

Programador full-stack

Sistemas de versionado

¿Qué es?

Gestión de los diversos cambios que se realizan sobre los elementos de algún producto o una configuración del mismo.



Un Sistema de Versionado de Código (SVC) es lo que nos permite **compartir el código fuente** de nuestros desarrollos y a la vez **mantener un registro de los cambios** por los que va pasando.



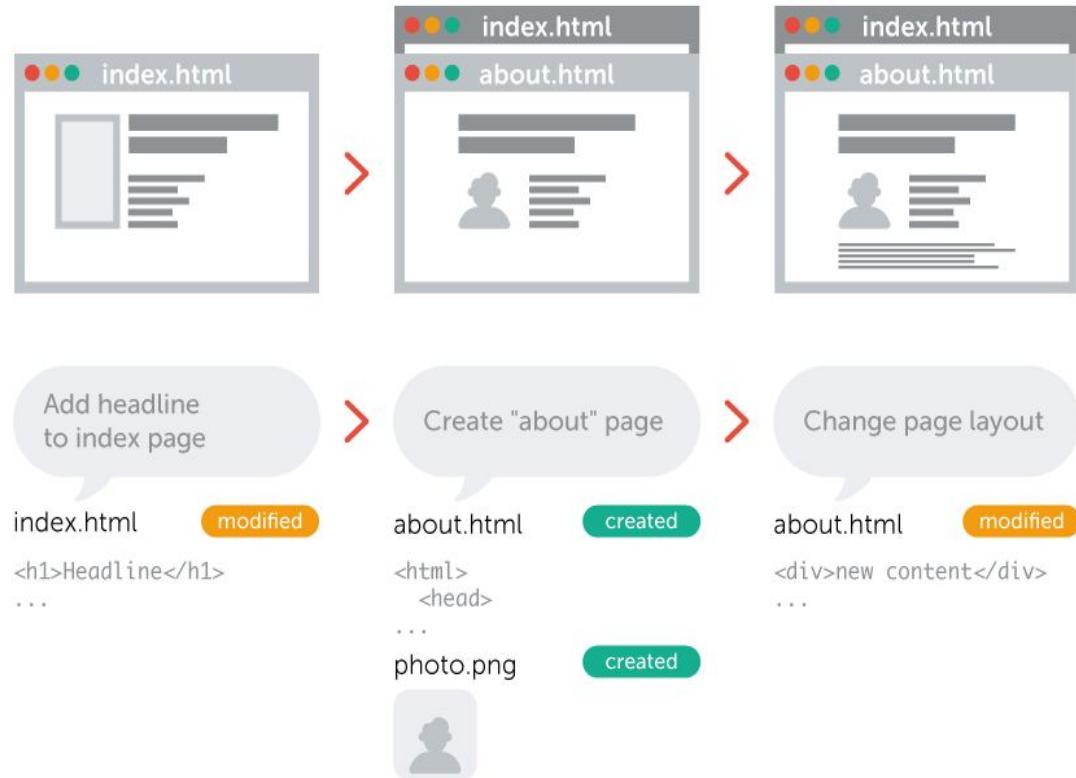
Time



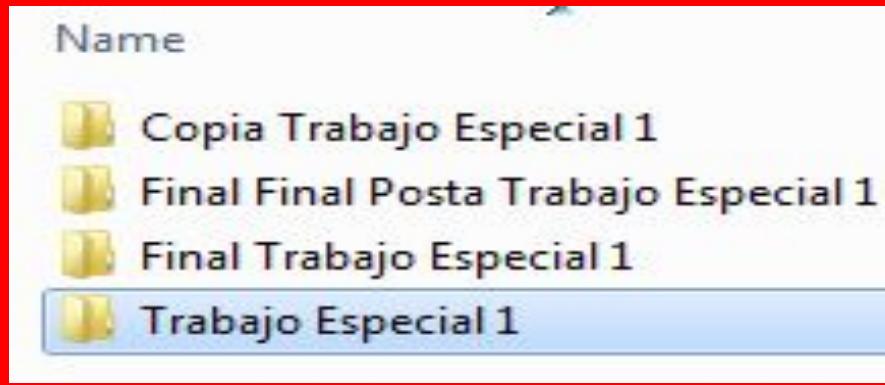
Your Project



VCS



Copiar y Pegar Archivos



NO
Es control de versiones

Software de Control de Versiones



TERMINOLOGÍA:

Repository: Se almacenan los datos actualizados e históricos de cambios.

Módulo: Conjunto de directorios y/o archivos dentro del repositorio.

Revisión: Es una versión determinada de la información que se gestiona.

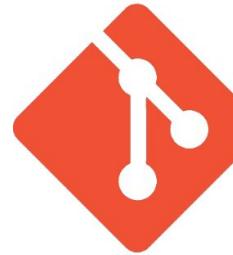
Checkout: Un despliegue crea una copia de trabajo local desde el repositorio.

Commit: Sucede cuando una copia de los cambios hechos a una copia local es escrita o integrada sobre el repositorio.

Mas terminología: “conflict”, “resolve”, “diff”, “export”, “import”, “merge”, “sync”, “workspace”.

Balance

- + Se puede seguir trabajando offline. Incluso si se cae el servidor.
- + Cada repositorio tiene toda la información histórica (Backups replicados).
- + Repositorios más limpios.
- + Server de Git consume menos recursos.
- + Permite hacer pruebas locales versionadas y subir solo lo relevante.
- Curva de aprendizaje mayor.



git

Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

[Link de descarga](#)

Instalando GIT

Downloading Git



Your download is starting...

You are downloading the latest (2.36.0) 64-bit version of **Git for Windows**. This is the most recent [maintained build](#). It was released **10 days ago**, on 2022-04-20.

[Click here to download manually](#), if your download hasn't started.

Other Git for Windows downloads

[Git for Windows Setup](#)

[32-bit Git for Windows Setup](#).

[64-bit Git for Windows Setup](#).

[Git for Windows Portable \("thumbdrive edition"\)](#)

[32-bit Git for Windows Portable](#).

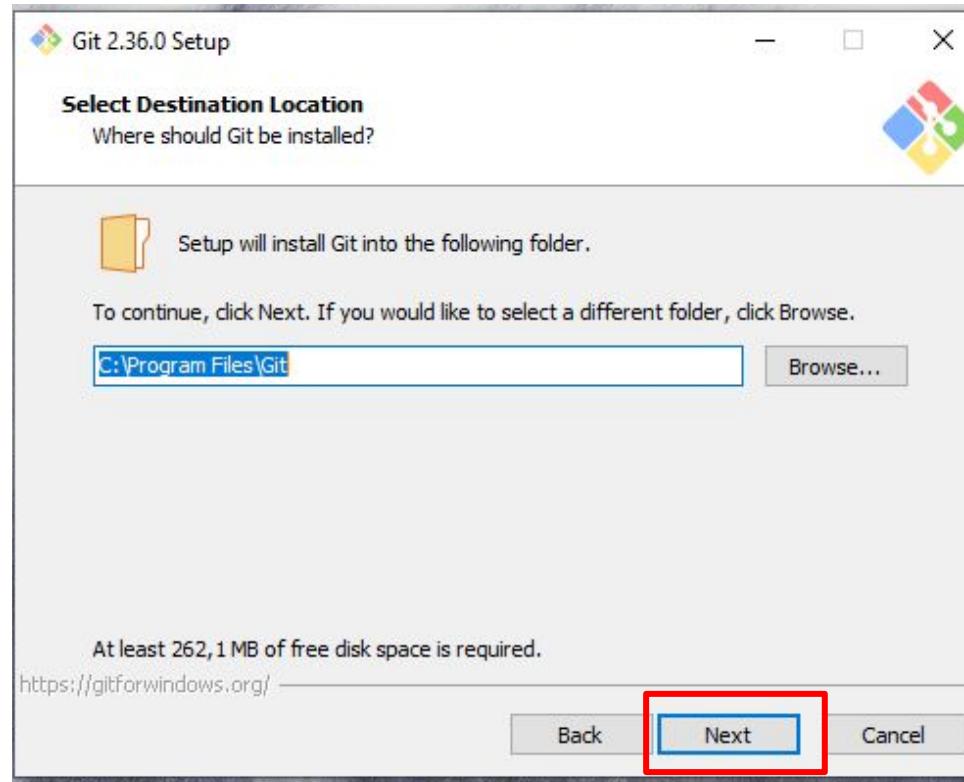
[64-bit Git for Windows Portable](#).

The current source code release is version 2.36.0. If you want the newer version, you can build it from [the source code](#).

