



## Qué es Git y Github



Es un sistema de control de versiones distribuido.

Plataforma web creada para alojar el código de las aplicaciones de los desarrolladores. Es un repositorio en la nube.





## **Términos importantes**



### Repositorio:

Servicio principal de Github

Espacio en la nube donde los usuarios pueden almacenar y compartir archivos.

Se almacenan archivos de texto con código en distintos lenguajes de programación.

Los repositorios pueden ser públicos o privados

Proyecto

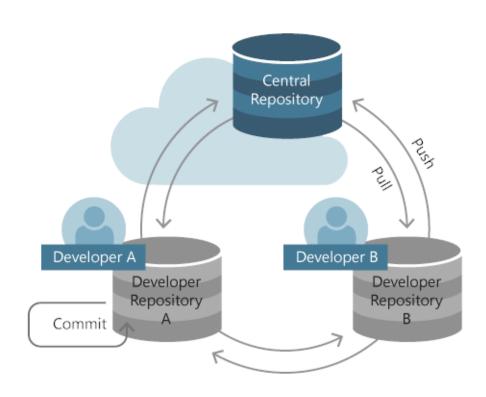
### Características:

- Los repositorios muestran información importante, como lo es\_
  - Descripción
  - Lenguajes de programación
  - Etiquetas de búsqueda
  - Readme
  - Configuración



## **Términos importantes**

### Repositorio:







### Main o Master:

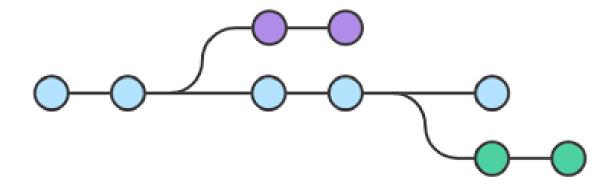
Rama principal del proyecto que integra todos los cambios y actualizaciones para tener un proyecto o producto final.





### Rama:

Copia idéntica del proyecto, pero separada para trabajar sobre ella.





Clone:

Sirve para realizar una copia exacta del proyecto en su equipo local

Fusión o merge:

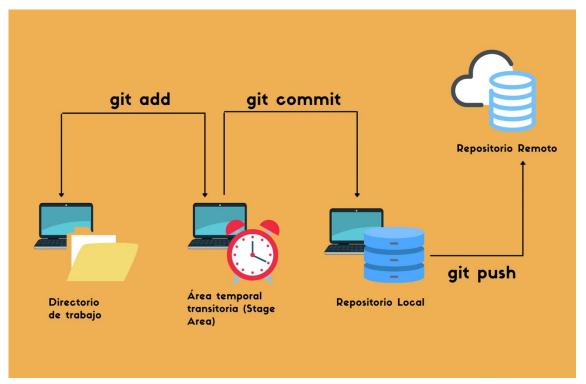
Integración de la funcionalidad desarrollada sobre una rama

Add:

Agrega cada uno de los archivos modificados al "Staging Area"

Fusión o merge:

Integración de la funcionalidad desarrollada sobre una rama



## **Herramientas**

Línea de comandos(terminal)



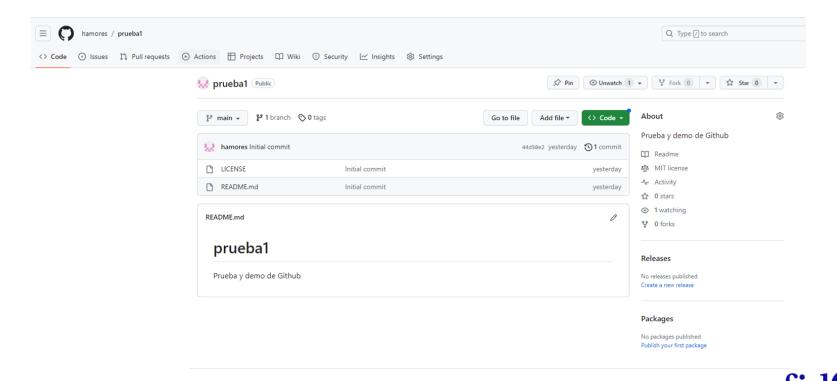


### Otras Plataformas del mercado basados en Git

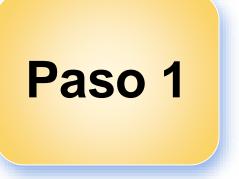




### Interfaz de Github



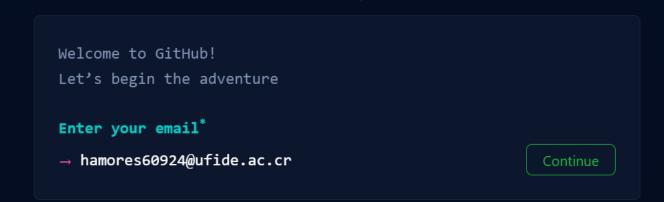
## Laboratorio



Crear una cuenta en Github

https://github.com/





By creating an account, you agree to the <u>Terms of Service</u>. For more information about GitHub's privacy practices, see the <u>GitHub Privacy Statement</u>. We'll occasionally send you account-related emails.



Password is strong

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter.

By creating an account, you agree to the <u>Terms of Service</u>. For more information about GitHub's privacy practices, see the <u>GitHub Privacy Statement</u>. We'll occasionally send you account-related emails.



Username hamores1 is not available.

By creating an account, you agree to the <u>Terms of Service</u>. For more information about GitHub's privacy practices, see the <u>GitHub Privacy Statement</u>. We'll occasionally send you account-related emails.

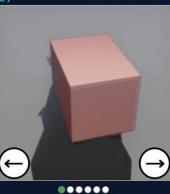
Welcome to GitHub! Let's begin the adventure Enter your email\* √ hamores60924@ufide.ac.cr Create a password\* **√** •••••••• Enter a username\* √ hamores2 **Email preferences** Receive occasional product updates and announcements.

By creating an account, you agree to the Terms of Service. For more information about GitHub's privacy practices,

### Verify your account

Use the arrows to rotate the object to face in the direction of the hand. (1 of 1)

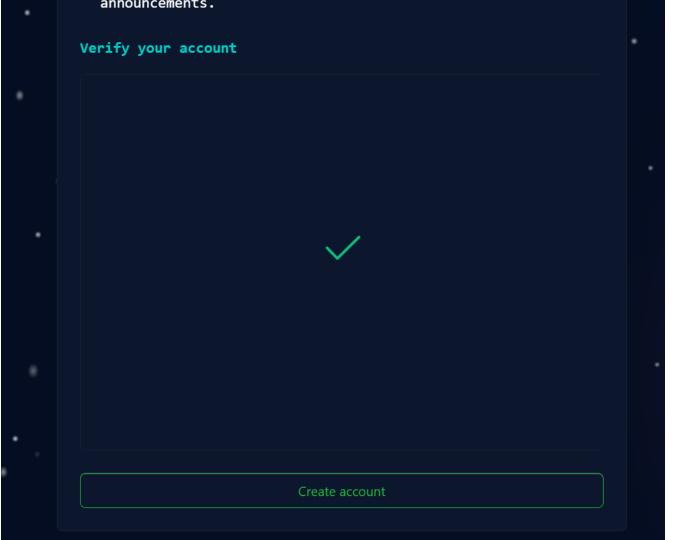




Submit









Didn't get your email? Resend the code or update your email address.





Here's your GitHub launch code, @hamores2!

Ran octocat standing next to a rocket

Continue signing up for GitHub by entering the code below:

Once completed, you can start using all of GitHub's features to explore, build, and share projects.

Not able to enter the code? Paste the following link into your browser: https://github.com/users/hamores2/emails/302950309/confirm\_verification/59432 552?via\_launch\_code\_email=true

Email preferences · Terms · Privacy · Sign in to GitHub



## **Welcome to GitHub**

We are glad you're here.

rojects.			
low many team me	embers will be working	with you?	
O Just me	O 2-5	<u> </u>	
<u> </u>	<u> </u>	<u> </u>	
re you a student o	or teacher?		
○ N/A	Student	○ Teacher	





# The tools you need to build what you want.

Soup to nuts, GitHub has it all.

## 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.

Automation and CI/CD

Actions, Packages, APIs, GitHub Pages, GitHub Marketplace, Webhooks, Hosted runners, Self-hosted runners, Secrets management, and more.

