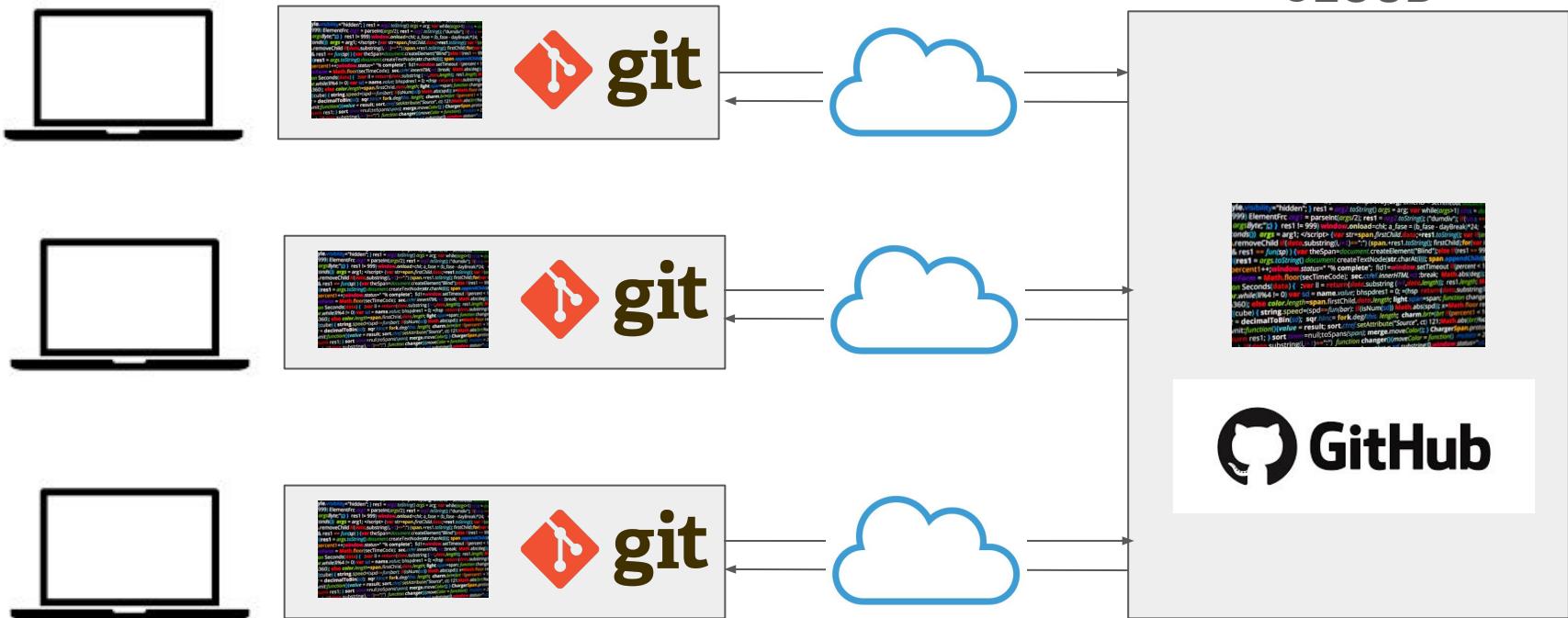


# GIT

By: Guillermo Andres De Mendoza Corrales



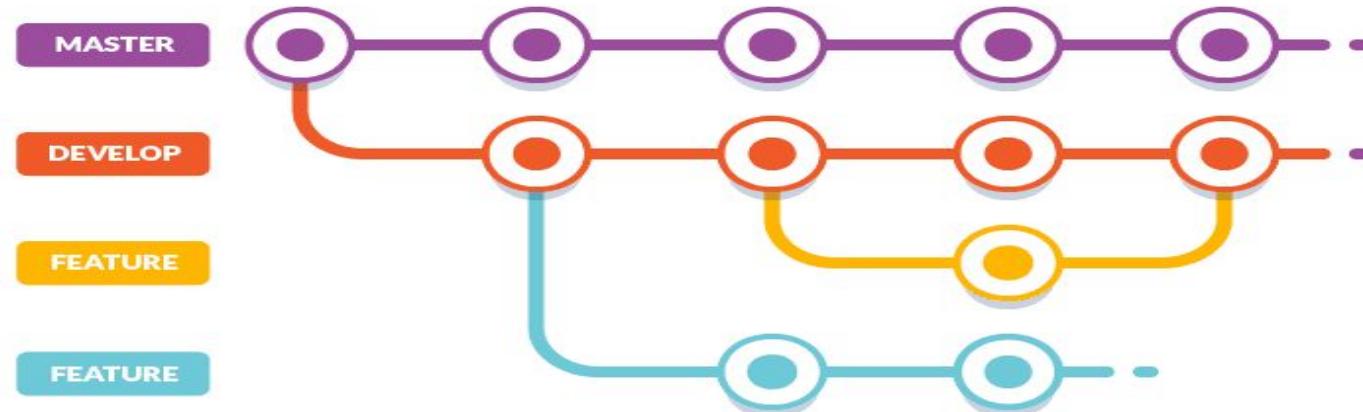


# GIT

# Theory



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.



