

First Training Program and Workshop

MACbioIDi – February – March 2018





GitHub



Introduction

Version Control (SVN- Git)

GitHub

Commands:

- repo
- commit,
- hash
- branch
- merge,
- fork
- Pull request

Using GitHub

Glossary

Recommended links

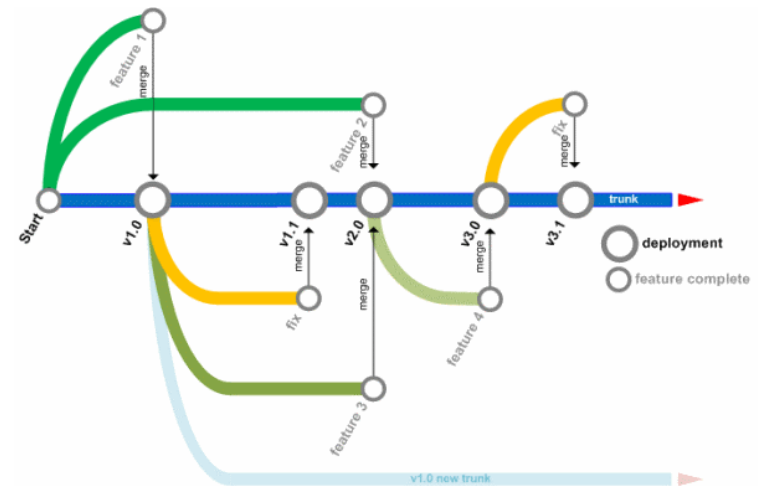
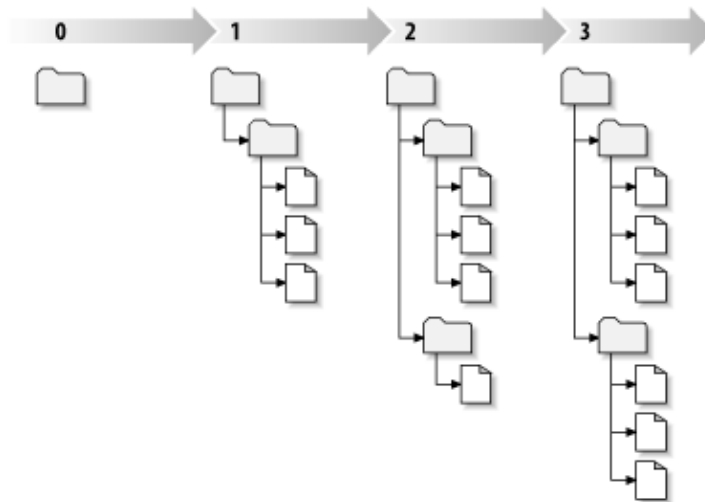


GitHub



Version Control

The management of changes to documents,





GitHub



Version Control: SVN - Git

SVN. Is a software versioning and revision control system distributed as open source under the Apache License.



Git lets developers see the entire timeline of their changes, decisions, and progression of any project in one place.

With a DVCS like Git, collaboration can happen any time while maintaining source code integrity.

Businesses using Git can break down communication barriers between teams and keep them focused on doing their best work.



GitHub



GitHub

Is a web service for version control using git.



github
SOCIAL CODING



GitHub: repo

MACbioIdi: Engineerin... X course of github - B... X Explore the GitHub... X Git Handbook · Git... X what is github - Bu... X What is GitHub? X Create a New Repos... X

GitHub, Inc. (US) | https://github.com/new 110% Buscar

Create a new repository

A repository contains all the files for your project, including the revision history.

Owner: MarilolaMACbioIdi / Repository name: storyteller ✓

Great repository names are short and memorable. Need inspiration? How about **turbo-octo-giggle**.

Description (optional)

Public
Anyone can see this repository. You choose who can commit.

Private
You choose who can see and commit to this repository.