□ Security

Private repos, 2FA, Required reviews, Required status checks, Code scanning, Secret scanning, Dependency graph,















### Create your first project

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

Create repository

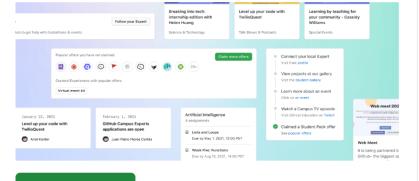
Import repository

### Recent activity

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

### Join GitHub Global Campus!

Prepare for a career in tech by joining GitHub Global Campus. Global Campus will help you get the practical industry knowledge you need by giving you access to industry tools, events, learning resources and a growing student community.



Join Global Campus

Home

Send feedback

Filter 8

×

#### Latest changes

- 5 hours ago CodeQL 2.16: Python Dependency Installation Disabled, New Queries, and...
- Yesterday Migrating GitHub Classroom Assignment Repository Creation from "Create from...
- 5 days ago GitHub Issues & Projects - Project status updates & issues side panel
- 5 days ago Copilot - January 18th update

View changelog →

### **Explore repositories**





The Cloud-Native API Gateway



Lua



## Laboratorio



Instalar las herramientas



## Laboratorio (Paso 2)

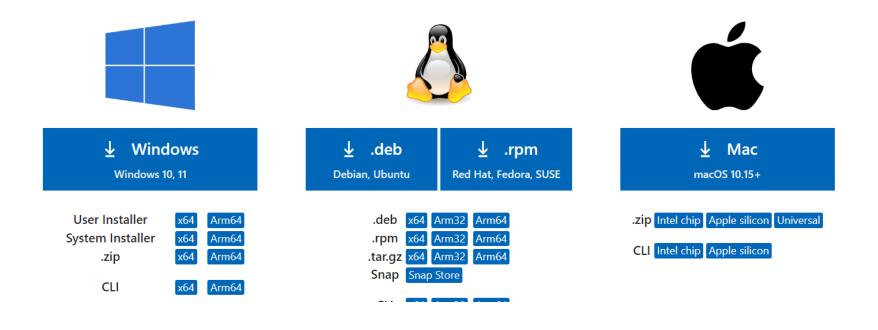
Visual Studio Code

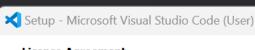
https://code.visualstudio.com/download



## Download Visual Studio Code

Free and built on open source. Integrated Git, debugging and extensions.





#### License Agreement

Please read the following important information before continuing.



Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.

This license applies to the Visual Studio Code product. Source Code for Visual Studio Code is available at <a href="https://github.com/Microsoft/vscode">https://github.com/Microsoft/vscode</a> under the MIT license agreement at <a href="https://github.com/microsoft/vscode/blob/main/LICENSE.txt">https://github.com/microsoft/vscode/blob/main/LICENSE.txt</a>. Additional license information can be found in our FAQ at <a href="https://code.visualstudio.com/docs/supporting/faq">https://code.visualstudio.com/docs/supporting/faq</a>.

### MICROSOFT SOFTWARE LICENSE TERMS

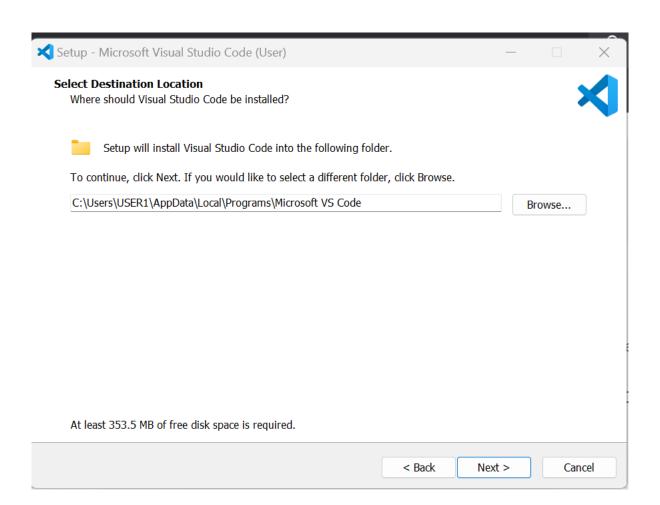
### MICROSOFT VISUAL STUDIO CODE

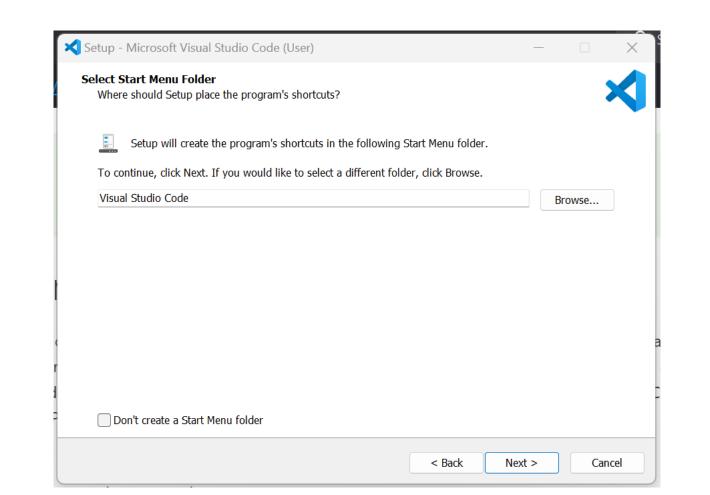
These license terms are an agreement between you and Microsoft Cornoration (or

- I accept the agreement
- I do not accept the agreement

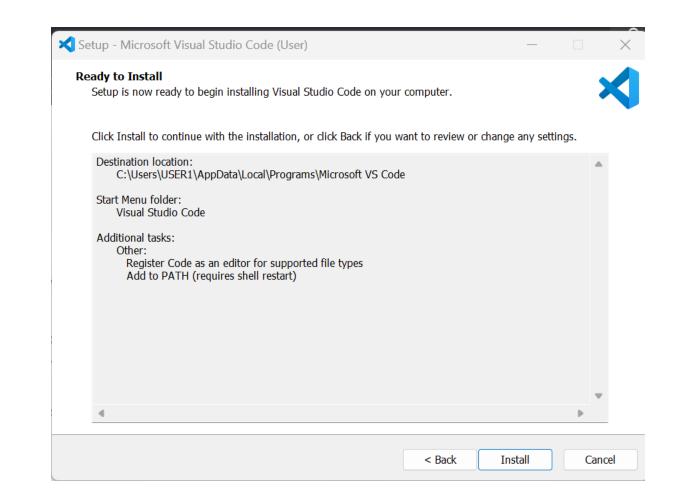
Next >

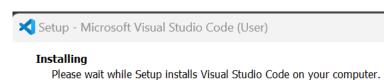
Cancel





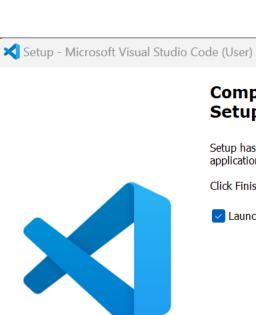
Select Additional Tasks					
Which additional tasks should be p	erformed?			•	
Select the additional tasks you wou Next.	ıld like Setup to perform while in	stalling Visual S	itudio Code, the	n click	
Additional icons:					
Create a desktop icon					
Other:					
Add "Open with Code" action t	o Windows Explorer file context r	menu			
Add "Open with Code" action t	o Windows Explorer directory co	ntext menu			
Register Code as an editor for	supported file types				
Add to PATH (requires shell re	estart)				







Extracting files...