# Install

The screenshot shows the official Git website ([git-scm.com](https://git-scm.com)) with a dark theme. At the top, there's a navigation bar with icons for back, forward, search, and home, followed by the URL 'git-scm.com'. The main header features the Git logo ('git') and the tagline '--distributed-is-the-new-centralized'. A search bar is located on the right side of the header.

The main content area has a dark background with a subtle diamond grid pattern. It contains two sections of text and an illustration:

- 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.**
- Git is lightning fast and has a huge ecosystem of GUIs, hosting services, and command-line tools.**

Below the text is a 3D-style illustration of several white book stacks connected by red and blue lines, representing the distributed nature of Git.

The bottom half of the page is divided into several sections:

- About**: Git's performance and ecosystem.
- Tools**: Command line tools, GUIs, and hosting services.
- Install**: Binary releases for all major platforms.
- Learn**: Pro Git book, videos, tutorials, and cheat sheet.
- Reference**: Git's reference documentation.
- Community**: Get involved! Bug reporting, mailing list, chat, development and more.

On the right side, there's a prominent call-to-action box for Windows users:

- Latest source release**: **2.53.0** (Release Notes)
- Install for Windows** (button)
- GitHub Repository** (link)



# Install

```
Símbolo del sistema + ▾
Microsoft Windows [Versión 10.0.26100.7623]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\memoo>git
usage: git [-v | --version] [-h | --help] [-C <path>] [-c <name>=<value>]
           [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
           [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--no-lazy-fetch]
           [--no-optimal-locks] [--no-advice] [--bare] [--git-dir=<path>]
           [--work-tree=<path>] [--namespace=<name>] [--config-env=<name>=<envvar>]
           <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
clone      Clone a repository into a new directory
init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
add        Add file contents to the index
mv         Move or rename a file, a directory, or a symlink
restore    Restore working tree files
rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
bisect    Use binary search to find the commit that introduced a bug
diff      Show changes between commits, commit and working tree, etc
grep      Print lines matching a pattern
log       Show commit logs
show      Show various types of objects
status    Show the working tree status

grow, mark and tweak your common history
backfill  Download missing objects in a partial clone
branch    List, create, or delete branches
commit    Record changes to the repository
merge    Join two or more development histories together
rebase   Reapply commits on top of another base tip
reset    Reset current HEAD to the specified state
switch   Switch branches
tag      Create, list, delete or verify a tag object signed with GPG

collaborate (see also: git help workflows)
fetch    Download objects and refs from another repository
pull     Fetch from and integrate with another repository or a local branch
```



# GITHUB

# GITHUB

Is a cloud-based platform that helps developers store, manage, and share their code using Git version control. It enables collaborative, real-time editing of projects, making it essential for tracking changes, reviewing code, and managing software development tasks. Owned by Microsoft, it is widely used for both open-source and professional, team-based software projects.



# GITHUB

1

Create a new account

2

Authenticate my PC with github

3

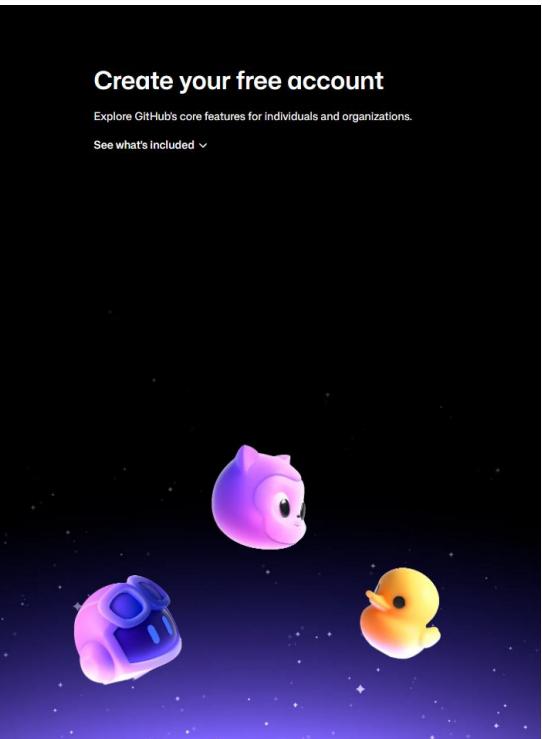
Create a new repository

4

Send/Receive files



# 1. Create a new account



Already have an account? [Sign in >](#)

## Sign up for GitHub

[Continue with Google](#)

[Continue with Apple](#)

or

Email\*

Email

Password\*

Password

Password should be at least 15 characters OR at least 8 characters including a number and a lowercase letter.