Initialize this repository with a README
This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: None | Add a license: None ⓘ

Create repository



GitHub: commit

The screenshot shows a browser window with several tabs open. The active tab is titled "Editing storyteller/R". The address bar shows the URL "https://github.com/MarilolaMACbioDi/storyteller/". The main content area displays a "Commit changes" dialog box. The dialog box has a title "Commit changes" and a profile picture of a person. Below the title is a text input field with the placeholder "Brief description about the repo". The input field contains the text "Just describing it is for the MACbioDi project". Below the input field are two radio button options: "Commit directly to the master branch." (which is selected) and "Create a new branch for this commit and start a pull request. Learn more about pull requests." At the bottom of the dialog box are two buttons: "Commit changes" (green) and "Cancel" (red). The footer of the browser window shows the copyright notice "© 2018 GitHub, Inc." and various links: "Terms", "Privacy", "Security", "Status", "Help", "Contact GitHub", "API", "Training", "Shop", "Blog", "About".



GitHub



GitHub: hash

The screenshot shows a web browser window displaying the GitHub repository page for 'MarilolaMACbiolDi / storyteller'. The browser's address bar shows the URL 'https://github.com/MarilolaMACbiolDi/storyteller/'. The repository page includes a search bar, navigation links for 'Pull requests', 'Issues', 'Marketplace', and 'Explore', and a header for the repository with 'Watch', 'Star', and 'Fork' buttons. The main content area shows the 'Code' tab selected, with a branch dropdown set to 'master' and the file 'storyteller / README.md' selected. A commit by 'MarilolaMACbiolDi' is shown with a brief description and a commit hash 'e0a762d' circled in red, followed by '22 seconds ago'. Below the commit, the file content is displayed, showing the title 'storyteller' and a description: 'A repo from Marilola to MACbiolDi first workshop project week.' At the bottom of the page, the full commit hash 'e0a762d3b4327c7e2e68665964e2171334a30131' is visible in the URL bar, also circled in red.



GitHub

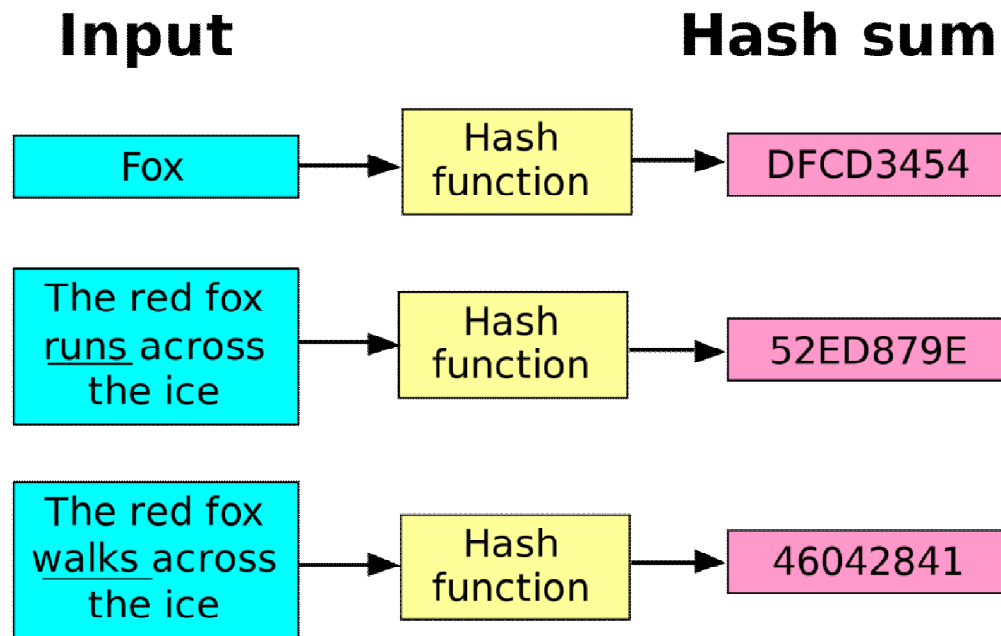


GitHub: hash

The screenshot shows a web browser window displaying a GitHub repository page for 'MarilolaMACbioIDi / storyteller'. The browser's address bar shows the URL 'https://github.com/MarilolaMACbioIDi/storyteller/'. The repository page includes navigation tabs for 'Code', 'Issues', 'Pull requests', 'Projects', 'Wiki', 'Insights', and 'Settings'. A 'Brief description about the repo' section contains the text 'Just describing it is for the MACbioIDi project'. Below this, a commit by 'MarilolaMACbioIDi' is shown, committed 2 minutes ago. The commit message is '1 parent 2edce2d commit e0a762d3b4327c7e2e68665964e2171334a30131'. The diff view shows changes to the 'README.md' file, with a deletion of the line '-# storyteller' and an addition of the line '+# storyteller'. The commit has 0 comments.