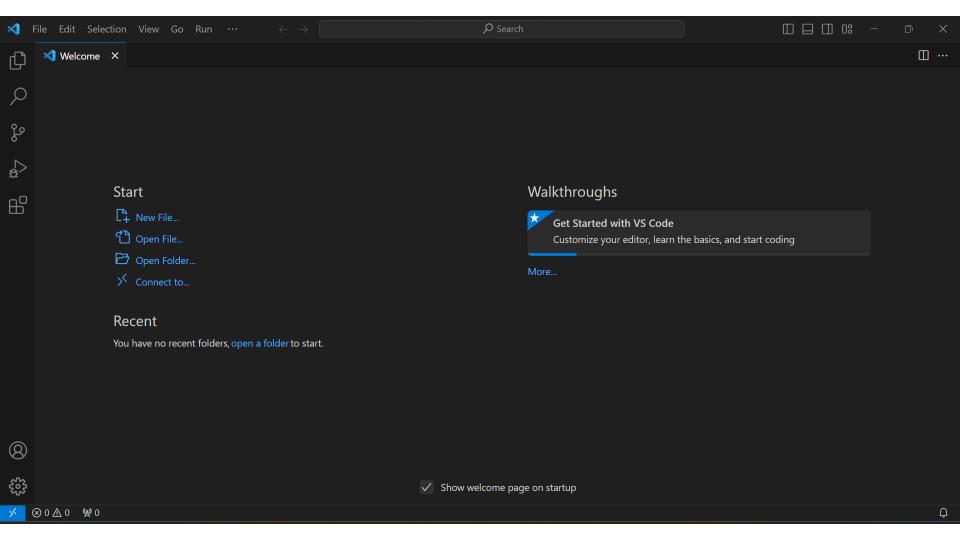
### Completing the Visual Studio Code Setup Wizard

Setup has finished installing Visual Studio Code on your computer. The application may be launched by selecting the installed shortcuts.

Click Finish to exit Setup.

✓ Launch Visual Studio Code

Finish



# Laboratorio (Paso 2)

Instalar Git

https://git-scm.com/downloads



Q Search entire site...

### About

### **Documentation**

#### Downloads

GUI Clients Logos

### Community

The entire **Pro Git book** written by Scott Chacon and Ben Straub is available to read online for free. Dead tree versions are available on Amazon.com.

## Downloads



Older releases are available and the Git source repository is on GitHub.



### **GUI Clients**

Git comes with built-in GUI tools (git-gui, gitk), but there are several third-party tools for users looking for a platform-specific experience.

View GUI Clients →

### Logos

Various Git logos in PNG (bitmap) and EPS (vector) formats are available for use in online and print projects.

 $\textbf{View Logos} \rightarrow$ 

#### \_\_\_



#### Information

Please read the following important information before continuing.



When you are ready to continue with Setup, click Next.

### **GNU General Public License**

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA

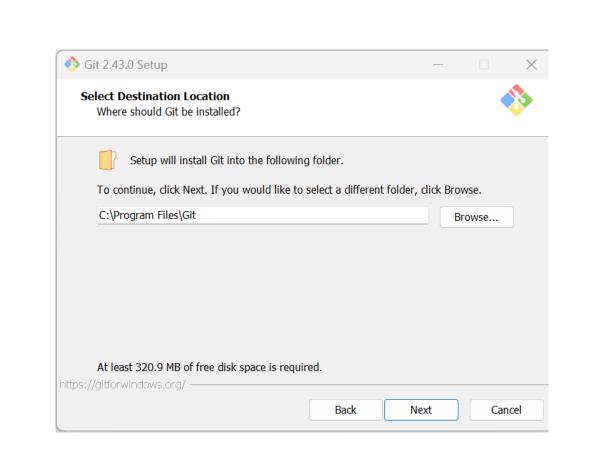
Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### **Preamble**

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change

https://gitforwindows.org/-

Next





### Select Components

Which components should be installed?



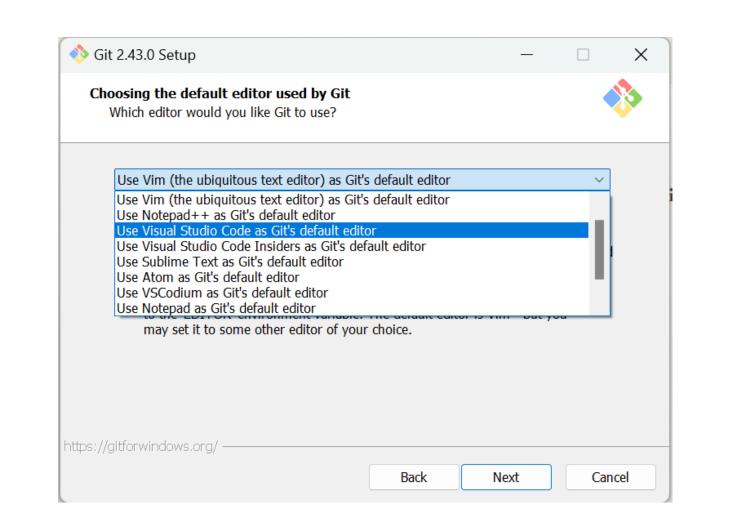
Cancel

Additional icons	
On the Desktop	
✓ Windows Explorer integration	
─ <mark> ✓</mark> Open Git Bash here	
Open Git GUI here	
☑ Git LFS (Large File Support)	
Associate .git* configuration files with the default text editor	
Associate .sh files to be run with Bash	
Check daily for Git for Windows updates	
(NEW!) Add a Git Bash Profile to Windows Terminal	

Current selection requires at least 320.8 MB of disk space. https://gitforwindows.org/

Back Next

Git 2.43.0 Setup		_		×
<b>Select Start Menu Folder</b> Where should Setup place the program's	shortcuts?			>
Setup will create the program's sh	ortcuts in the follow	ing Start Menu fo	older.	
To continue, click Next. If you would like	to select a different	folder, click Brow	wse.	
Git		Br	owse	
☐ Don't create a Start Menu folder				
1 11 11 11 11 1				
https://gitforwindows.org/	Back	Next	Cancel	





### Adjusting the name of the initial branch in new repositories

What would you like Git to name the initial branch after "git init"?



Let Git decide

Let Git use its default branch name (currently: "master") for the initial branch in newly created repositories. The Git project intends to change this default to a more inclusive name in the near future.

### Override the default branch name for new repositories

NEW! Many teams already renamed their default branches; common choices are "main", "trunk" and "development". Specify the name "git init" should use for the initial branch:

main

This setting does not affect existing repositories.

Back Next



#### Adjusting your PATH environment

How would you like to use Git from the command line?



Use Git from Git Bash only

This is the most cautious choice as your PATH will not be modified at all. You will only be able to use the Git command line tools from Git Bash.

- O Git from the command line and also from 3rd-party software

  - (Recommended) This option adds only some minimal Git wrappers to your

PATH to avoid cluttering your environment with optional Unix tools.

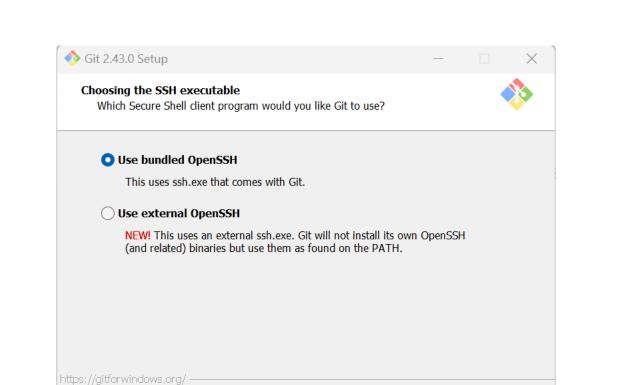
You will be able to use Git from Git Bash, the Command Prompt and the Windows PowerShell as well as any third-party software looking for Git in PATH.

Back

Next

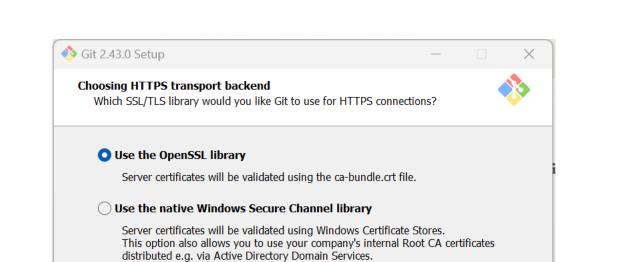
Both Git and the optional Unix tools will be added to your PATH. Warning: This will override Windows tools like "find" and "sort". Only use this option if you understand the implications.

Use Git and optional Unix tools from the Command Prompt



Back

Next



Back

Next

Cancel

https://gitforwindows.org/







Checkout Windows-style, commit Unix-style line endings

Git will convert LF to CRLF when checking out text files. When committing

text files, CRLF will be converted to LF. For cross-platform projects, this is the recommended setting on Windows ("core.autocrlf" is set to "true").