Username\*

Username

Username may only contain alphanumeric characters or single hyphens, and cannot begin or end with a hyphen.

Your Country/Region\*

Colombia

For compliance reasons, we're required to collect country information to send you occasional updates and announcements.

Email preferences

Receive occasional product updates and announcements

**Create account >**

By creating an account, you agree to the [Terms of Service](#). For more information about GitHub's privacy practices, see the [GitHub Privacy Statement](#). We'll occasionally send you account-related emails.



### 3. Authenticate my PC with github



```
C:\Users\memoo\OneDrive\Desktop\git\test>git config --global user.email "github email"  
C:\Users\memoo\OneDrive\Desktop\git\test>git config --global user.name alias
```



## 2. Access token

The screenshot shows a GitHub profile page for the user 'memoodm'. The profile features a large circular icon of a white cat wearing sunglasses. The user's name is 'memoodm' and they are described as 'memoodm · he/him'. Below the profile, it says 'Edit profile'. The stats section indicates '23 followers · 0 following'. The location is listed as 'Colombia' and the email as 'memoodm@gmail.com'. The 'Popular repositories' section lists several public repositories: 'AI-8Puzzle-SearchAlgorithm', 'simulation-prey-predator', 'python-libs', 'usa-computacion-cientifica-1', 'python-multithreading', and 'AI-Game-2048-MinMax'. A timeline at the bottom shows '64 contributions in the last year' with a heatmap of activity. On the right side, a sidebar menu is open, showing options like 'Profile', 'Repositories', 'Stars', 'Gists', 'Organizations', 'Enterprises', 'Sponsors', and 'Settings'. The 'Settings' option is highlighted with a red box. Other visible items in the sidebar include 'Copilot settings', 'Feature preview', 'Appearance', 'Accessibility', 'Try Enterprise', and 'Sign out'. The date '2024' is also visible in the sidebar.



## 2. Access token

Settings

Type [ ] to search

memoodm (memoodm)  
Your personal account

Go to your personal profile

Public profile

Name: memoodm

Profile picture: A circular icon featuring a white cat wearing sunglasses and holding a pencil.

Public email: memoodm@gmail.com

Bio: Tell us a little bit about yourself

Pronouns: he/him

URL: <https://www.linkedin.com/in/guillermo-andres-de-mendoza-corral/>

Social accounts: Link to social profile 1, Link to social profile 2, Link to social profile 3, Link to social profile 4

Company:

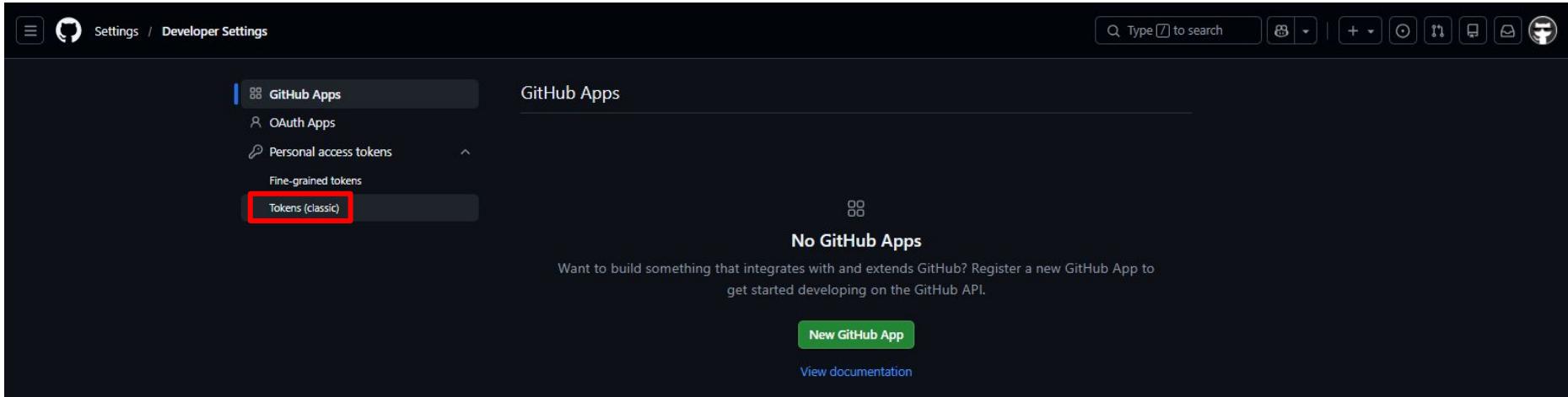
Location: Colombia

Developer settings

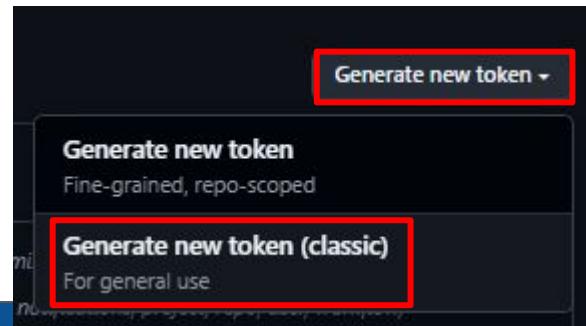
All of the fields on this page are optional and can be deleted at any time, and by filling them out, you're giving us consent to share this data wherever your user profile appears. Please see our [privacy statement](#) to learn more about how we use this information.



## 2. Access token



The screenshot shows the GitHub Developer Settings page. The top navigation bar includes icons for settings, developer tools, and search, followed by a series of small icons. The main menu on the left has sections for GitHub Apps, OAuth Apps, Personal access tokens, Fine-grained tokens, and Tokens (classic). The Tokens (classic) section is highlighted with a red box. The central content area is titled "GitHub Apps" and displays a message: "No GitHub Apps". It encourages users to "Want to build something that integrates with and extends GitHub? Register a new GitHub App to get started developing on the GitHub API." Below this are two buttons: a green "New GitHub App" button and a blue "View documentation" link.



## 2. Access token

New personal access token (classic)

personal access tokens (classic) function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to [authenticate to the API](#) over Basic Authentication

Note

What's this token for?

Expiration

No expiration ▾

⚠ GitHub strongly recommends that you set an expiration date for your token to help keep your information secure. [Learn more](#)

Select scopes

Scopes define the access for personal tokens. [Read more about OAuth scopes.](#)

<input checked="" type="checkbox"/> repo	Full control of private repositories
<input checked="" type="checkbox"/> repostatus	Access commit status
<input checked="" type="checkbox"/> repo_deployment	Access deployment status
<input checked="" type="checkbox"/> public_repo	Access public repositories
<input checked="" type="checkbox"/> repository	Access repository invitations
<input checked="" type="checkbox"/> security_events	Read and write security events
<input checked="" type="checkbox"/> workflow	Update GitHub Action workflows
<input checked="" type="checkbox"/> writepackages	Upload packages to GitHub Package Registry
<input checked="" type="checkbox"/> readpackages	Download packages from GitHub Package Registry
<input checked="" type="checkbox"/> deletepackages	Delete packages from GitHub Package Registry
<input checked="" type="checkbox"/> admin:org	Full control of orgs and teams, read and write org projects
<input checked="" type="checkbox"/> write:org	Read and write org and team membership, read and write org projects
<input checked="" type="checkbox"/> read:org	Read org and team membership, read org projects
<input checked="" type="checkbox"/> manage:runner:org	Manage org runners and runner groups
<input checked="" type="checkbox"/> admin:public_key	Full control of user public keys
<input checked="" type="checkbox"/> write:public_key	Write user public keys
<input checked="" type="checkbox"/> read:public_key	Read user public keys
<input checked="" type="checkbox"/> admin:repo_hook	Full control of repository hooks
<input checked="" type="checkbox"/> write:repo_hook	Write repository hooks
<input checked="" type="checkbox"/> read:repo_hook	Read repository hooks
<input checked="" type="checkbox"/> admin:org_hook	Full control of organization hooks
<input checked="" type="checkbox"/> gist	Create gists
<input checked="" type="checkbox"/> notifications	Access notifications
<input checked="" type="checkbox"/> user	Update ALL user data
<input checked="" type="checkbox"/> read:user	Read ALL user profile data
<input checked="" type="checkbox"/> user:email	Access user email addresses (read-only)
<input checked="" type="checkbox"/> user:follow	Follow and unfollow users
<input checked="" type="checkbox"/> delete_repo	Delete repositories
<input checked="" type="checkbox"/> write:discussion	Read and write team discussions
<input checked="" type="checkbox"/> read:discussion	Read team discussions

token name



## 2. Access token

GitHub Apps

OAuth Apps

Personal access tokens

Fine-grained tokens

Tokens (classic)

### Personal access tokens (classic)

Generate new token ▾

Tokens you have generated that can be used to access the [GitHub API](#).

⚠ Make sure to copy your personal access token now. You won't be able to see it again!

✓ ghp_AI0j5QCQlsTiIFVklUp09gDXKL87I32w0dUY	Delete
alienware laptop — admin:enterprise, admin:gpg_key, admin:org, admin:org_hook, admin:public_key, admin:repo_hook, Never used admin:ssh_signing_key, audit_log, codespace, copilot, delete:packages, delete_repo, gist, notifications, project, repo, user, workflow, write:discussion, write:network_configurations, write:packages	Delete

⚠ This token has no expiration date.