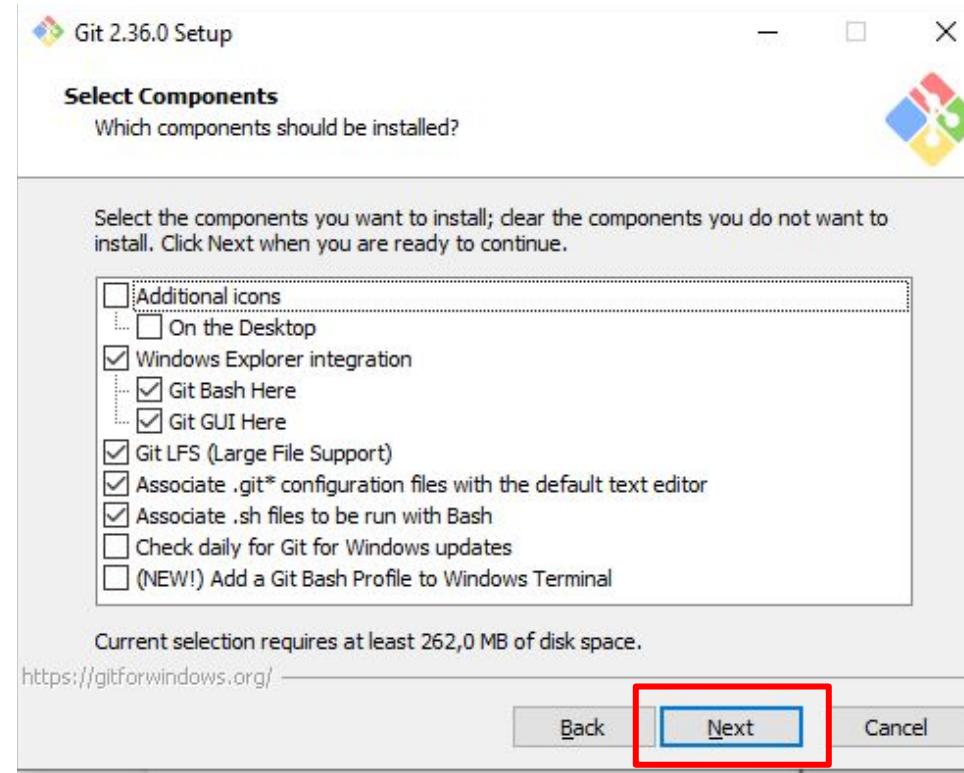
Instalando GIT



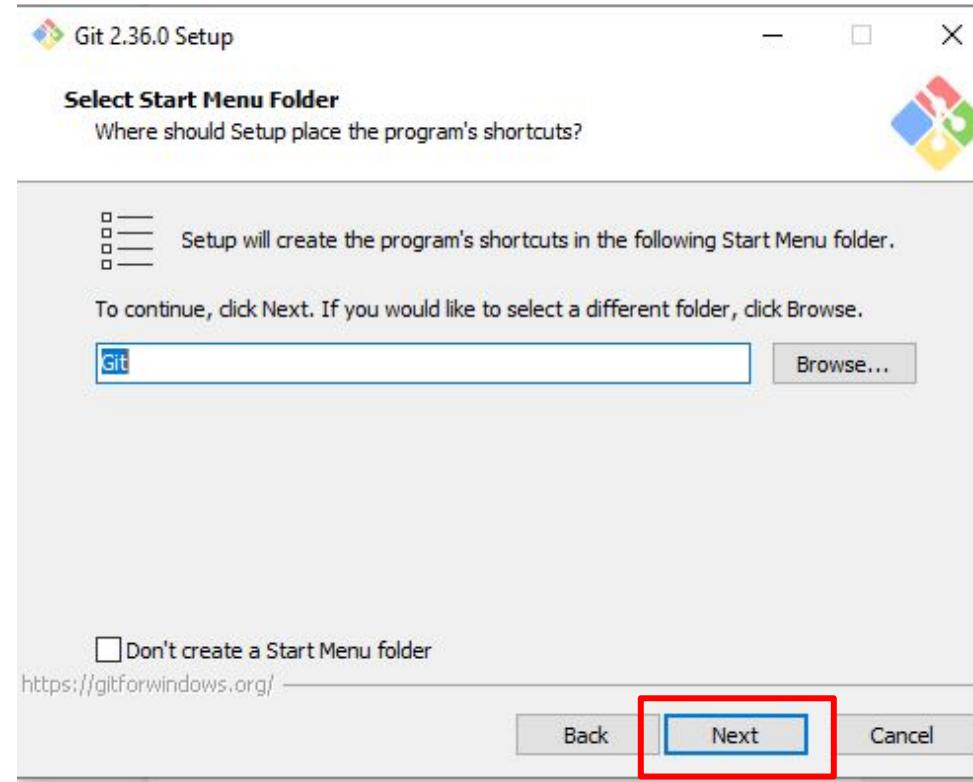
Instalando GIT



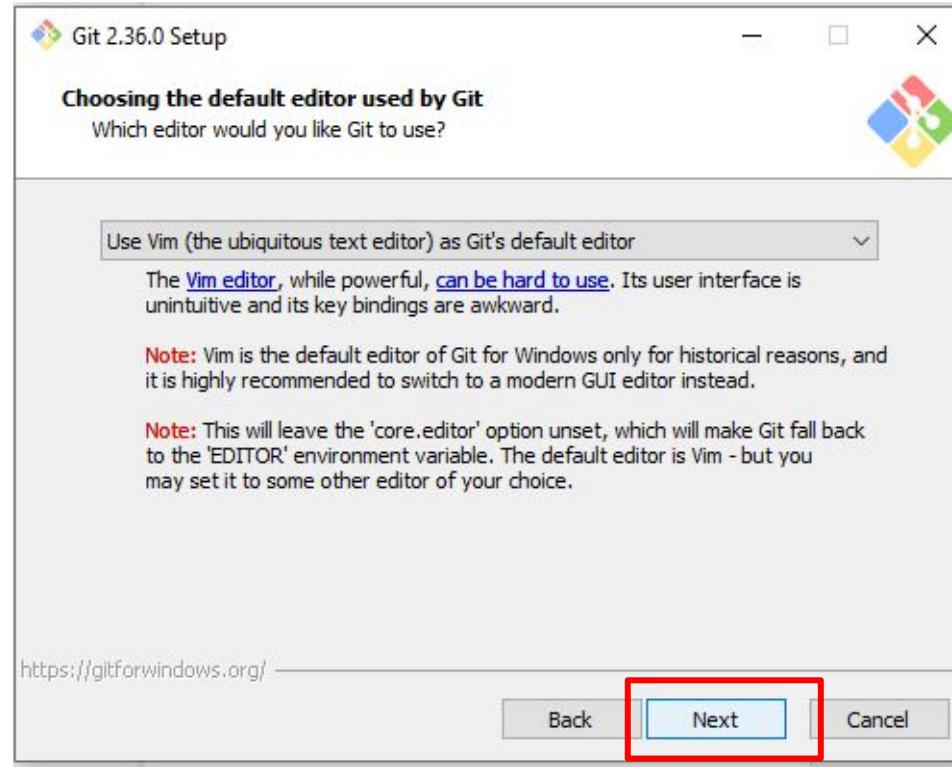
Instalando GIT



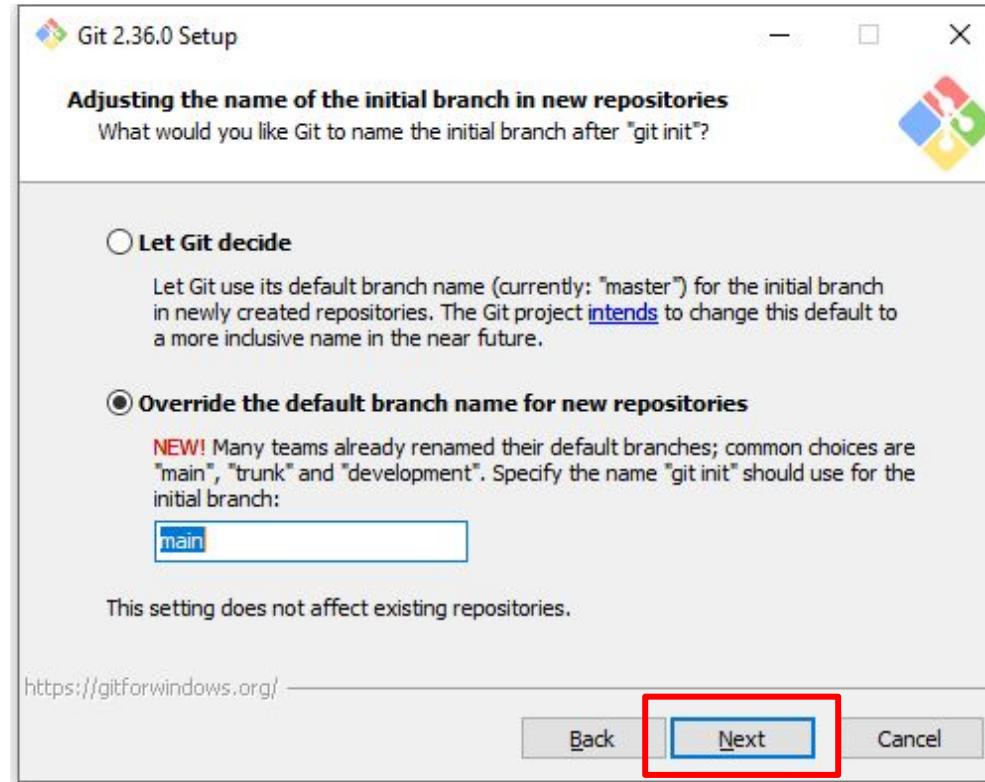
Instalando GIT



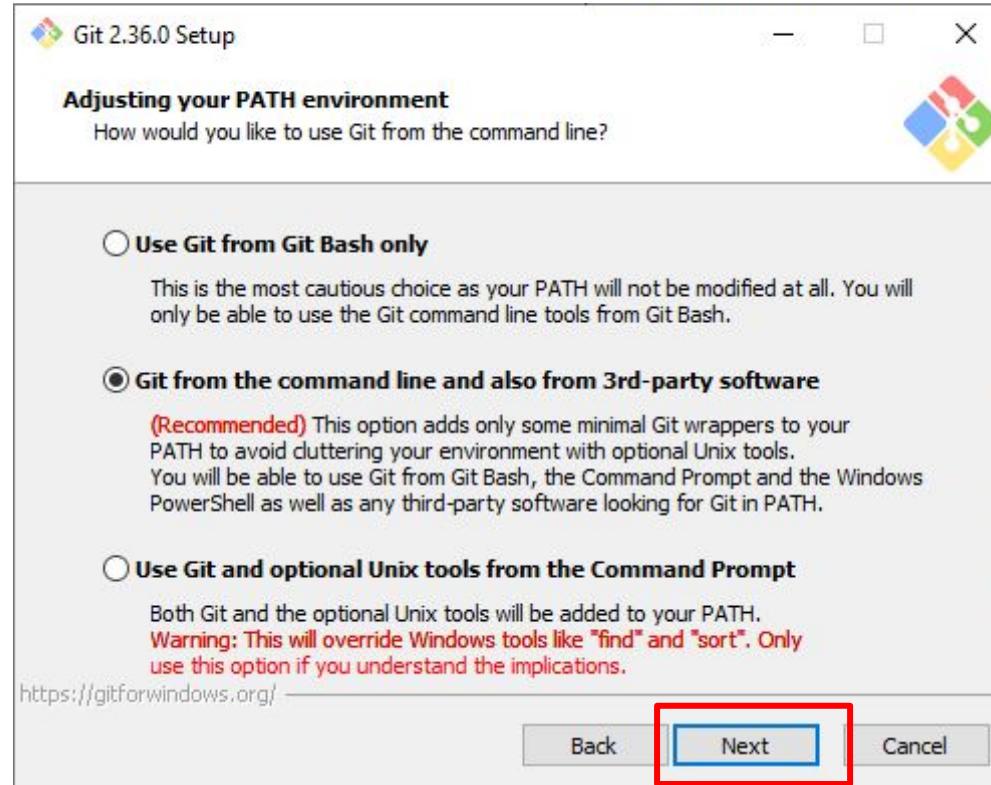
Instalando GIT



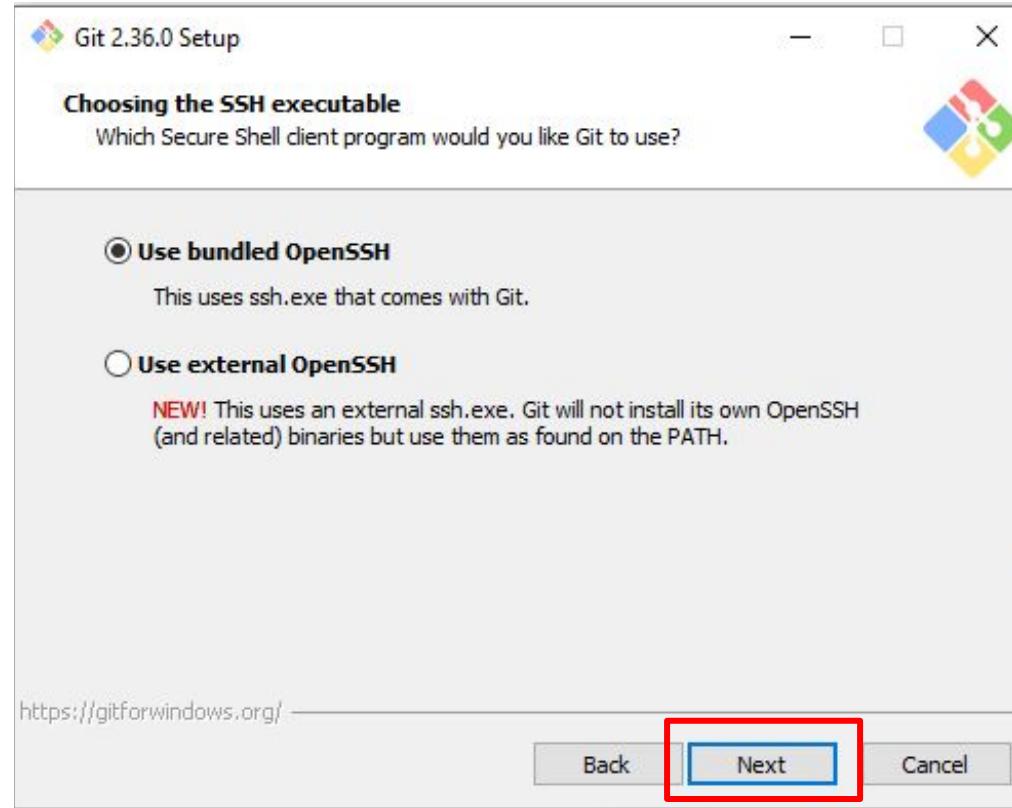
Instalando GIT



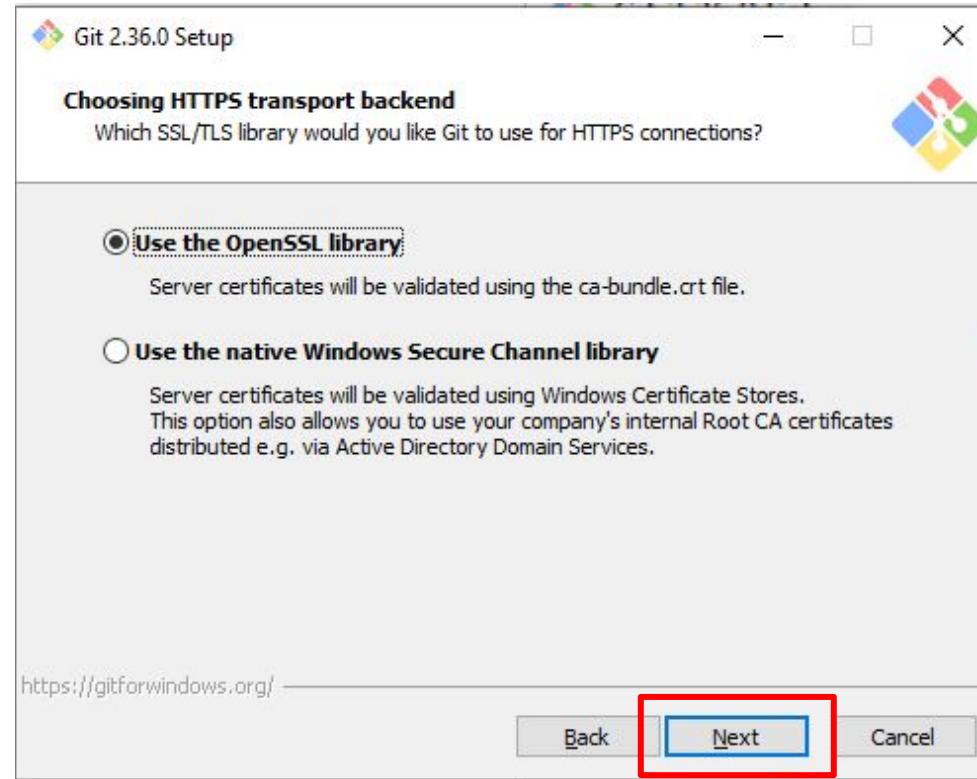
Instalando GIT



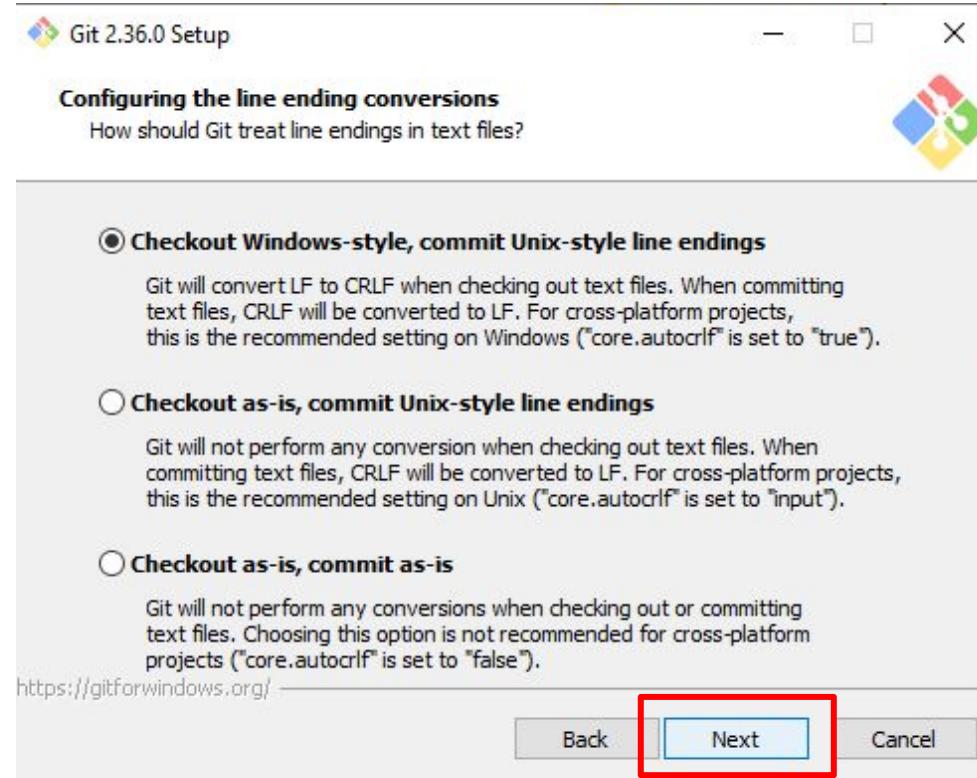
Instalando GIT



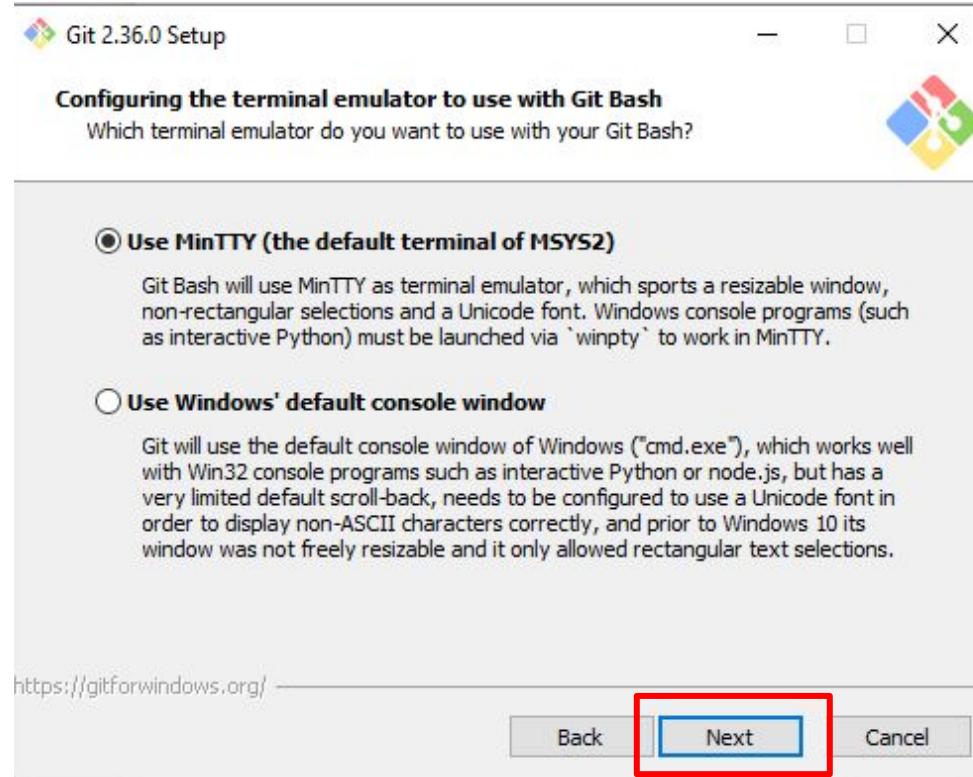
Instalando GIT



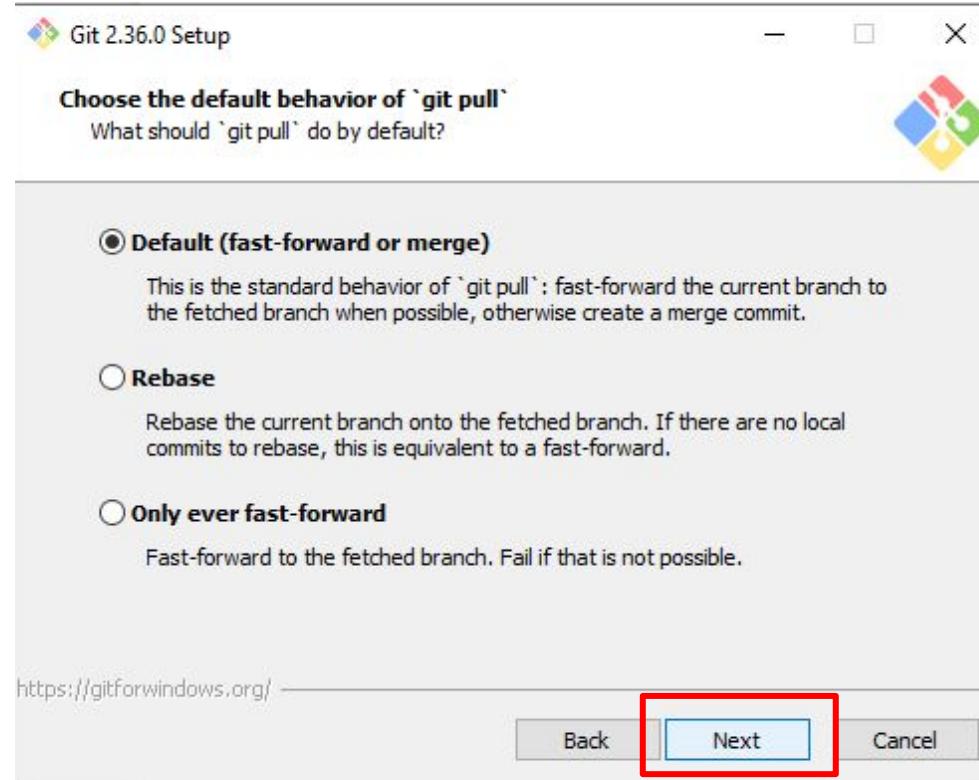
Instalando GIT



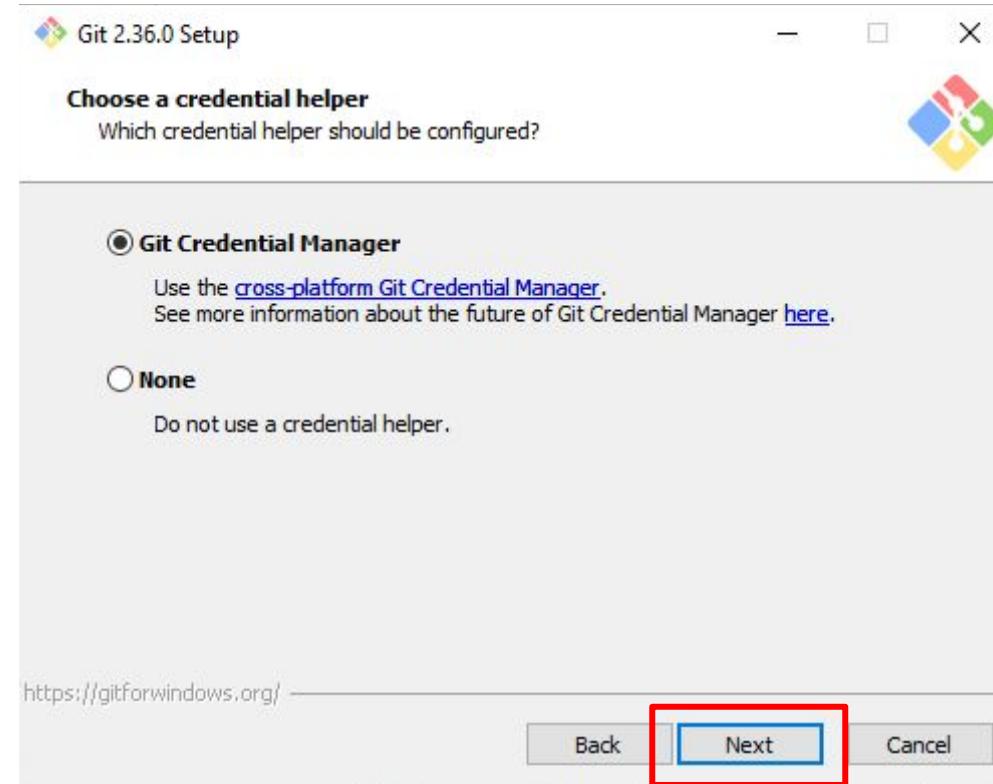
Instalando GIT



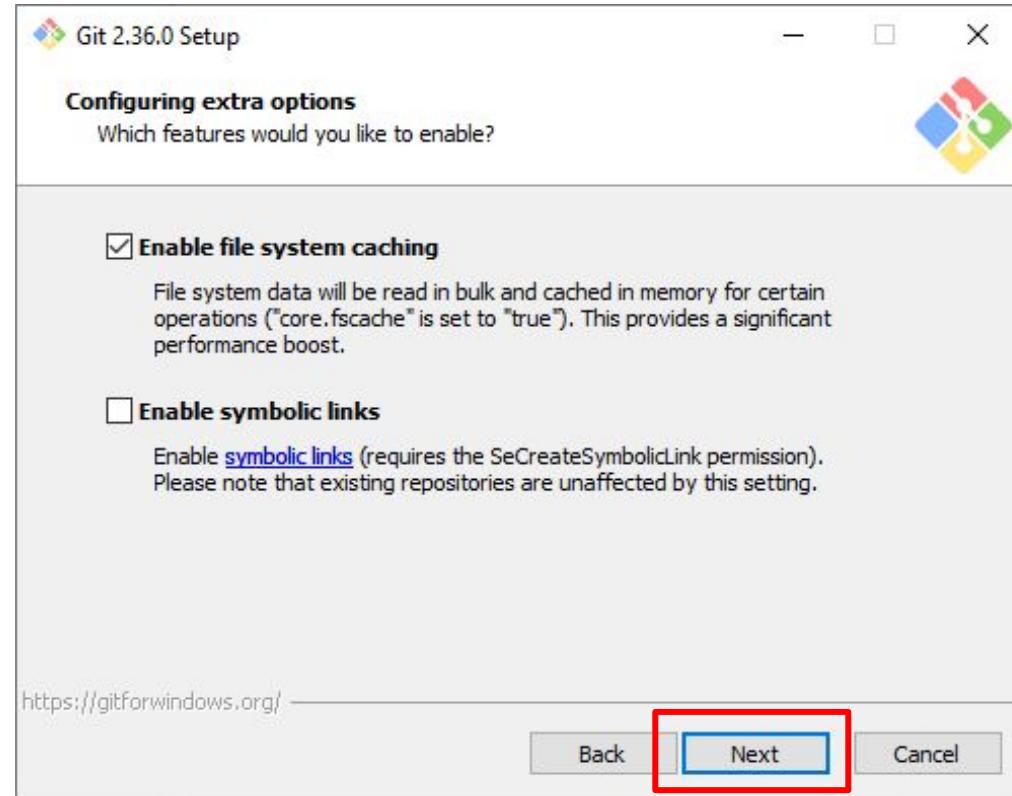
Instalando GIT



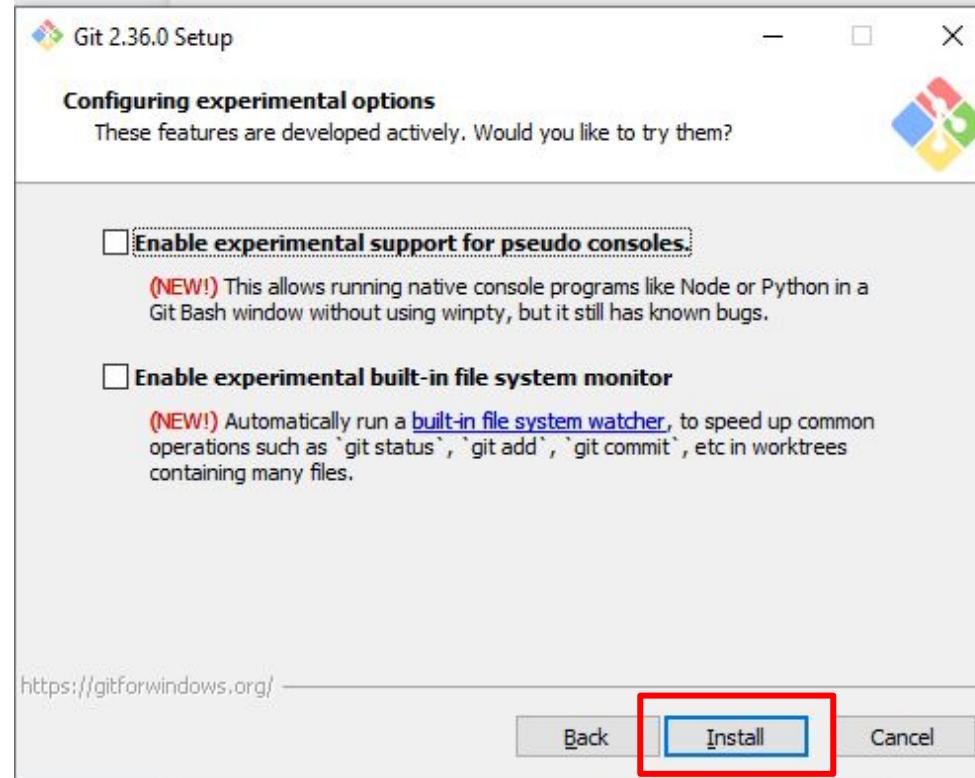
Instalando GIT



Instalando GIT



Instalando GIT



Vocabulario

- **Repositorio:** Donde se guardan los archivos y datos asociados a cada commit.