Back

Next

### Checkout as-is, commit Unix-style line endings

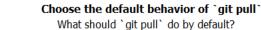
Git will not perform any conversion when checking out text files. When

committing text files, CRLF will be converted to LF. For cross-platform projects, this is the recommended setting on Unix ("core.autocrlf" is set to "input").

Checkout as-is, commit as-is Git will not perform any conversions when checking out or committing text files. Choosing this option is not recommended for cross-platform

projects ("core.autocrlf" is set to "false").







• Fast-forward or merge

Fast-forward the current branch to the fetched branch when possible,

otherwise create a merge commit.

Rebase

Rebase the current branch onto the fetched branch. If there are no local commits to rebase, this is equivalent to a fast-forward.

Only ever fast-forward

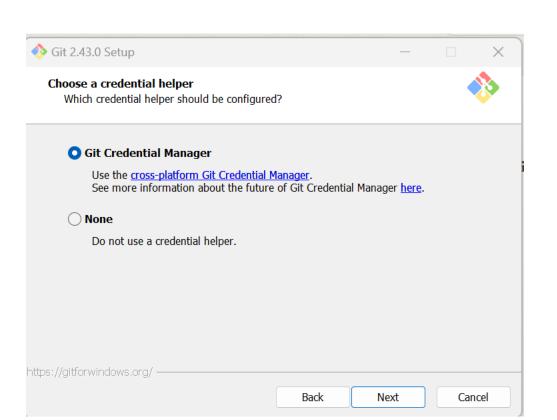
Fast-forward to the fetched branch. Fail if that is not possible.

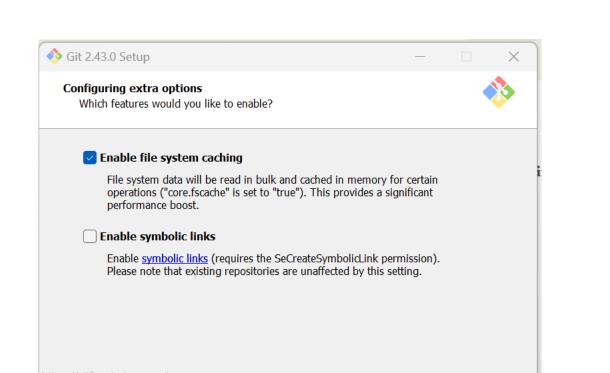
This is the standard behavior of `git pull`.

Back

Cancel

Next





Back

Next



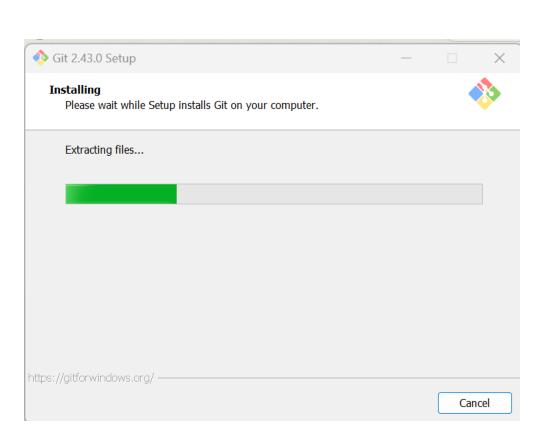
### Configuring experimental options

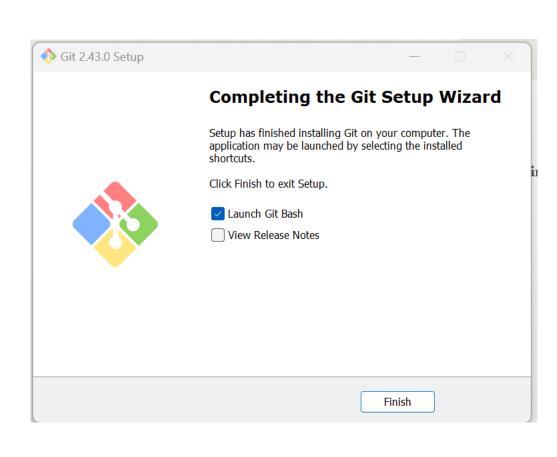
https://gitforwindows.org/

These features are developed actively. Would you like to try them?

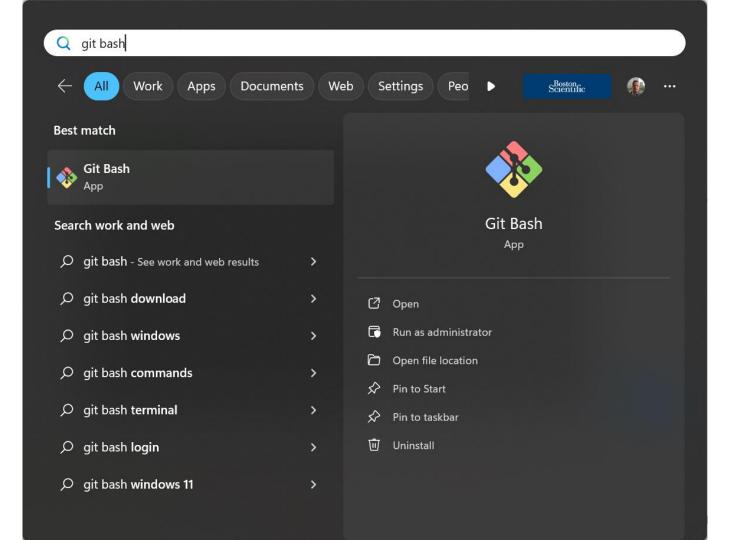


☐ Enable experimental support for pseudo consoles.
This allows running native console programs like Node or Python in a Git Bash window without using winpty, but is unfortunately not quite stable ye
☐ Enable experimental built-in file system monitor
(NEW!) Automatically run a <u>built-in file system watcher</u> , to speed up common operations such as `git status`, `git add`, `git commit`, etc in worktrees containing many files









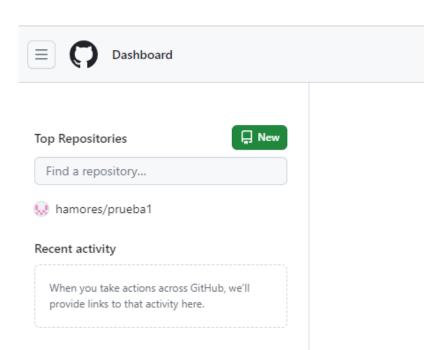
### Laboratorio

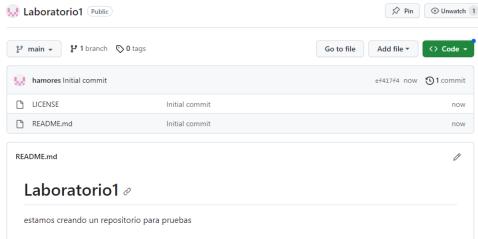


Crear un repositorio en Github con las siguientes instrucciones:

- Nombre: sc\_302\_documentacion
- Agregar una descripción
- Repositorio público
- Crear archivo Readme
- En la licencia agregar la opción MIT