Personal access tokens (classic) function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to [authenticate to the API over Basic Authentication](#).



# 3. Create a new repository

Dashboard

Top repositories

New

Find a repository...

memoodm/maestria-python-web  
memoodm/curso-pythonweb-usa  
memoodm/python-web  
me50/memoodm  
memoodm/master-tesis  
memoodm/AngularCameraV8  
memoodm/tenpo-test

Show more

Ask Copilot

Create a profile README for me

What are Python decorators?

Home

Aliodk starred your repository 3 weeks ago

memoodm/AI-8Puzzle-SearchAlgorithm

Solving 8 puzzle game with algorithms: BFS, DFS, A\*

Python ⭐ 18

Trending repositories · See more

block/goose

an open-source, extensible AI agent that goes beyond code suggestions - install, execute, edit, and test with any LLM

Filter

GitHub Copilot

Now available for free

Up to 50 chats and 2,000 code completions per month, access to Claude 3.5 Sonnet, and more.

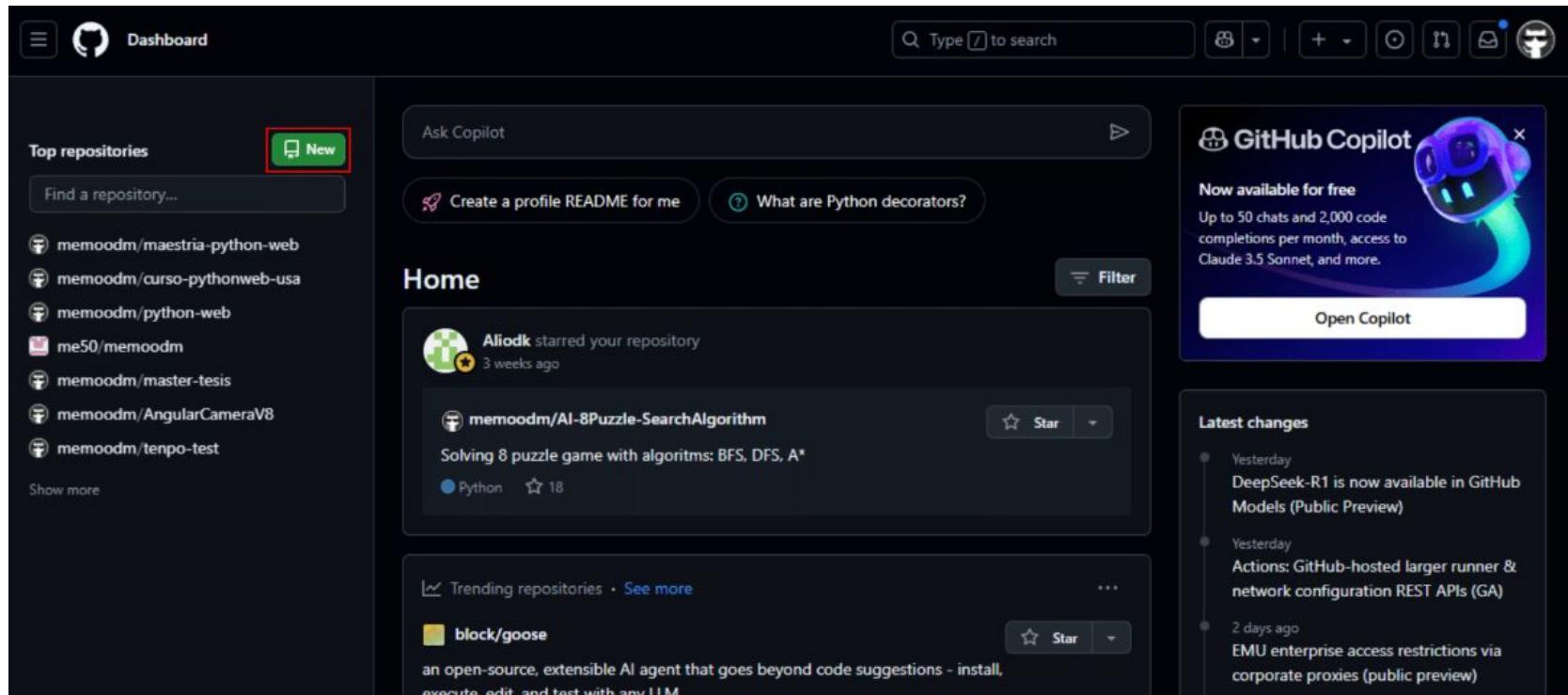
Open Copilot

Latest changes

Yesterday DeepSeek-R1 is now available in GitHub Models (Public Preview)

Yesterday Actions: GitHub-hosted larger runner & network configuration REST APIs (GA)

2 days ago EMU enterprise access restrictions via corporate proxies (public preview)



# 3. Create a new repository

Create a new repository

Repositories contain a project's files and version history. Have a project elsewhere? [Import a repository](#).  
Required fields are marked with an asterisk (\*).