- **Commit:** Cambio de una versión a otra.
- **Verbos GIT:** son comandos GIT específicos para manipular el repositorio.

Uso de GIT

- Se puede usar una GUI, pero eso no te salva de necesitar entender lo que está pasando
 - A veces las GUI te intentan ocultar lo que pasa y termina jugando en contra
 - Son muy utiles para ver los diff
- Más adelante en el curso vamos a ver como utilizar la consola



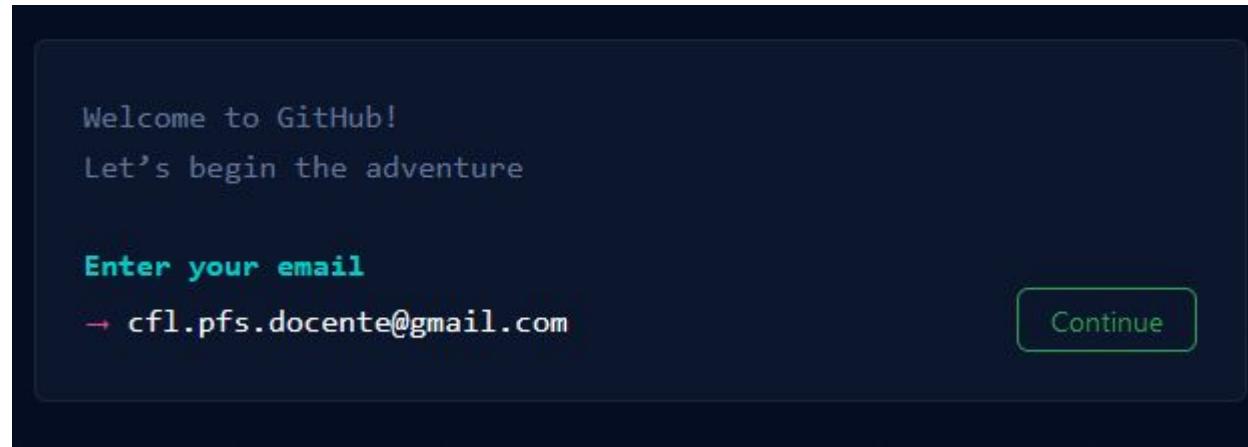
- Plataforma de desarrollo colaborativo, que utiliza Git.
- Ofrece GIT y más cosas juntas
- Gratis
- Tiene facetas de red social. Se suele usar como CV de proyectos propios.
- Existen otras alternativas (GitLab, BitBucket, etc).

Crear una cuenta

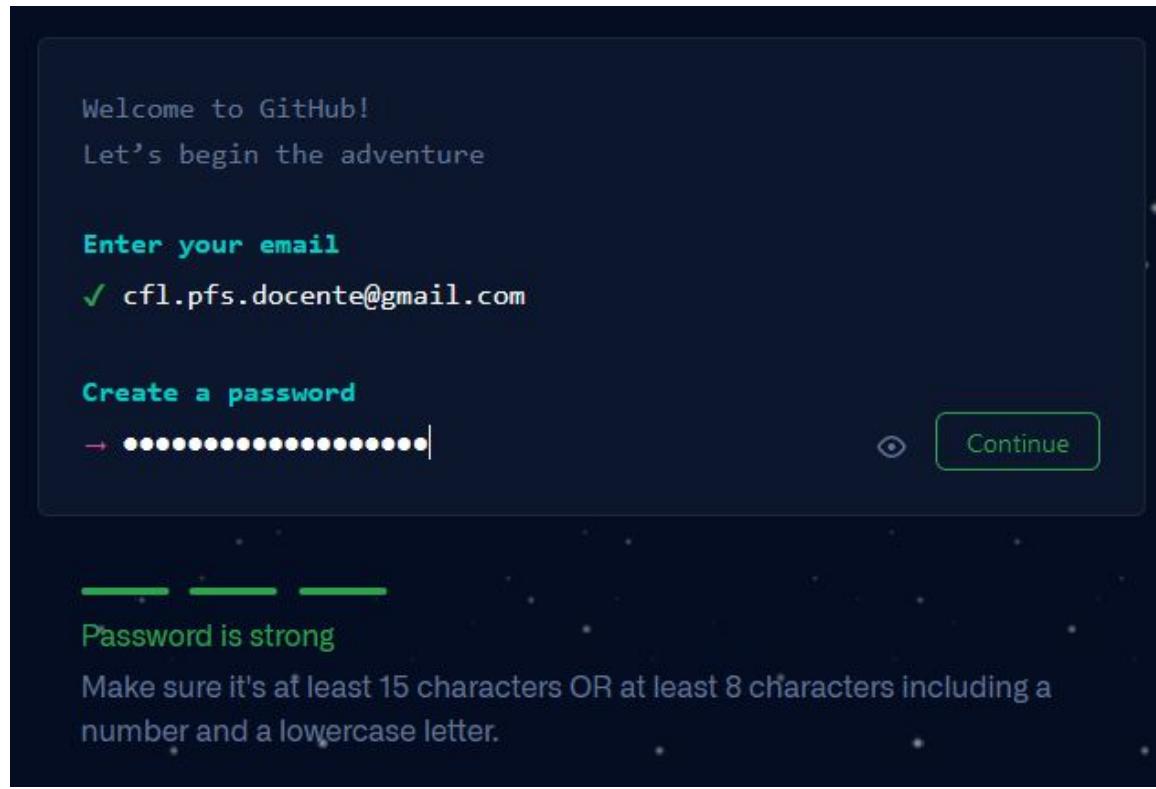
The screenshot shows the GitHub homepage with a dark blue background. At the top, there is a navigation bar with links: Why GitHub? (dropdown), Team, Enterprise, Explore (dropdown), Marketplace, and Pricing (dropdown). To the right of the navigation bar are a search bar labeled "Search GitHub", a "Sign in" button, and a "Sign up" button, which is highlighted with a red box. Below the navigation bar, the main headline reads "Where the world builds software" in large white text. Below this headline, a subtext states: "Millions of developers and companies build, ship, and maintain their software on GitHub—the largest and most advanced development platform in the world." At the bottom left, there is a form with an "Email" input field and a green "Sign up for GitHub" button. On the right side of the page, there is a large, glowing blue globe with pink lines representing network connections. A small cartoon character wearing a space helmet is visible at the bottom right of the globe. The GitHub logo is located in the bottom right corner of the slide.