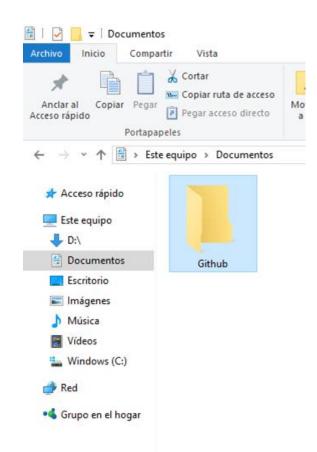
## Laboratorio



Hacer una copia del repositorio en mi computadora

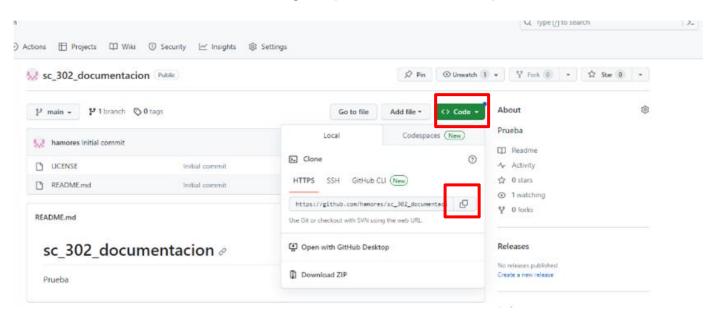


1. Crear un directorio para Git



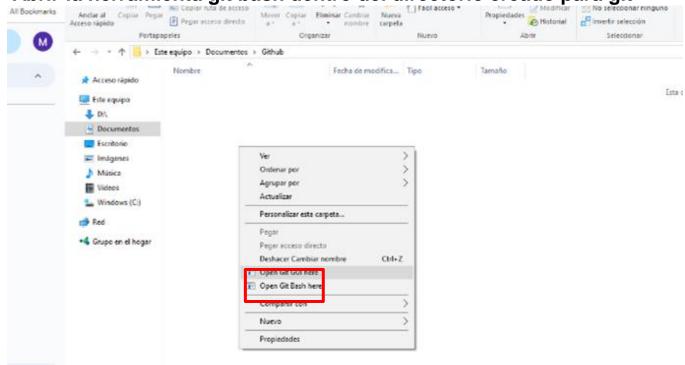


- 2. Clonar el repositorio al directorio que acabo de crear
  - a. Seleccionar en Github "clone" y copiar el link del repositorio





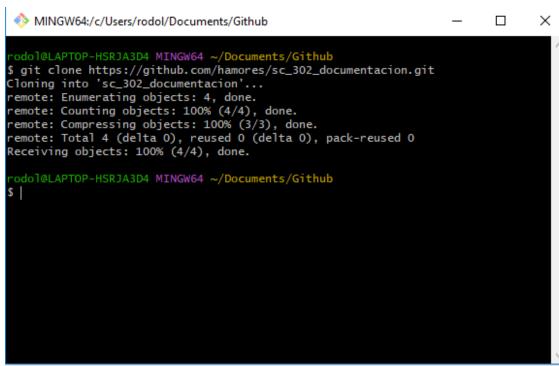
b. Abrir la herramienta git bash dentro del directorio creado para git





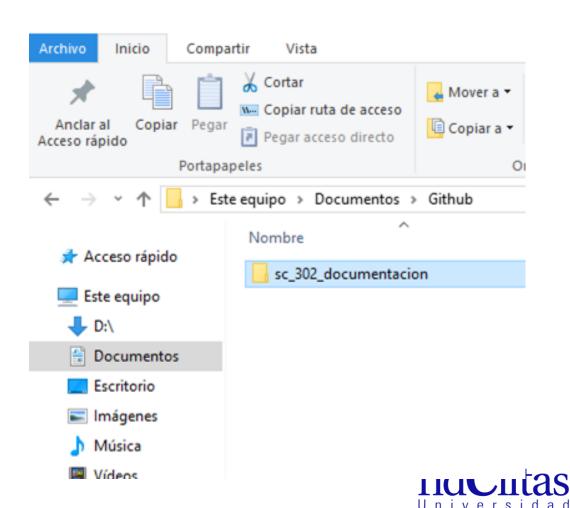
MINGW64:/c/Users/rodol/Documents/Github	_	×
rodol@LAPTOP-HSRJA3D4 MINGW64 ~/Documents/Github \$		^
		10

C. utilizar el comando: git clone + link que acabamos de copiar

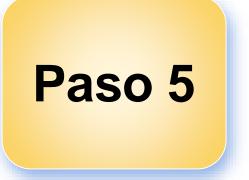




d. Verificamos que fue creada La carpeta en nuestro directorio



### Laboratorio



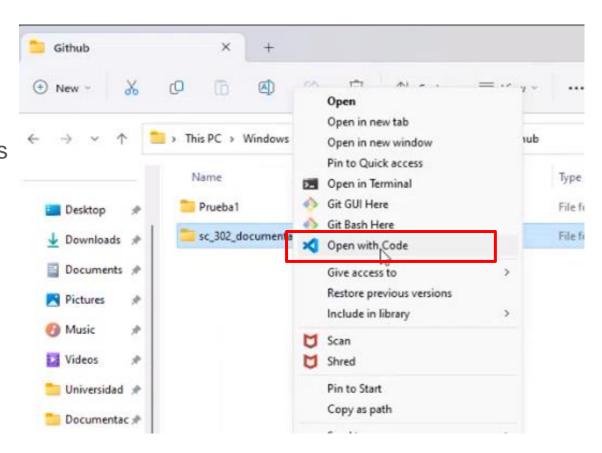
Crear un nuevo archivo y editar con el siguiente texto:

- Nombre del archivo: mi\_archivo
- Console.log('hola mundo)
- Extensión del archivo: .js

mi\_archivo.js



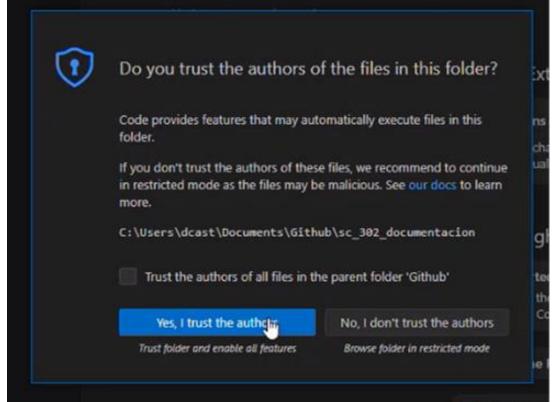
a. Sobre la carpeta del repositorio que acabamos de copiar seleccionamos"Open with Code"



b. Seleccionamos la opción:

"Yes, I trust the author"

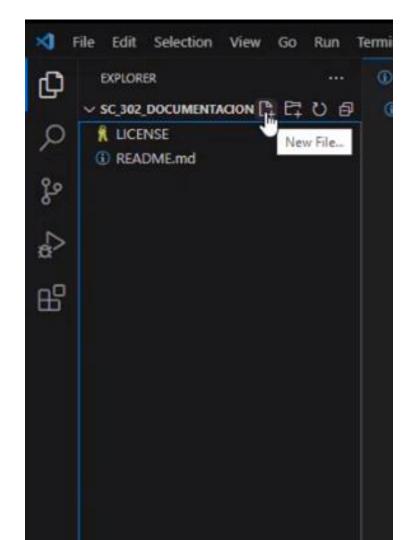
### Visual Studio Code

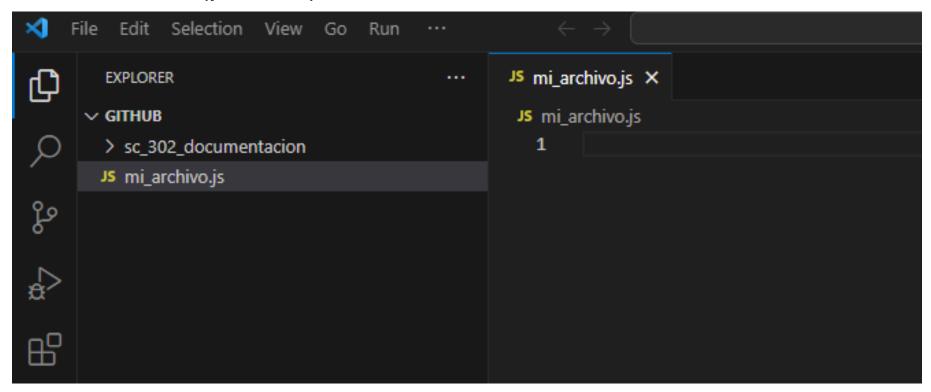


Boost you

c. Crear el nuevo archivo con el nombre:

mi-archivo.js





d. Editamos el archivo:

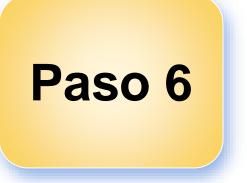
console.log('hola mundo')

Este es un ejercicio de uso de git y github

e. Guardamos el cambio en el archivo.