1 General

Owner \* Repository name \*

memodm /

Great repository names are short and memorable. How about [turbo-waffle](#)?

Description

0 / 350 characters

2 Configuration

Choose visibility \* Choose who can see and commit to this repository

Public

Add README READMEs can be used as longer descriptions. [About READMEs](#)

On

Add .gitignore .gitignore tells git which files not to track. [About Ignoring files](#)

No .gitignore

Add license Licenses explain how others can use your code. [About licenses](#)

No license

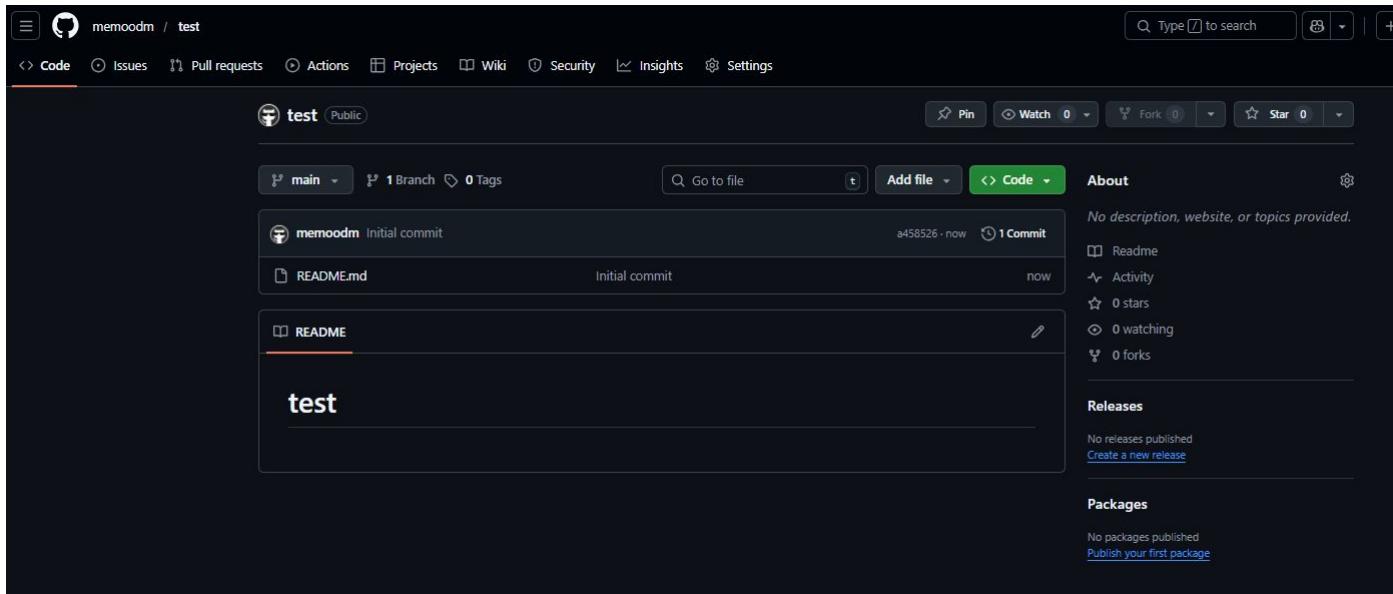
[Create repository](#)