GitHub: hash





GitHub



GitHub: branch

The screenshot shows a web browser window with several tabs open, including 'course of github', 'Explore the Git', 'Git Handbook', 'what is github', 'What is Git', 'MarilolaMACbio...', and 'sha in git - Bus...'. The address bar shows the URL 'https://github.com/MarilolaMACbioDi/storyteller'. The page content includes a repository overview for 'storyteller' with 10 commits, 3 branches, 0 releases, and 1 contributor. A modal window titled 'Switch branches/tags' is open, showing a search bar 'Find or create a branch...' and a list of branches: 'Clinicians' (selected), 'Engineers', and 'master' (checked). The repository name 'storyteller' and its description 'A repo from Marilola to MACbioDi first workshop project week.' are visible below the modal.



GitHub



GitHub: merge

The screenshot shows a web browser window with several tabs open. The active tab is a GitHub pull request page for the repository 'MarilolaMACbioDi/storyteller'. The page header indicates that the pull request can be merged automatically because there are no conflicts with the base branch. A green 'Merge pull request' button is visible. Below this, there is a promotional banner for GitHub Marketplace. At the bottom, there is a comment box with a 'Write' tab selected, a text area containing the placeholder 'Leave a comment', and buttons for 'Close pull request' and 'Comment'. On the right side of the page, there are settings for Projects, Milestone, and Notifications, along with a list of participants.

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GitHub, Inc. (US) | https://github.com/MarilolaMACbioDi/storyteller/ | 110% | Buscar

Add more commits by pushing to the **Engineers** branch on MarilolaMACbioDi/storyteller.

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](#).

Set up continuous integration to automatically test your code
Catch bugs, enforce style, and increase confidence in your code before you merge.

[Explore GitHub Marketplace](#)

Write Preview **AA** **B** **i**

Leave a comment

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

Styling with Markdown is supported **Close pull request** **Comment**

Projects

None yet

Milestone

No milestone

Notifications

Unsubscribe

You're receiving notifications because you authored the thread.

1 participant

Lock conversation



GitHub



GitHub: branch and merge

The screenshot shows a web browser window displaying the GitHub interface for the repository `MarilolaMACbioIdi / storyteller`. The browser's address bar shows the URL `https://github.com/MarilolaMACbioIdi/storyteller/`. The repository page includes navigation tabs for `Code`, `Issues` (0), `Pull requests` (1), `Projects` (0), `Wiki`, `Insights`, and `Settings`. On the left, a sidebar menu lists repository metrics: `Pulse`, `Contributors`, `Community`, `Traffic`, `Commits`, `Code frequency`, `Dependency graph`, `Network` (highlighted), and `Forks`. The main content area shows a network graph under the heading `Owners` and `Mar`. The graph displays a sequence of commits on the `main` branch, with a commit count of 18. A branch named `clinicians` is shown branching off from `main`, and another branch named `engineers` is shown branching off from `clinicians`. The graph uses different colors (green, blue, purple) to represent different branches and their relationships.



GitHub



GitHub: fork

The screenshot shows a web browser window displaying a GitHub repository page. The browser's address bar shows the URL `https://github.com/medtec4susdev/storyteller`. The repository page header includes the GitHub logo, a search bar, and navigation links for 'Pull requests', 'Issues', 'Marketplace', and 'Explore'. The repository name is 'medtec4susdev / storyteller', noted as 'forked from MarilolaMACbiolDi/storyteller'. It shows 0 stars, 0 forks, and 1 contributor. Below the header, there are tabs for 'Code', 'Pull requests', 'Projects', 'Wiki', 'Insights', and 'Settings'. A message states 'No description, website, or topics provided.' with an 'Edit' button. A summary bar shows 10 commits, 3 branches, 0 releases, and 1 contributor. The current branch is 'master'. Action buttons include 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. A commit history table is visible:

Commit	Message	Time
MarilolaMACbiolDi Merge pull request #2 from MarilolaMACbiolDi/Clinicians		Latest commit 7930b85 an hour ago
README.md	Brief description about the repo	7 hours ago
Workshopstory	Merge pull request #2 from MarilolaMACbiolDi/Clinicians	an hour ago

Below the commit history, the 'README.md' file content is partially visible, showing the word 'storyteller' in a large font. The browser's address bar at the bottom shows `https://github.com/medtec4susdev/storyteller/upload/master`.