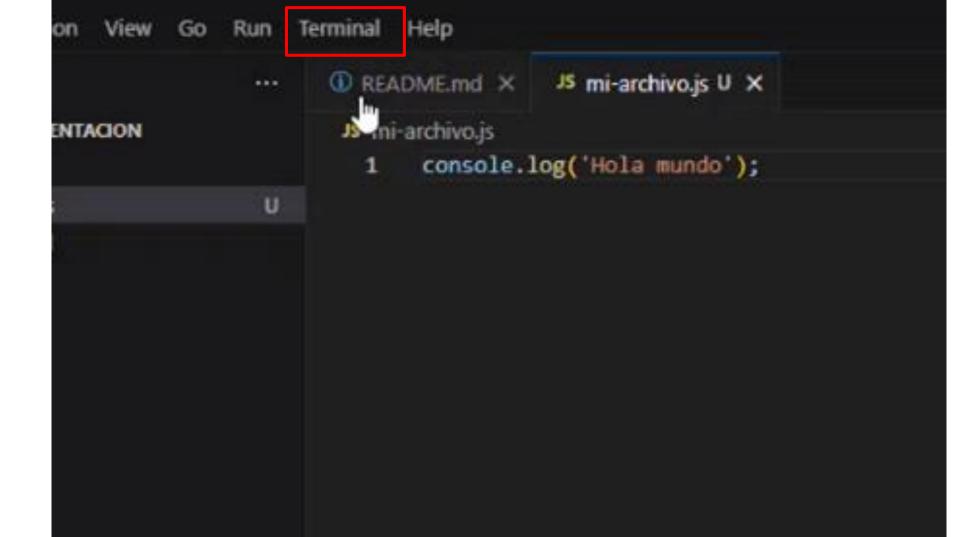
```
JS mi_archivo.js 9 •
JS mi_archivo.js
       console.log('hola mundo')
      este es un ejercicio de uso de git y github
  3
```

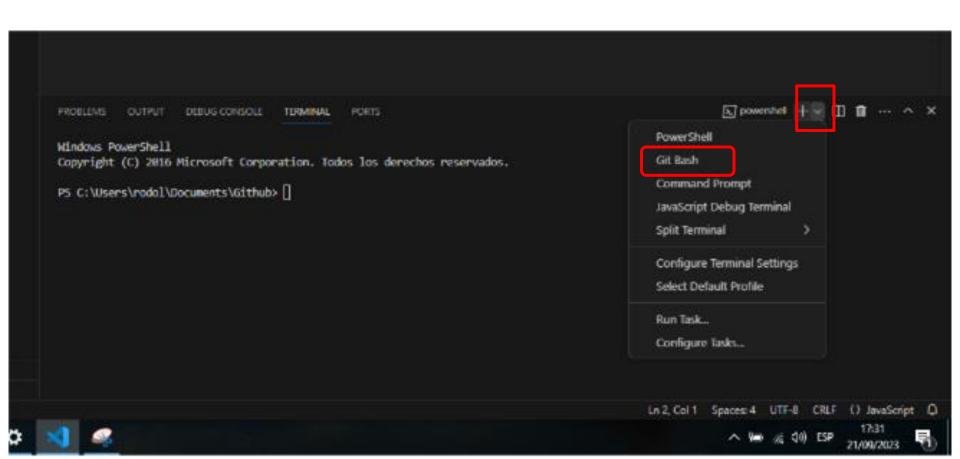
## Laboratorio



Abrir una terminal git bash en Visual Studio Code







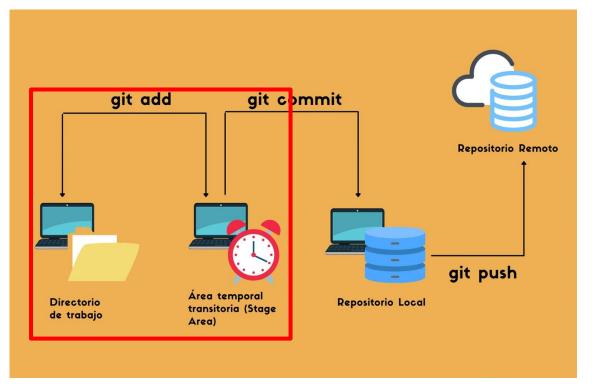
#### Laboratorio



Agregar el archivo al stating area con el comando Add



# **Términos importantes(cont)**



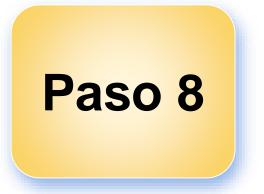
## Laboratorio(paso 7)

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

sviten@DESKTOP-018PMOA MINGW64 ~/Documents/Github/sc_302_documentacion (main)
$ git add mi-archivo.js

sviten@DESKTOP-018PMOA MINGW64 ~/Documents/Github/sc_302_documentacion (main)
$ |
```

#### Laboratorio

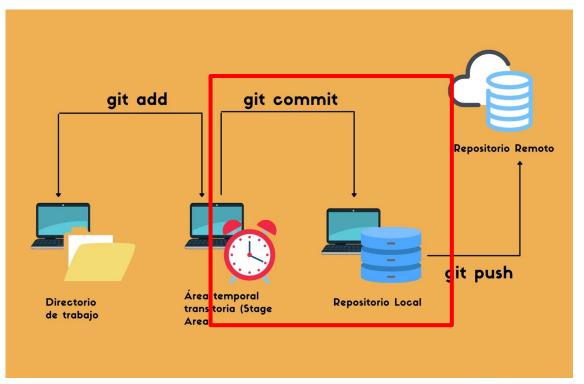


Aplicar los cambios al repositorio local con el comando Commit

git commit -m "mensaje sobre el cambio a realizar"



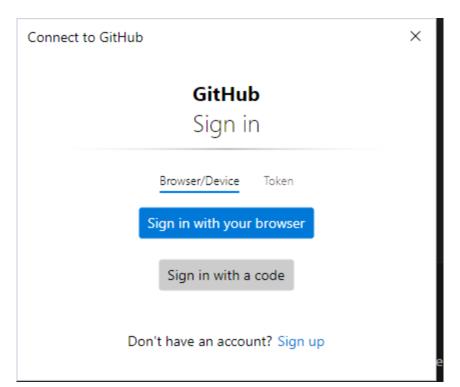
# **Términos importantes(cont)**



## Laboratorio(paso 8)

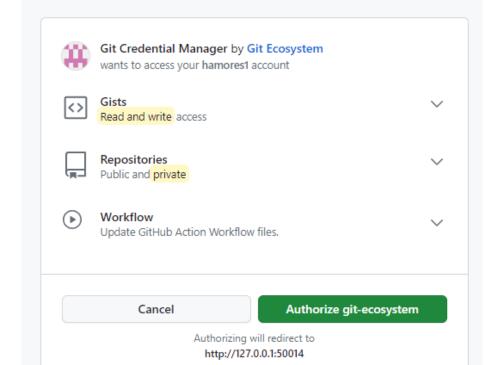
#### Git push

```
Run
  git config --global user.email "you@example.com"
  git config --global user_name "Your Name"
to set your account's default identity.
Omit -- global to set the identity only in this repository.
fatal: unable to auto-detect email address (got 'Dell Core 17gDESKTOP-CBBBU
Dell Core 170065KTCP-0168EEC MINGW64 --/Documents/Github/sc 382 documentacion
```

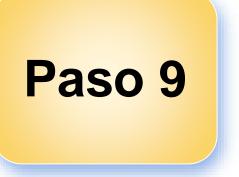




#### Authorize Git Credential Manager



#### Laboratorio

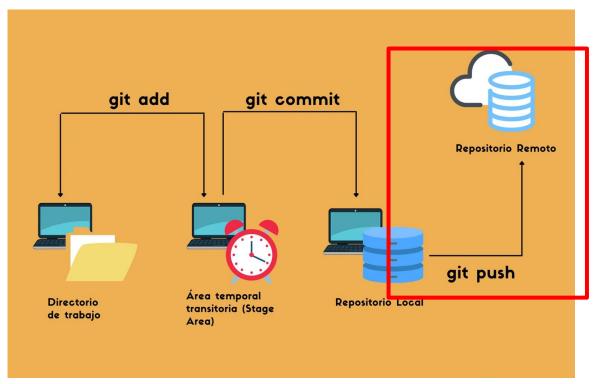


Subir los cambios al repositorio en la nube con el comando push

git push



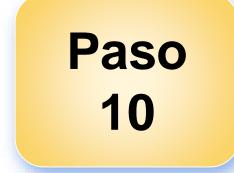
# **Términos importantes(cont)**



## Laboratorio(paso 9)