unique name

public access

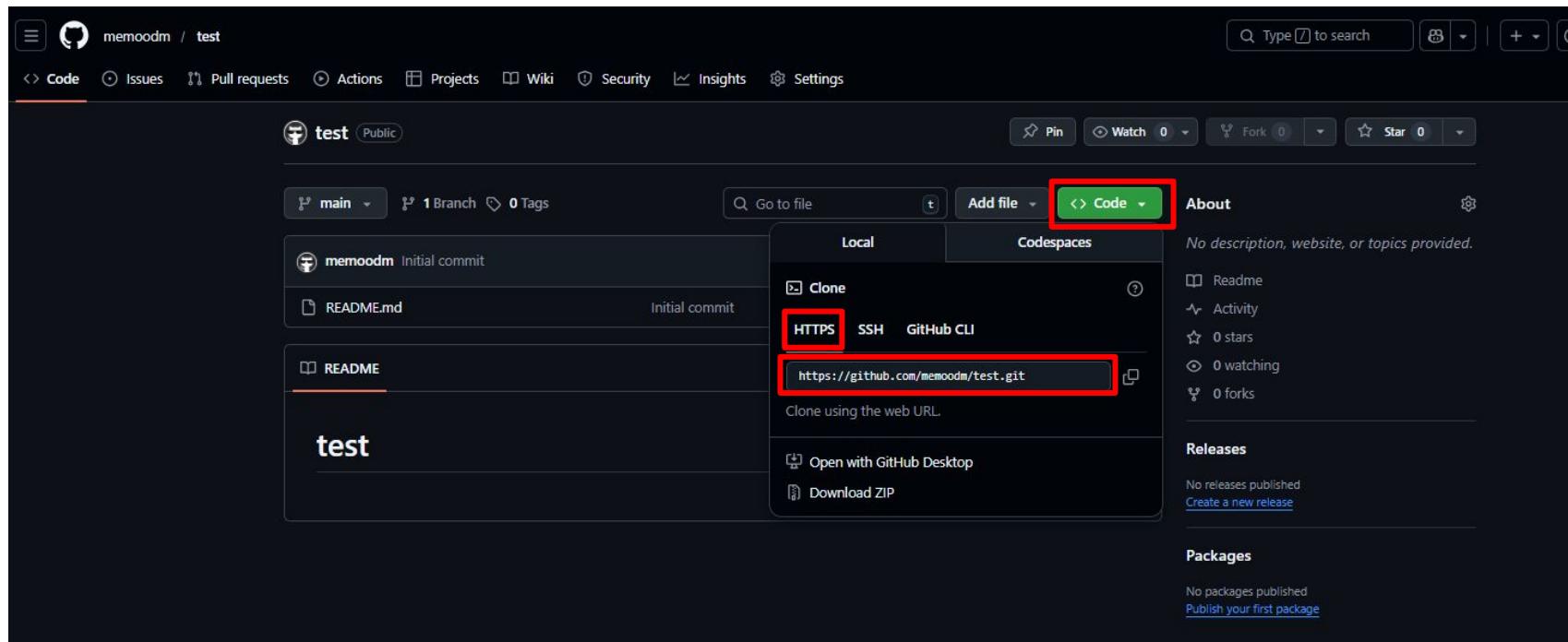


# 3. Create a new repository



# GIT COMMANDS

# 4. CLONE



The screenshot shows a GitHub repository page for a repository named "test". The repository is public and has one branch ("main") and one commit ("Initial commit"). The "Code" tab is selected. A modal window is open, showing cloning options. The "HTTPS" option is highlighted with a red box, and its URL, "https://github.com/memoodm/test.git", is also highlighted with a red box.

memoodm / test

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

test Public

main 1 Branch 0 Tags

Go to file Add file <> Code

Local Codespaces

Clone

HTTPS SSH GitHub CLI

https://github.com/memoodm/test.git

Clone using the web URL.

Open with GitHub Desktop Download ZIP

About

No description, website, or topics provided.

Readme Activity 0 stars 0 watching 0 forks

Releases

No releases published Create a new release

Packages

No packages published Publish your first package



# 4. CLONE

Creo una carpeta en mi pc



Comando en CMD:

git clone URL\_REPO

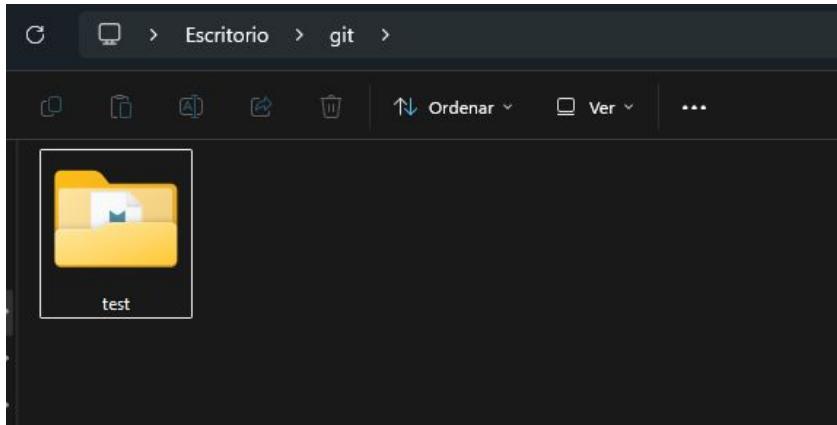
C:\Windows\System32\cmd.e

Microsoft Windows [Versión 10.0.26100.7623]  
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\memoo\Desktop\git>git clone https://github.com/memoodm/test.git

The image shows a screenshot of a Windows Command Prompt window. The title bar says "C:\Windows\System32\cmd.e". The window displays the Windows version information and then a command line. The command "git clone https://github.com/memoodm/test.git" is entered at the prompt. The entire command line is highlighted with a red rectangle.