<https://github.com/>

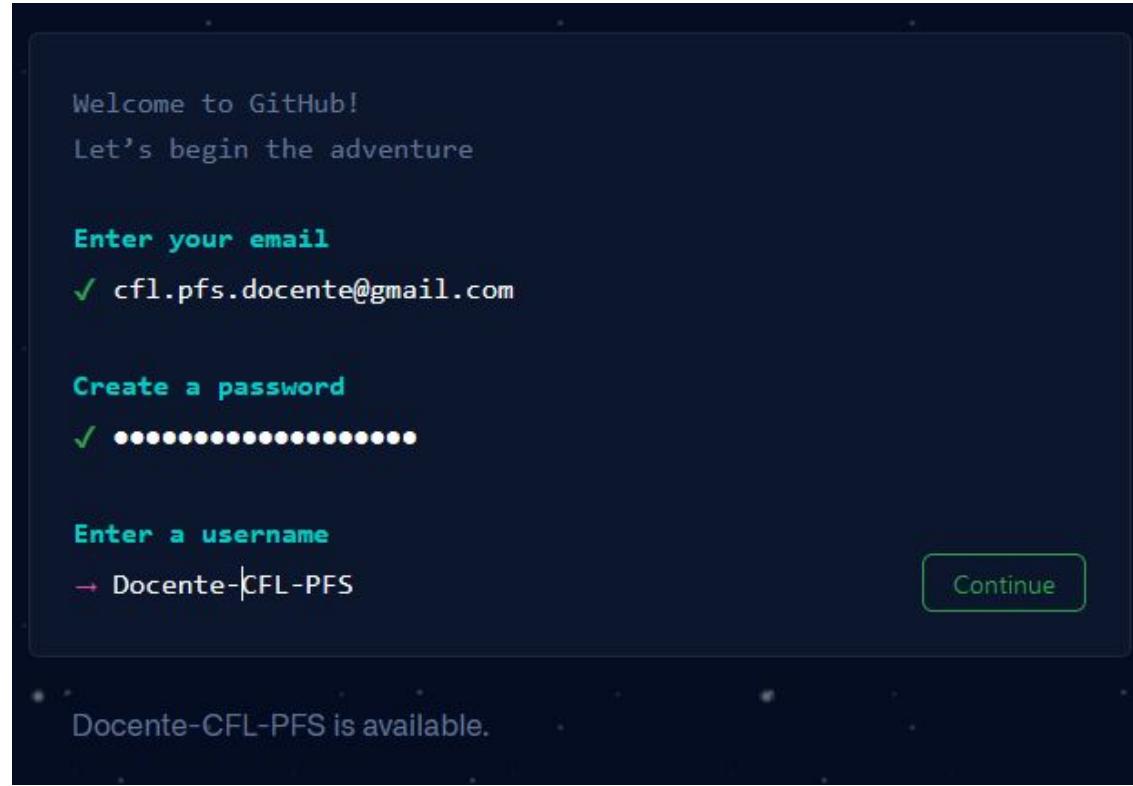
Crear una cuenta



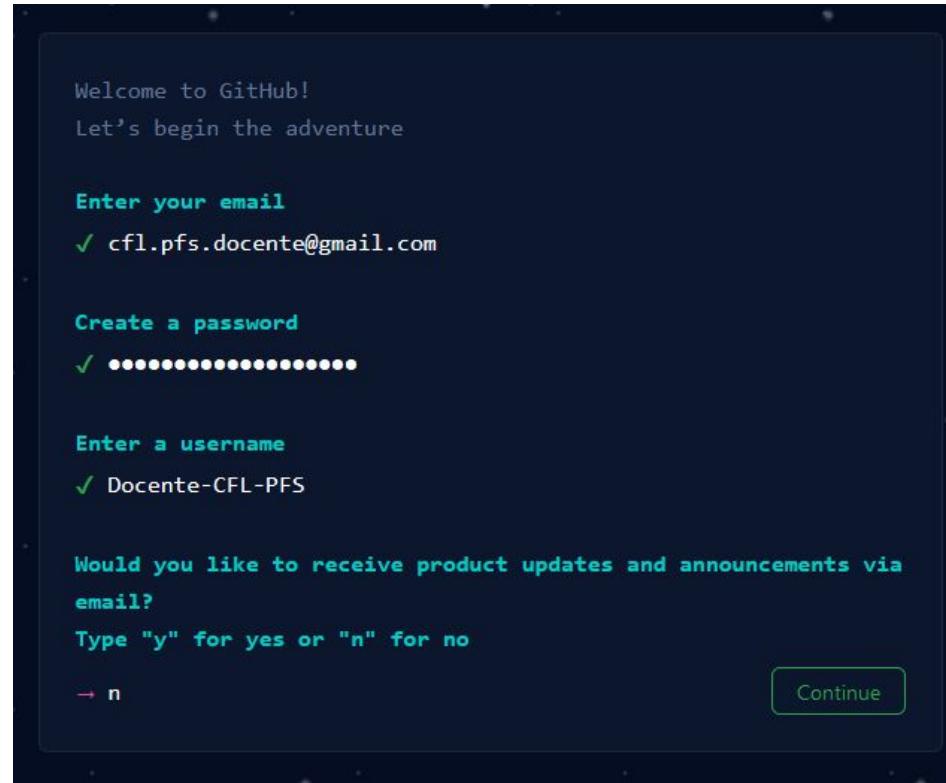
Crear una cuenta



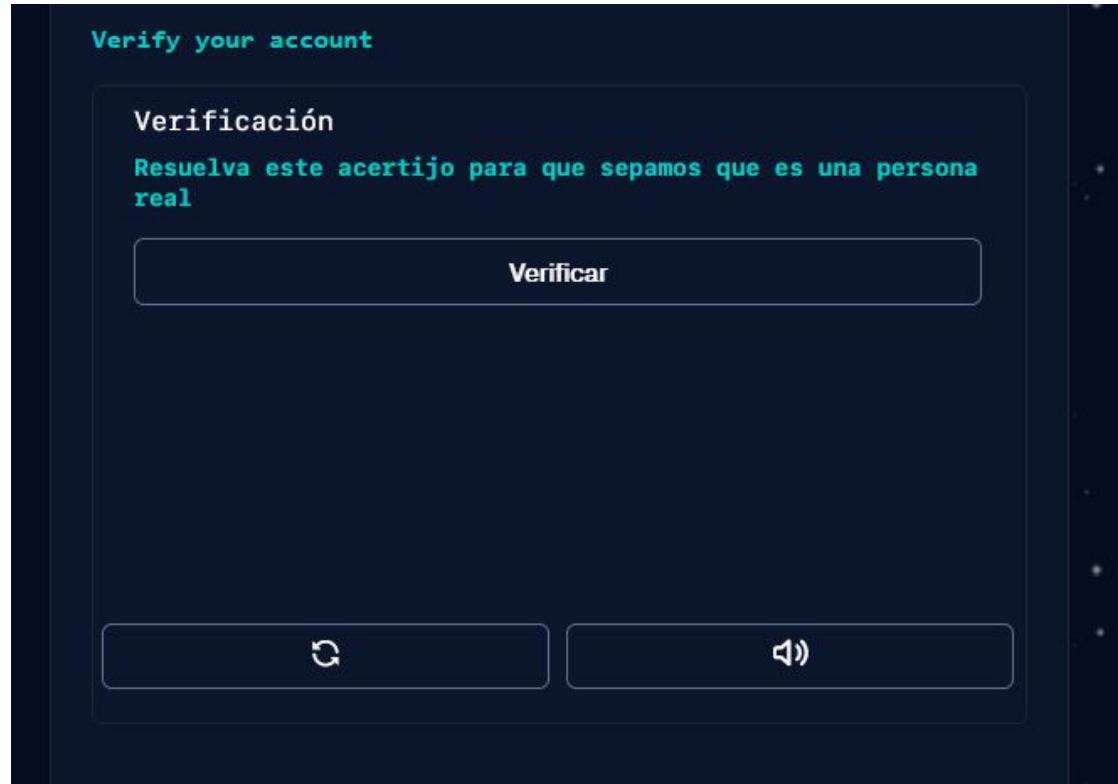
Crear una cuenta



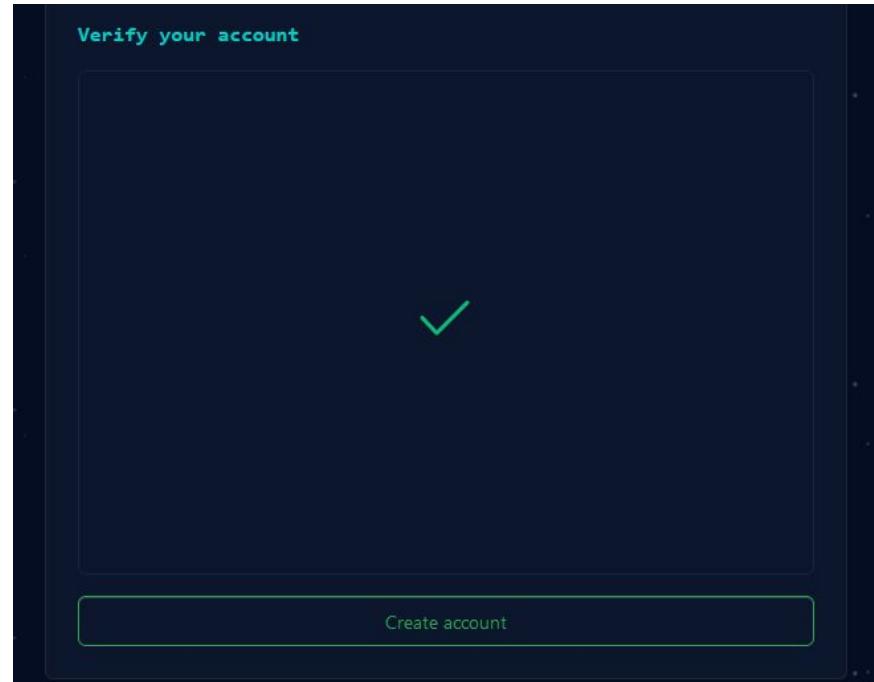
Crear una cuenta



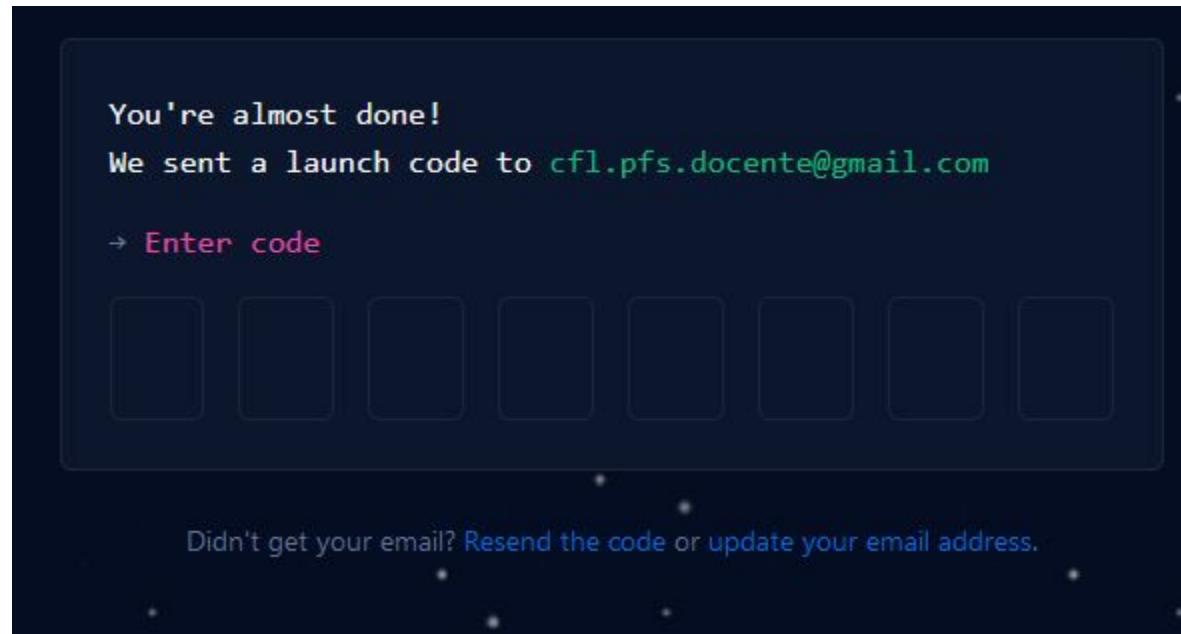
Crear una cuenta



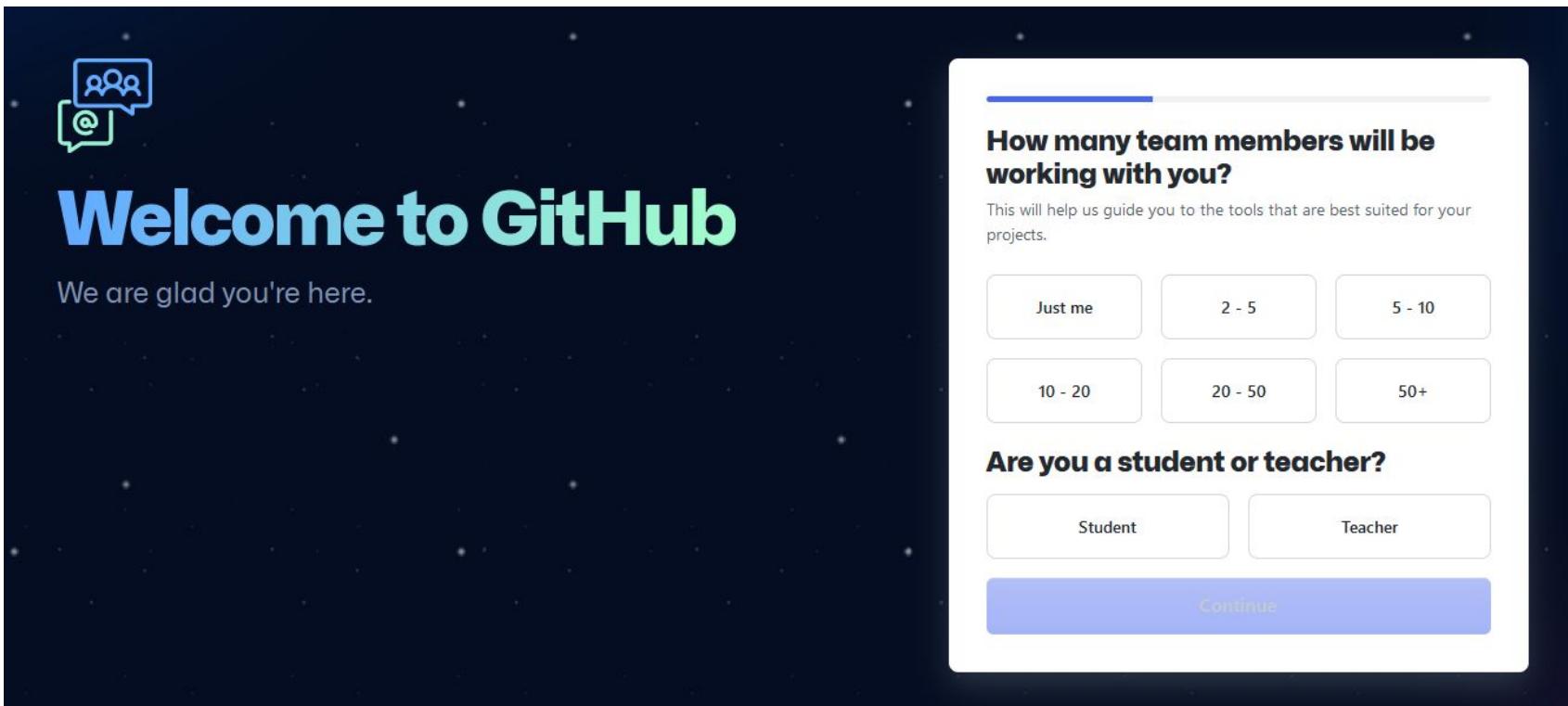
Crear una cuenta



Crear una cuenta



Crear una cuenta



The image shows a composite view of the GitHub onboarding process. On the left, the GitHub welcome screen features a speech bubble icon with three people and an '@' symbol, followed by the text "Welcome to GitHub" in large blue letters and "We are glad you're here." in smaller white text. On the right, a modal window titled "How many team members will be working with you?" asks this question and provides six options: "Just me", "2 - 5", "5 - 10", "10 - 20", "20 - 50", and "50+". Below this, another section asks "Are you a student or teacher?", with "Student" and "Teacher" options. A large blue "Continue" button is at the bottom of the modal. In the bottom right corner, the GitHub logo is visible.