```
sviten@DESKTOP-018PMOA MINGW64 ~/Documents/Github/sc 302 documentacion (main)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 354 bytes | 354.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/hamores/sc 302 documentacion.git
   1cdd543..e2097a3 main -> main
sviten@DESKTOP-018PMOA MINGW64 ~/Documents/Github/sc 302 documentacion (main)
```

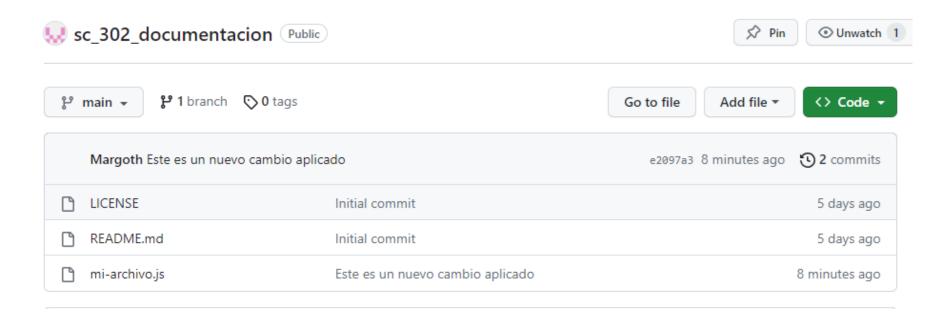
#### Laboratorio



Confirmar que el archivo aparece en el repositorio de Github, y con el texto con que fue editado.



## Laboratorio(paso 10)

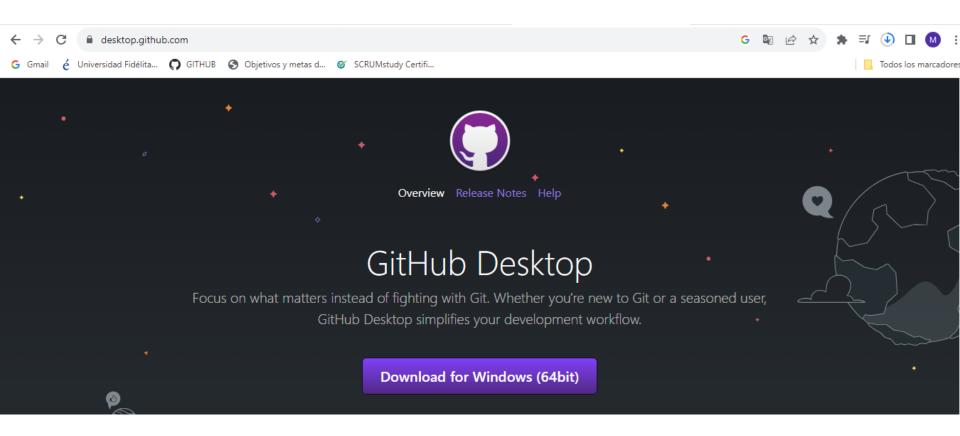


#### Otros comandos de Git

https://cs.fyi/guide/git-cheatsheet

