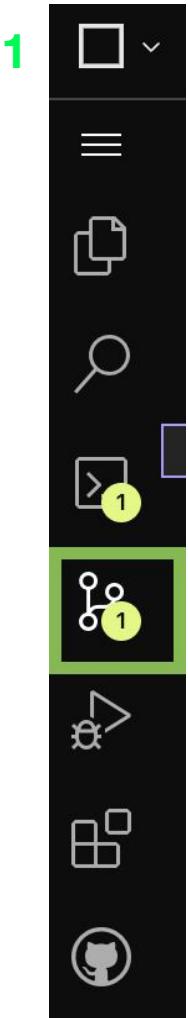
**Local: `.gitignore`**

Generated files, and files that you don't want to see in the repository

# Modifying Code

1. In the left panel, select **Source Control** and open the first item – **Source Control** to see the changed files.
2. Select the changes to include in the commit.
  - a. You can click the **+** button in the **Changes** section to select all changes.
  - b. If you forget to select changes, a warning will appear, and you can safely click **Yes**.
3. Enter a message in the **Message** field (it should answer the question "What does this commit do?").
4. Click the **Commit** button.
5. Click the **Publish Branch** button to perform the push action.

Check your repository on [GitHub.com](#) to ensure all changes have been applied.



5.1

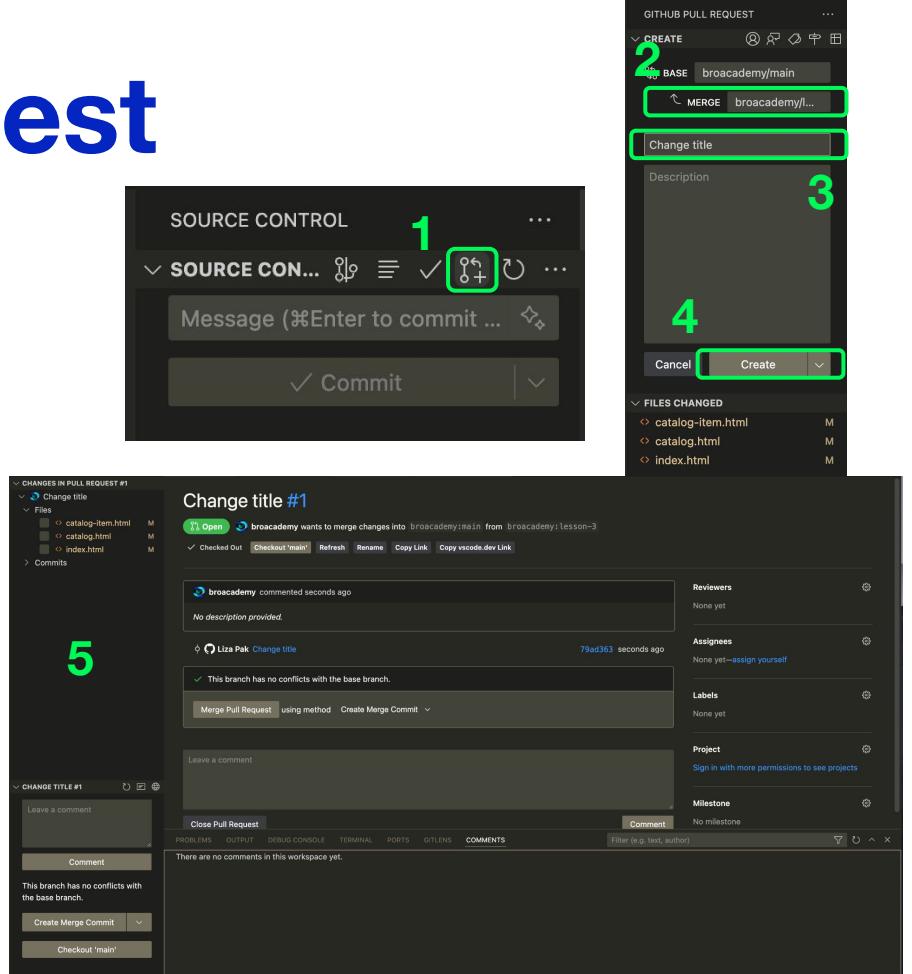
# Creating pull request

## Using Codesandbox

1. Open Source control tab and choose **Pull request** button

If you don't have changes, you can't create a PR

2. Check the **branch name**
3. **Describe** the changes made in your commits
4. Click **Create**
5. See the result



# Creating pull request

## Using [github.com](#)

1. Open the repository on **GitHub** and select the **Pull Requests** tab.
2. Click the **New pull request** button.
3. A panel with the commits to be included in the pull request will appear.  
Check branches names.  
Click the **Create pull request** button.
4. Describe the changes made in your commits and click **Create pull request**.
5. Review the created pull request.

1

Welcome to pull requests!

Pull requests help you collaborate on code with other people. As pull requests are created, they'll appear here in a searchable and filterable list. To get started, you should [create a pull request](#).

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#).

base repository: [htmlacademy-animation/145...](#) base: master head repository: [sealeye/magic-vacation](#) compare: master

Able to merge. These branches can be automatically merged.

Discuss and review the changes in this comparison with others. [Learn about pull requests](#)

3 Create pull request

4

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 repository: [htmlacademy-animation/145...](#) base: master head repository: [sealeye/magic-vacation](#) compare: master

Able to merge. These branches can be automatically merged.

Update Readme.md #2

sealeye wants to merge 1 commit into htmlacademy-animation:master from sealeye:master

Conversation 0 Commits 1 Checks 0 Files changed 1

sealeye commented now  
No description provided.

sealeye marked this pull request as ready for review now

This branch has not been deployed  
No deployments

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.

4

You Are  
**AWESOME**



**QUESTIONS?**



# Homework

Made two iterations of pull requests

## Git lesson (add readme)

- 1.1. Create a branch with your task about git lesson
- 1.2. Add yourself and your mentor into README.md
- 1.3. Commit and push these changes
- 1.4. Create a pull request and set your mentor as a reviewer
- 1.5. Wait until your mentor will merge your branch into target branch

## 2. Save results of HTML lesson

- 2.1. Move back to target branch
- 2.2. Create another branch with your task about html lesson
- 2.3. Add your HTML files (index.html, blog.html)
- 2.4. Commit and push
- 2.5. Create a pull request and set your mentor as a reviewer
- 2.6. Wait until your mentor will merge your branch into target branch



**Please fill out the feedback form**  
**It's very important for us**



**THANK YOU!**  
**Have a good evening!**