How many team members will be working with you?

This will help us guide you to the tools that are best suited for your projects.

Just me 2 - 5 5 - 10

10 - 20 20 - 50 50+

Are you a student or teacher?

Student Teacher

Continue



Crear una cuenta

What specific features are you interested in using?

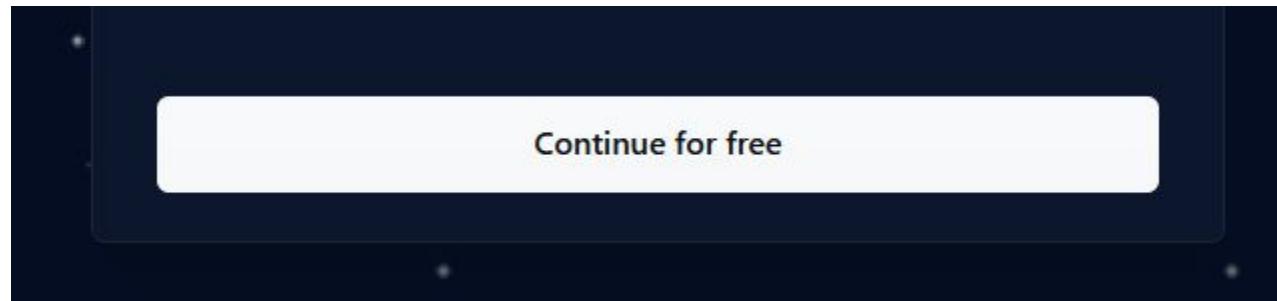
Select all that apply so we can point you to the right GitHub plan.

 Collaborative coding

Codespaces, Pull requests, Notifications, Code review, Code review assignments, Code owners, Draft pull requests, Protected branches, and more.



Crear una cuenta



Crear una cuenta

The screenshot shows the GitHub onboarding process for creating a new repository. At the top, there's a navigation bar with a search bar, 'Pull requests', 'Issues', 'Marketplace', and 'Explore' buttons. On the left, a sidebar has a 'Create your first project' section with a 'Create repository' button and a 'Import repository' link. Below it is a 'Recent activity' section with a note about linking actions across GitHub. A large central modal window is titled 'Learn Git and GitHub without any code!' and contains a guide to creating a repository, starting a branch, writing comments, and opening a pull request. It features 'Read the guide' and 'Start a project' buttons. The main feed area shows tabs for 'Following', 'For you', and a 'Beta' tab. A 'Introduce yourself' section provides instructions for creating a README file, with a sample template showing a list of items from 1 to 6, each with an emoji icon. At the bottom right of the modal, there are 'Dismiss this' and 'Continue' buttons.

Create your first project

Ready to start building? Create a repository for a new or bring over an existing repository and keep contributing to it.

[Create repository](#) [Import repository](#)

Recent activity

When you take actions across GitHub, we'll provide links to that activity here.

Learn Git and GitHub without any code!

Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.

[Read the guide](#) [Start a project](#)

Following For you (Beta)

Introduce yourself

The easiest way to introduce yourself on GitHub is by creating a README in a repository about you! You can start here:

Docente-CFL-PFS / README.md

```
1 - 🌟 Hi, I'm @Docente-CFL-PFS
2 - 💬 I'm interested in ...
3 - 🌱 I'm currently learning ...
4 - 🚀 I'm looking to collaborate on ...
5 - 📧 How to reach me ...
6
```

[Dismiss this](#) [Continue](#)



Crear un repositorio

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?

[Import a repository.](#)

Owner *



Docente-CFL-PFS

Repository name *

PFS2022



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

Description (optional)

Repositorio de Trabajo CFL PFS 2022

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

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

Add a README file

This is where you can write a long description for your project. [Learn more.](#)

Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: None

Choose a license

A license tells others what they can and can't do with your code. [Learn more.](#)

License: None

You are creating a public repository in your personal account.

[Create repository](#)



Crear un repositorio

Docente-CFL-PFS / PFS2022 Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Quick setup — if you've done this kind of thing before

Set up in Desktop or HTTPS SSH https://github.com/Docente-CFL-PFS/PFS2022.git

Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.

...or create a new repository on the command line

```
echo "# PFS2022" >> README.md  
git init  
git add README.md  
git commit -m "first commit"  
git branch -M main  
git remote add origin https://github.com/Docente-CFL-PFS/PFS2022.git  
git push -u origin main
```

...or push an existing repository from the command line

```
git remote add origin https://github.com/Docente-CFL-PFS/PFS2022.git  
git branch -M main  
git push -u origin main
```

...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

Import code

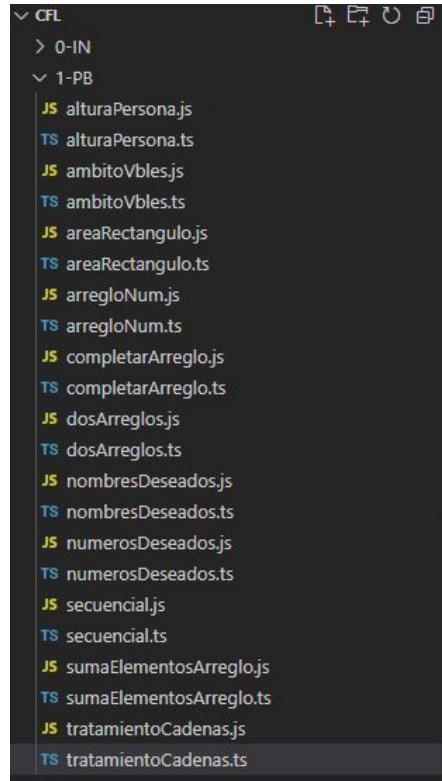


Organización local

- Como creamos esa conexión entre github y nuestra carpeta de ejercicios?
- Antes vamos a organizar bien nuestro espacio de trabajo
 - Una carpeta para CFL
 - Una carpeta por cada Modulo
 - Una carpeta por clase
 - Ejercicios con número



Organización local



The screenshot shows a file explorer window with the following directory structure:

- CFL
 - > 0-IN
 - < 1-PB
 - JS alturaPersona.js
 - TS alturaPersona.ts
 - JS ambitoVbles.js
 - TS ambitoVbles.ts
 - JS areaRectangulo.js
 - TS areaRectangulo.ts
 - JS arregloNum.js
 - TS arregloNum.ts
 - JS completarArreglo.js
 - TS completarArreglo.ts
 - JS dosArreglos.js
 - TS dosArreglos.ts
 - JS nombresDeseados.js
 - TS nombresDeseados.ts
 - JS numerosDeseados.js
 - TS numerosDeseados.ts
 - JS secuencial.js
 - TS secuencial.ts
 - JS sumaElementosArreglo.js
 - TS sumaElementosArreglo.ts
 - JS tratamientoCadenas.js
 - TS tratamientoCadenas.ts



NO ES LA FORMA CORRECTA

- De qué clase es cada uno?
- Cómo pregunto si tengo problemas con un ejercicio?



```
CFL
> 0-IN
< 1-PB
Clase 1
JS alturaPersona.js
TS alturaPersona.ts
JS ambitoVblesjs
TS ambitoVbles.ts
JS areaRectangulo.js
TS areaRectangulo.ts
Clase 2
JS nombresDeseados.js
TS nombresDeseados.ts
JS numerosDeseados.js
TS numerosDeseados.ts
JS secuencial.js
TS secuencial.ts
Clase 3
JS arregloNum.js
TS arregloNum.ts
JS completarArreglo.js
TS completarArreglo.ts
JS dosArreglos.js
TS dosArreglos.ts
JS sumaElementosArreglo.js
TS sumaElementosArreglo.ts
Clase 7
JS tratamientoCadenas.js
TS tratamientoCadenas.ts
```