```
Reply from 192.168.1.1: bytes=32 time=2ms TTL=100
Reply from 192.168.1.1: bytes=32 time=2ms TTL=100
Reply from 192.168.1.1: bytes=32 time=1ms TTL=100
Reply from 192.168.1.1: bytes=32 time=2ms TTL=100
Request timed out.
Reply from 192.168.1.1: bytes=32 time=2ms TTL=100
Request timed out.
Reply from 192.168.1.1: bytes=32 time=1ms TTL=100
           Reply from 192.168.1.1: bytes=32 time=5ms TTL=100
Reply from 192.168.1.1: bytes=32 time=3ms TTL=100 Reply from 192.168.1.1: bytes=32 time=3ms TTL=100 Reply from 192.168.1.1: bytes=32 time=324ms TTL=100 Reply from 192.168.1.1: bytes=32 time=2ms TTL=100 Request fined out
  Reply from 192.168.1.1: bytes=32 time=5ms TTL=100
Reply from 192.168.1.1: bytes=32 time=5ms TTL=100
Reply from 192.168.1.1: bytes=32 time=2ms TTL=100
Request timed out
```





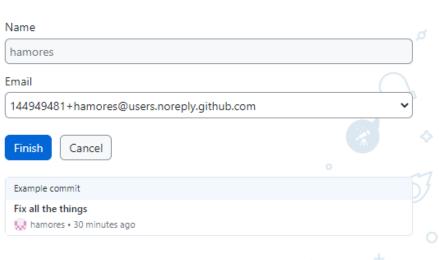
https://desktop.github.com/



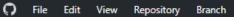
# Configure Git

This is used to identify the commits you create. Anyone will be able to see this information if you publish commits.

- Use my GitHub account name and email address
- O Configure manually





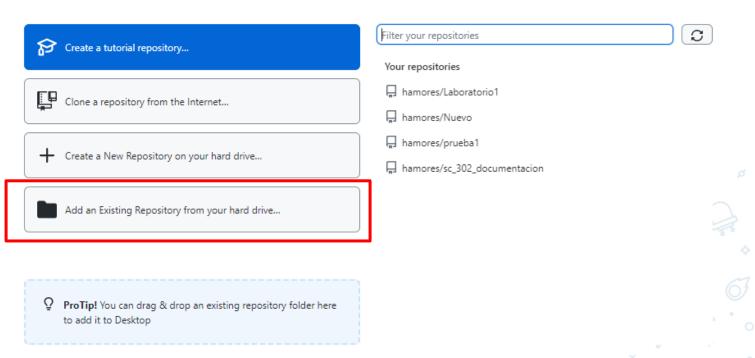


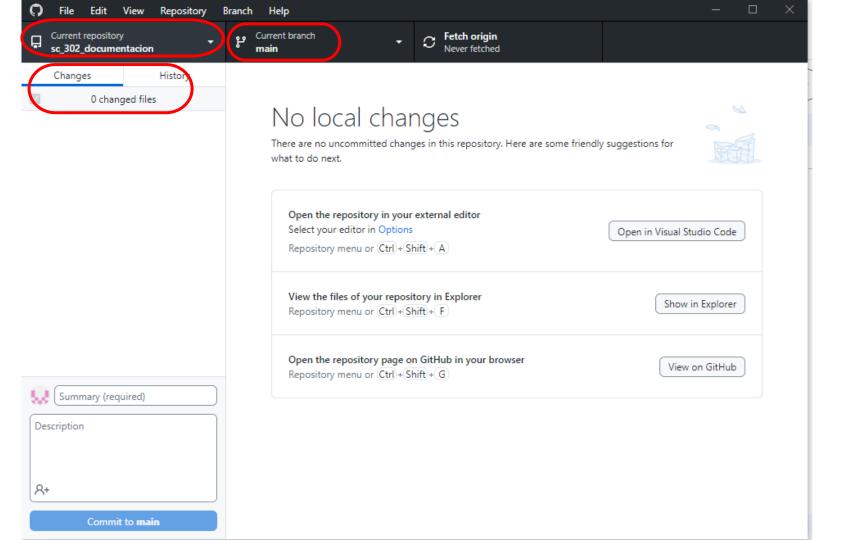
# Let's get started!

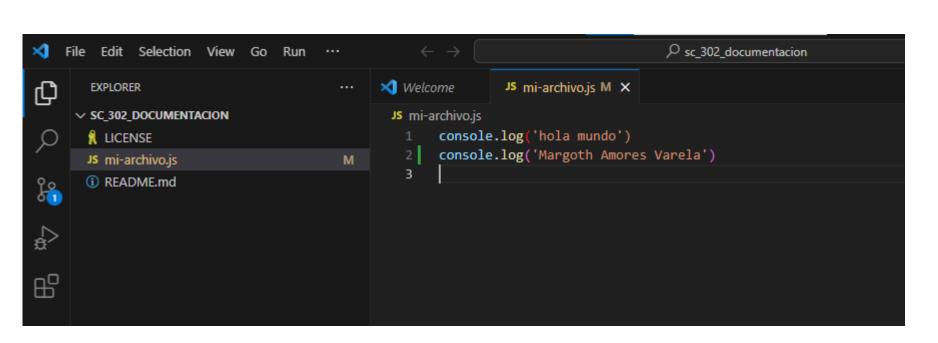
Help

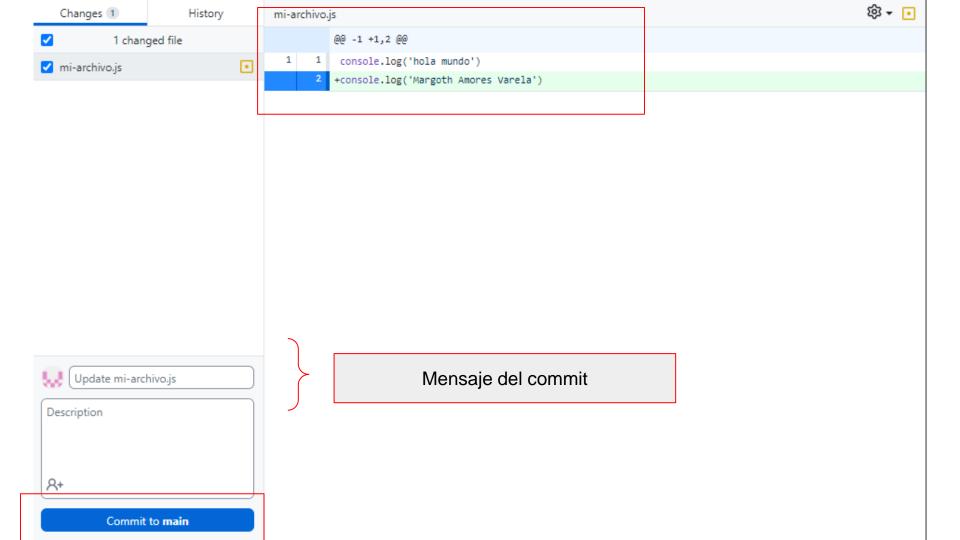
Add a repository to GitHub Desktop to start collaborating

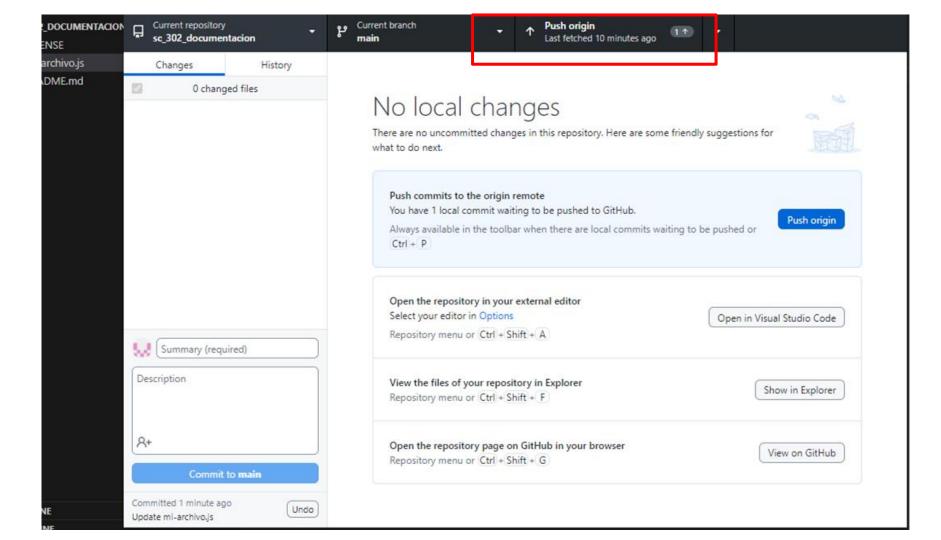




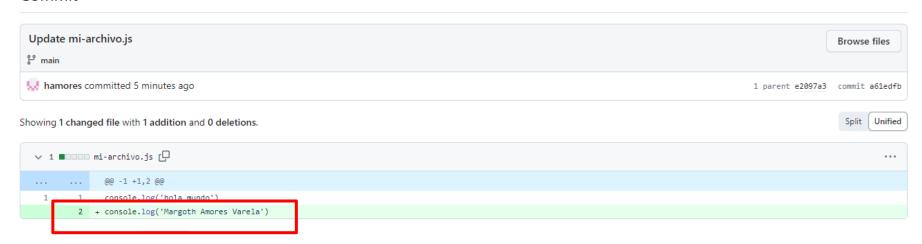




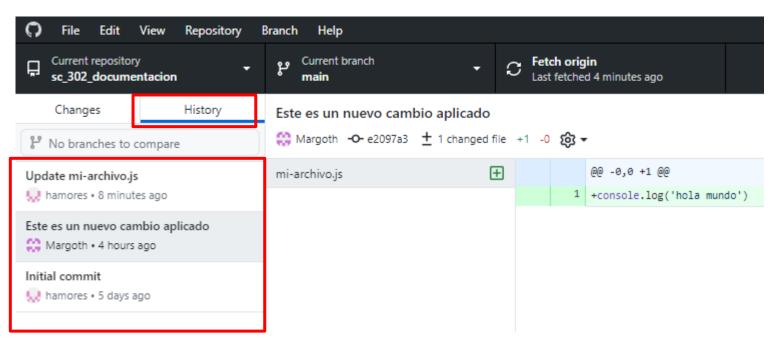




#### Commit



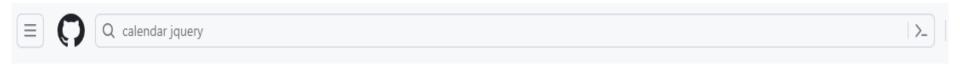
## Ver historial en Github Desktop





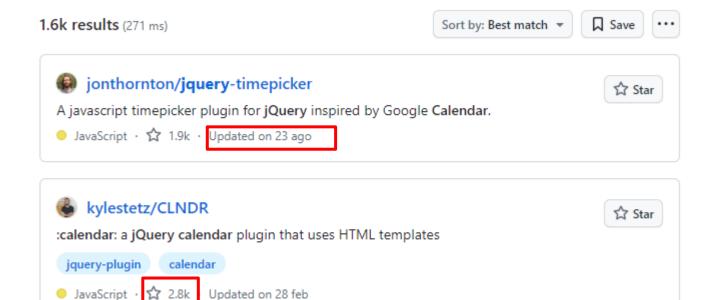
## Ejemplo

Buscar un calendario de **jquery** para integrarlo en un página web que está desarrollando.



Repositorios en tendencia:

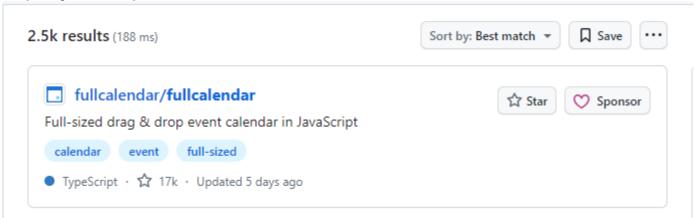
https://github.com/trending



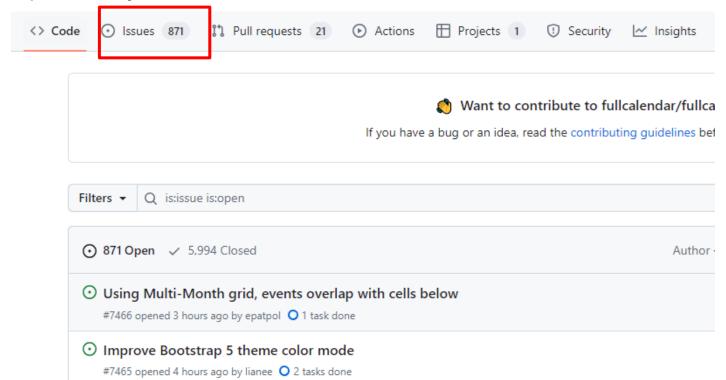


## Ejemplo

Buscar un proyecto que se llama "fullcalendar"



#### Abrir el repositorio y seleccionar "issues":





## Entregable

Un archivo .pdf con el link al repositorio creado por el estudiante.

Ejemplo:

https://github.com/hamores/sc\_302\_documentacion

Nomenclatura del archivo:

SC\_302\_MN\_LAB\_Gihub\_Nombre\_Apellido1