GitHub: creating a pull-request

The screenshot shows a web browser window with the GitHub interface. The address bar shows the URL: `https://github.com/MarilolaMACbioDi/storyteller/compare/master...medtec4susdev:master`. The page title is "Comparing changes". Below the title, there is a navigation bar with "Code", "Issues 0", "Pull requests 1", "Projects 0", "Wiki", and "Insights". The main content area shows a comparison between "base fork: MarilolaMACbioDi/storyteller" and "head fork: medtec4susdev/storyteller". A green checkmark indicates "Able to merge". A prominent green button says "Create pull request". Below this, it shows "1 commit", "1 file changed", "0 commit comments", and "1 contributor". A commit from "medtec4susdev" on Mar 18, 2018, is listed with the message "Adding a new line" and a verified commit hash "8b643e4". At the bottom, it says "Showing 1 changed file with 1 addition and 0 deletions." and has "Unified" and "Split" view options.



GitHub: checking a pull-request

The screenshot shows a web browser window displaying the GitHub interface for the repository `MarilolaMACbioDi/storyteller`. The browser's address bar shows the URL `https://github.com/MarilolaMACbioDi/storyteller/`. The repository page includes navigation tabs for `Code`, `Issues`, `Pull requests` (which is active), `Projects`, `Wiki`, `Insights`, and `Settings`. A notification banner at the top of the pull request section reads: "Label issues and pull requests for new contributors. Now, GitHub will help potential first-time contributors discover issues labeled with `help wanted` or `good first issue`". Below this, there are filter options: `Filters` (set to `is:pr is:open`), `Labels`, and `Milestones`, along with a `New pull request` button. The pull request list shows `1 Open` and `2 Closed` pull requests. The first pull request is titled `Two new countries`, opened 2 hours ago by `MarilolaMACbioDi`. At the bottom, a `ProTip!` suggests bookmarking issues and pull requests for later review.



GitHub



GitHub: accepting a pull-request

The screenshot shows a web browser window with the following tabs: "MACbioID: Engineering Of E-Lear...", "Understanding the GitHub Flo...", "git and github - Buscar con Go...", and "Adding a new line by medtec4s...". The address bar shows the URL "https://github.com/MarilolaMACbioID/storyteller/".

The main content area displays a pull request from **medtec4susdev** (commented 8 minutes ago) to the repository **MarilolaMACbioID/storyteller/**. The pull request title is "Adding a new line". The commit message is "Merge branch 'master' into master". The pull request is ready for merge, with a green checkmark and the message: "This branch has no conflicts with the base branch. Merging can be performed automatically." A green button labeled "Merge pull request" is visible.

The commit history shows two commits: "Adding a new line" (Verified, 8b643e4) and "Merge branch 'master' into master" (Verified, 06db348).

On the right side, there are sections for "Reviewers" (MarilolaMACbioID), "Assignees" (No one—assign yourself), "Labels" (None yet), "Projects" (None yet), "Milestone" (No milestone), and "Notifications" (Subscribe button). At the bottom, it indicates "2 participants".



GitHub



GitHub: submit an issue

Sign in to GitHub · GitHub

Professors · Issue #5 · MarilolaMACbioIDi / storyteller

GitHub, Inc. [US] <https://github.com/MarilolaMACbioIDi/storyteller/issues/5>

This repository Search Pull requests Issues Marketplace Explore

MarilolaMACbioIDi / storyteller Watch 0 Star 0 Fork 1

Code Issues 1 Pull requests 0 Projects 0 Wiki Insights

Professors #5

Edit New issue

Open medtec4susdev opened this issue a minute ago · 0 comments

medtec4susdev commented a minute ago

Contributor

I think it could be interesting to include some interesting professors

Assignees: No one assigned

Labels: None yet

Projects: None yet

Milestone: No milestone

Notifications: Unsubscribe

Write Preview AA B i “ < > @

Leave a comment



GitHub



GitHub: manage an issue

The screenshot shows a web browser window with the GitHub issue page for 'Professors #5'. The browser's address bar shows the URL <https://github.com/MarilolaMACbioIDI/storyteller/issues/5>. The issue is currently closed, as indicated by a red 'Closed' label. The issue was opened by user 'medtec4susdev' 9 minutes ago and has 2 comments.