Organización local



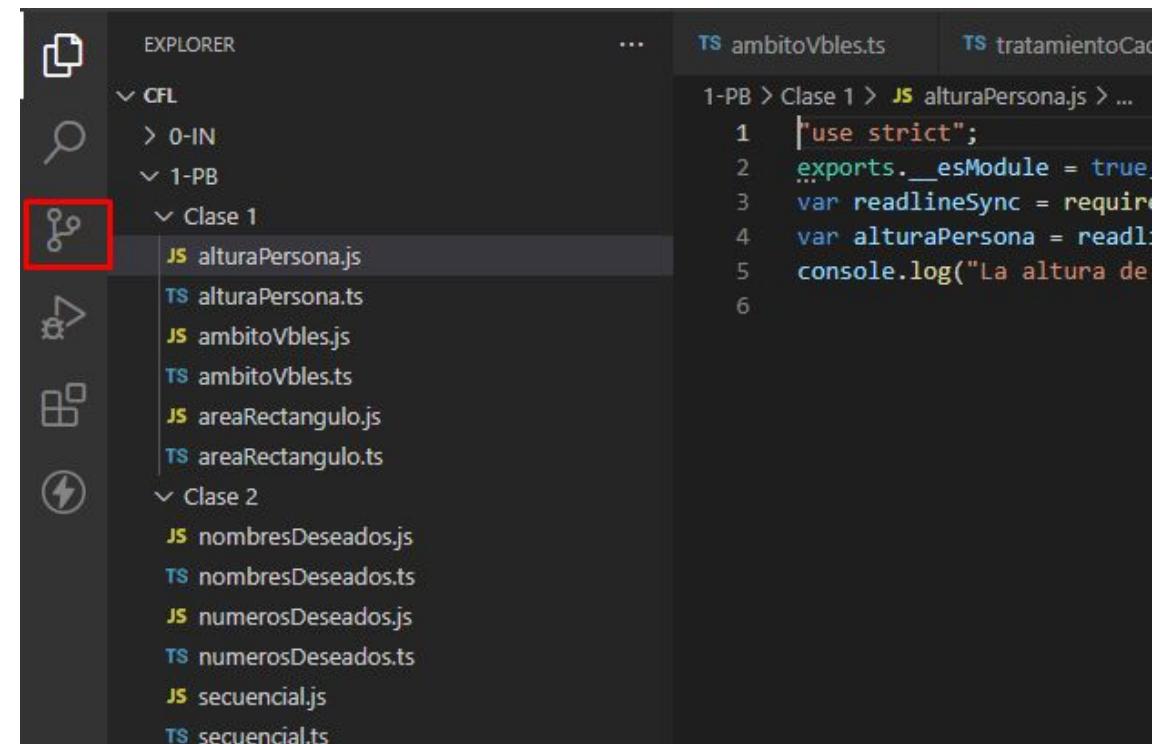
Correcta organización

- Cada ejercicio en su clase.
- Más intuitivo para buscar

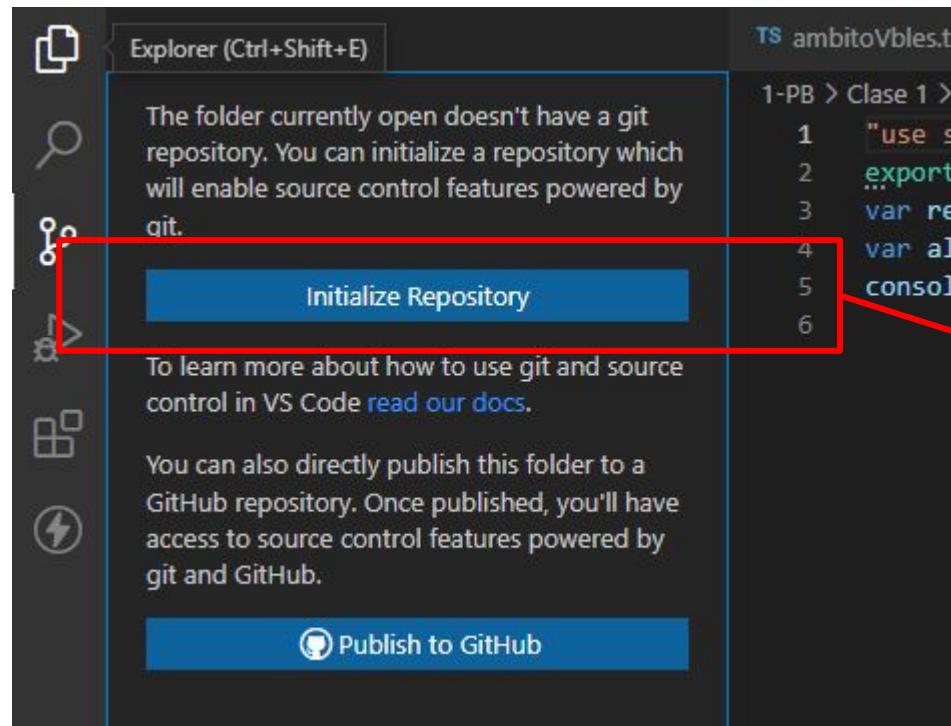


Vinculando proyecto con Git

VSCode cuenta con una extensión de git



Vinculando proyecto con Git



Generamos nuestro “Repo” local

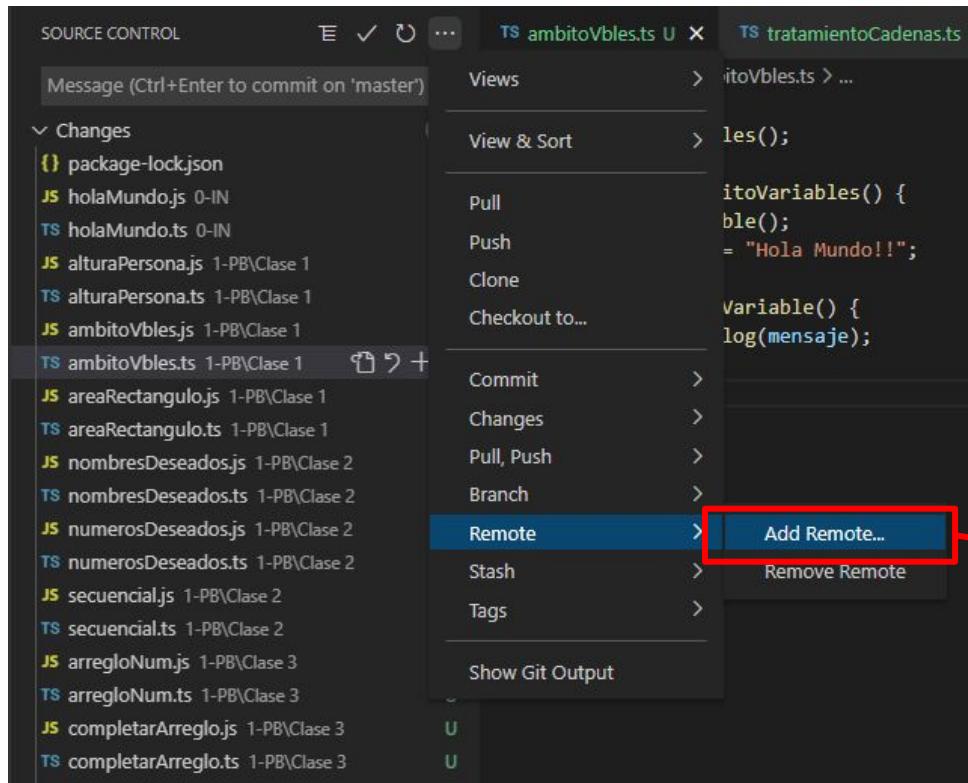
Vinculando proyecto con Git

The screenshot shows a code editor interface with a dark theme. On the left, there's a vertical toolbar with icons for file operations like Open, Save, Find, and Refresh. Next to it is a Source Control panel titled "SOURCE CONTROL". It displays a message box with "Message (Ctrl+Enter to commit on 'master')". Below that, it shows a list of changes with a count of 34. The list includes files like package-lock.json, holaMundo.js, holaMundo.ts, alturaPersona.js, alturaPersona.ts, ambitoVbles.js, ambitoVbles.ts, areaRectangulo.js, areaRectangulo.ts, nombresDeseados.js, nombresDeseados.ts, numerosDeseados.js, numerosDeseados.ts, and secuencial.js. The file "ambitoVbles.ts" is currently open in the main editor window, showing its code:

```
1-PB > Clase 1 > ambitoVbles.ts
1   let mensaje;
2   ambitoVariables();
3
4   function ambitoVariables() {
5       leeVariables();
6       mensaje = leeMensaje();
7   }
8   function leeVariables() {
9       console.log("Variables leídas");
10 }
```

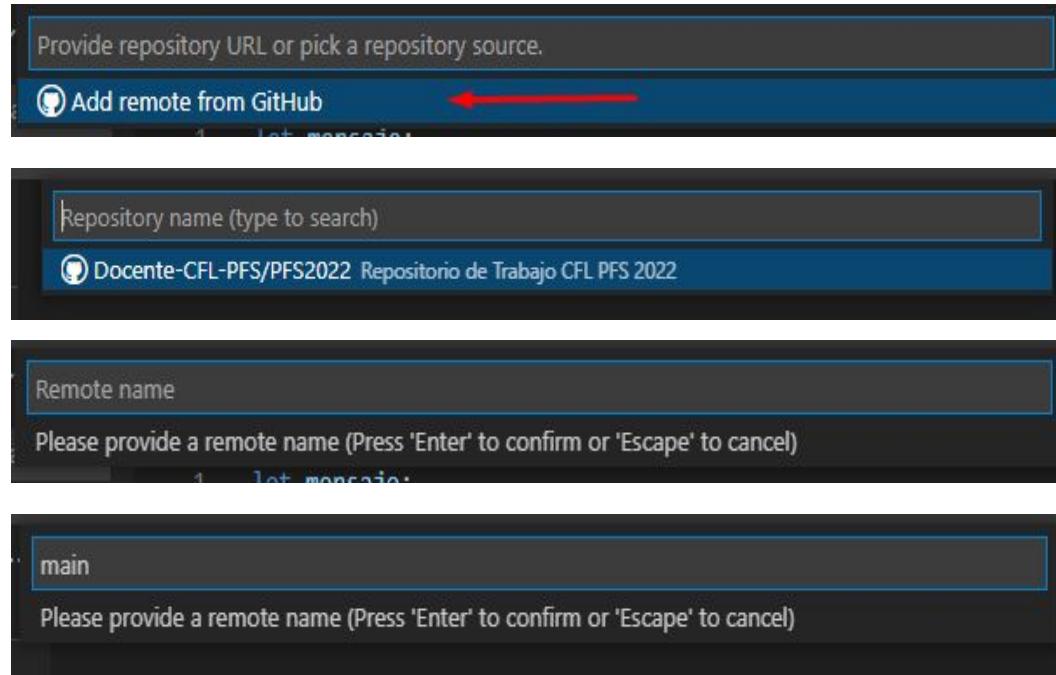
- U: Updated
(actualizado)
- A: Added (agregado)
- D: Deleted (eliminado)

Vinculando proyecto con Git



Llamamos Remote al
Repositorio que esta
en github

Vinculando proyecto con Git



Vinculando proyecto con Git



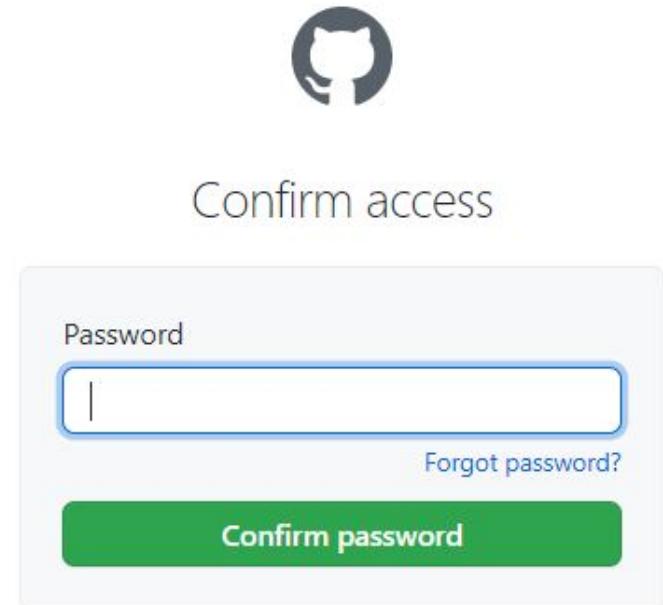
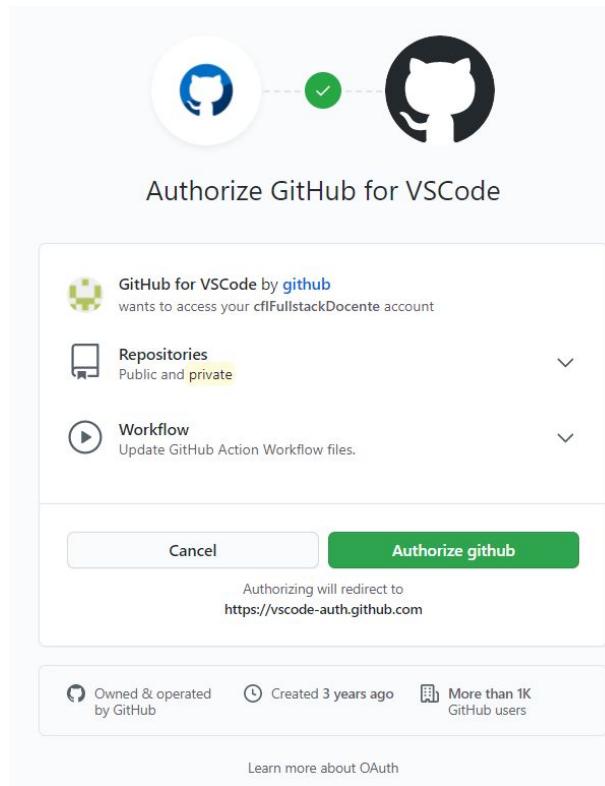
Authorize Visual Studio Code to access GitHub

If you initiated this authorization from Visual Studio Code, click 'Continue' to authorize access to GitHub

Continue

[Do not authorize](#)

Vinculando proyecto con Git



Tip: You are entering **sudo mode**. We won't ask for your password again for a few hours.

Vinculando proyecto con Git



Success!

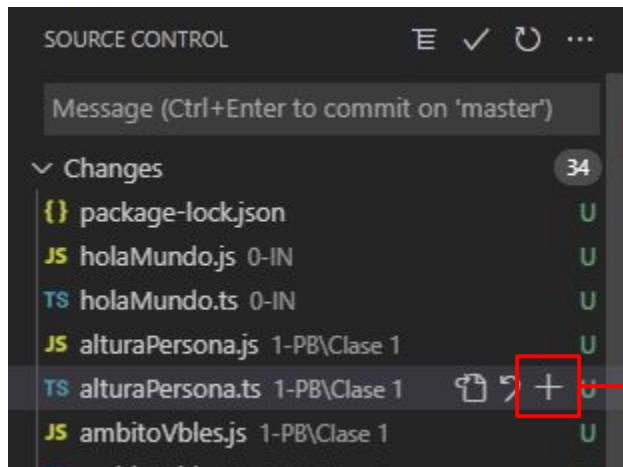
Authorization was successful. You will be redirected back to Visual Studio Code

Didn't work?

If you aren't redirected, you can add the token manually.

Your authorization token:

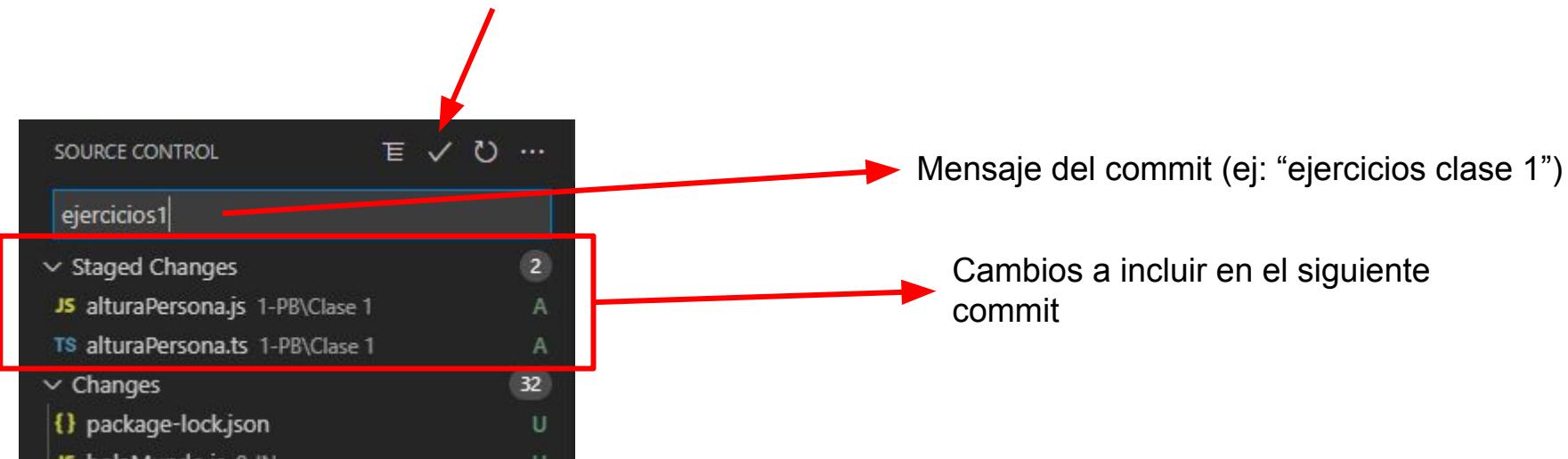
Subiendo cambios a Github



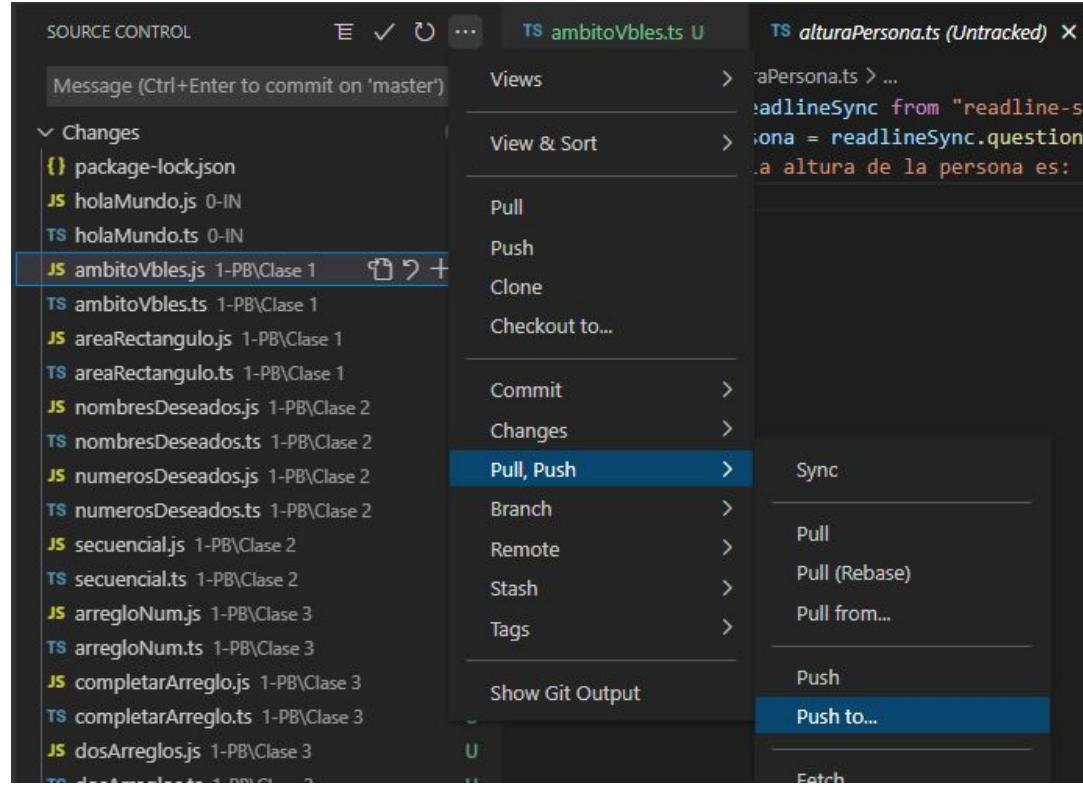
Pasamos nuestros cambios a Staged

Subiendo cambios a Github

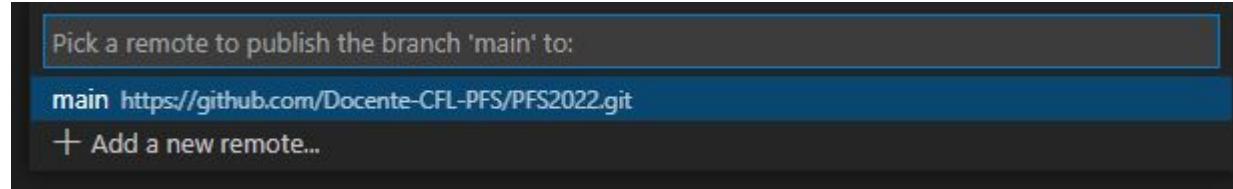
Commit: Cambio de una versión a otra.



Subiendo cambios a Github



Push to nos deja decidir a donde queremos subir nuestro commit



Por ahora se sube siempre
a main

Docente-CFL-PFS / PFS2022 Public

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main ▾ PFS2022 / 1-PB / Clase 1 /

mauri52 ejercicios 1

...

alturaPersona.js ejercicios 1

alturaPersona.ts ejercicios 1

Agregar colaboradores

The screenshot shows a GitHub repository interface. At the top, the repository name is "Docente-CFL-PFS / PFS2022" with a "Public" badge. Below the repository name is a navigation bar with links: Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The "Settings" link is highlighted with a red box. In the center, there is a breadcrumb navigation bar showing "main" and "PFS2022 / 1-PB /". Below this, a list of files and folders is displayed, starting with "mauri52 ejercicios 1", followed by an ellipsis (".."), and then "Clase 1" which is associated with "ejercicios 1".

Agregar colaboradores

Docente-CFL-PFS / PFS2022 Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Actions

Webhooks

Environments

Repository name

PFS2022 Rename

Template repository

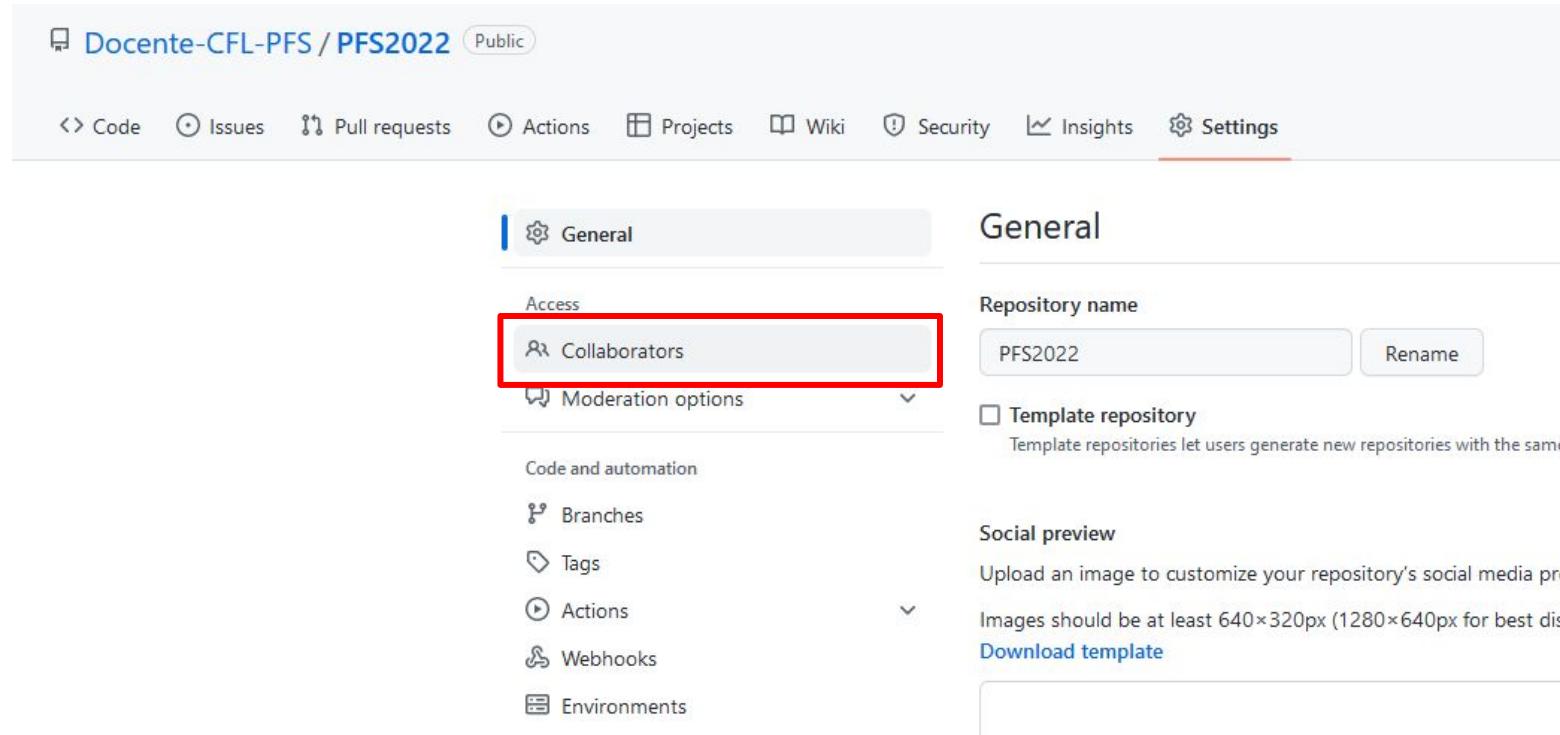
Template repositories let users generate new repositories with the same

Social preview

Upload an image to customize your repository's social media pre

Images should be at least 640×320px (1280×640px for best dis

[Download template](#)



Agregar colaboradores

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Actions

Webhooks

Environments

Pages

Security

Code security and analysis

Who has access

PUBLIC REPOSITORY 

This repository is public and visible to anyone.

[Manage](#)

DIRECT ACCESS 

1 has access to this repository. 1 collaborator.

Manage access

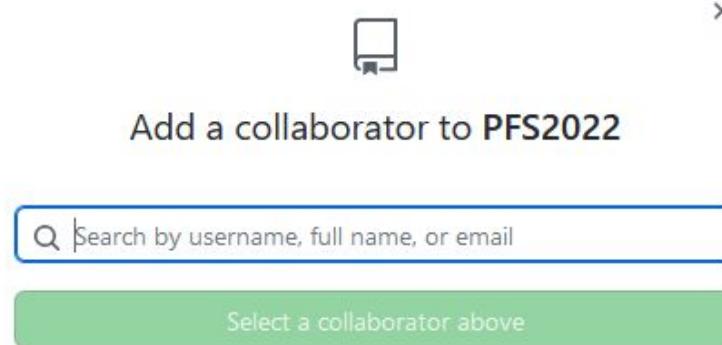
Select all Type ▾

Find a collaborator...

mauri52 Collaborator Remove

Add people

Agregar colaboradores



Agregamos usuario:

Docente-CFL-PFS