The first comment, from 'medtec4susdev', is a contributor comment from 9 minutes ago. The text reads: "I think it could be interesting to include some interesting professors". Below the text is a blurred image of a colorful bar chart.

The second comment, from 'MarilolaMACbioIDI', is an owner comment from 6 minutes ago. The text reads: "I think you are right. I'll manage.".

A status update from 'MarilolaMACbioIDI' indicates that the issue was closed 4 minutes ago.

The third comment, from 'MarilolaMACbioIDI', is an owner comment from 23 seconds ago. The text reads: "Done #5".

On the right side of the issue, there are several configuration options: Assignees (No one—assign yourself), Labels (None yet), Projects (None yet), Milestone (No milestone), and Notifications (Unsubscribe). At the bottom of the right sidebar, it shows '2 participants' and a 'Lock conversation' option.



GitHub



Exercise

Follow the instructions in the web page below to practise the concepts explained.

<https://guides.github.com/activities/hello-world/>



GitHub



Using GitHub

<https://help.github.com/articles/create-a-repo/>

<https://help.github.com/articles/fork-a-repo/>



GitHub



Glossary

Branch

A branch is a parallel version of a repository. It is contained within the repository, but does not affect the primary or master branch allowing you to work freely without disrupting the "live" version. When you've made the changes you want to make, you can merge your branch back into the master branch to publish your changes.

Clone

A clone is a copy of a repository that lives on your computer instead of on a website's server somewhere, or the act of making that copy. You can push your local changes to the remote to keep them synced when you're online.

Commit

A commit, or "revision", is an individual change to a file (or set of files). It's like when you *save* a file, except with Git, every time you save it creates a unique ID (a.k.a. the "SHA" or "hash") that allows you to keep record of what changes were made when and by who. Commits usually contain a commit message which is a brief description of what changes were made.



Glossary

Diff

A diff is the *difference* in changes between two commits, or saved changes. The diff will visually describe what was added or removed from a file since its last commit.

Fetch

Fetching refers to getting the latest changes from an online repository without merging them in. Once these changes are fetched you can compare them to your local branches .

Fork

A fork is a personal copy of another user's repository that lives on your account. Forks allow you to freely make changes to a project without affecting the original. Forks remain attached to the original, allowing you to submit a pull request to the original's author to update with your changes. You can also keep your fork up to date by pulling in updates from the original.

Git

Git is an open source program for tracking changes in text files. It was written by the author of the Linux operating system, and is the core technology that GitHub, the social and user interface, is built on top of.



Glossary

Markdown

Markdown is a simple semantic file format, not too dissimilar from .doc, .rtf and .txt. Markdown makes it easy for even those without a web-publishing background to write prose (including with links, lists, bullets, etc.) and have it displayed like a website.

Merge

Merging takes the changes from one branch (in the same repository or from a fork), and applies them into another. This often happens as a pull request (which can be thought of as a request to merge), or via the command line. A merge can be done automatically via a pull request via the GitHub web interface if there are no conflicting changes, or can always be done via the command line.

Pull

Pull refers to when you are fetching *in* changes *and* merging them. For instance, if someone has edited the remote file you're both working on, you'll want to *pull* in those changes to your local copy so that it's up to date.



Glossary

Pull request

Pull requests are proposed changes to a repository submitted by a user and accepted or rejected by a repository's collaborators.

Push

Pushing refers to sending your committed changes to a remote repository, such as a repository hosted on GitHub. For instance, if you change something locally, you'd want to then *push* those changes so that others may access them.

Remote

This is the version of something that is hosted on a server, most likely GitHub. It can be connected to local clones so that changes can be synced.

Repository

A repository is the most basic element of GitHub. They're easiest to imagine as a project's folder. A repository contains all of the project files (including documentation), and stores each file's revision history. Repositories can have multiple collaborators and can be either public or private.



GitHub



Glossary

SSH key

SSH keys are a way to identify yourself to an online server, using an encrypted message. It's as if your computer has its own unique password to another service. GitHub uses SSH keys to securely transfer information to your computer.



Recommended links

<https://services.github.com/on-demand/intro-to-github/>

<https://guides.github.com/>

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