# 4. CLONE

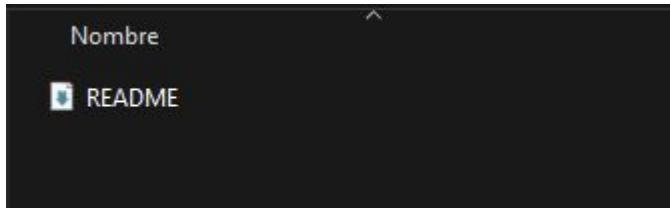


Nombre	Fecha de modificación	Tipo	Tamaño
README	9/02/2026 9:59 a.m.	Markdown Source File	1 KB



# 4. Compare

my pc



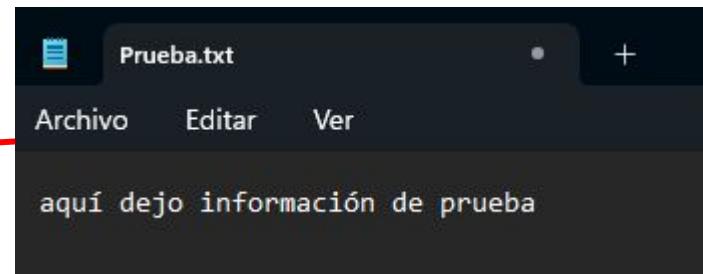
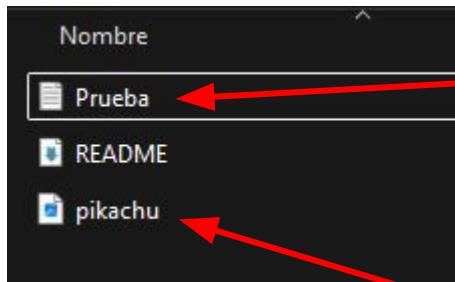
github

A screenshot of a GitHub repository page. At the top, it shows "main", "1 Branch", "0 Tags", and a search bar. Below that is a commit history for "memoodm Initial commit" made 11 minutes ago. The commit message is "Initial commit". Underneath the commit is a file named "README" with the content "test". There is also a small edit icon next to the file name.



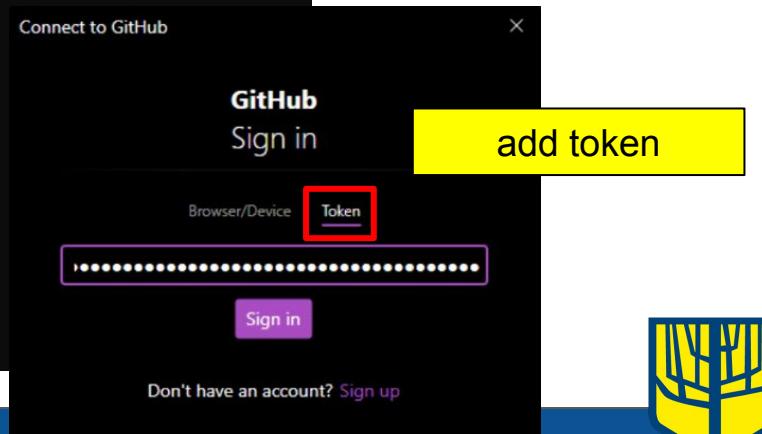
## 4. Add content to pc repository

my pc



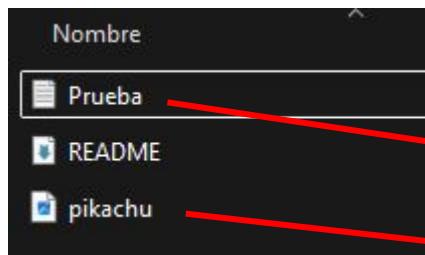
# 4. Add content to pc repository

```
C:\Windows\System32\cmd.e X + ▾  
Microsoft Windows [Versión 10.0.26100.7623]  
(c) Microsoft Corporation. Todos los derechos reservados.  
  
C:\Users\memoo\Desktop\git\test>git add .  
  
C:\Users\memoo\Desktop\git\test>git commit -m "subo un archivo y una imagen como prueba"  
[main 6986b63] subo un archivo y una imagen como prueba  
 2 files changed, 0 insertions(+), 0 deletions(-)  
 create mode 100644 Prueba.txt  
 create mode 100644 pikachu.png  
  
C:\Users\memoo\Desktop\git\test>git push  
Enumerating objects: 5, done.  
Counting objects: 100% (5/5), done.  
Delta compression using up to 16 threads  
Compressing objects: 100% (3/3), done.  
Writing objects: 100% (4/4), 114.86 KiB | 38.29 MiB/s, done.  
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)  
To https://github.com/memoodm/test.git  
 a458526..6986b63 main -> main
```



# 4. Compare

my pc



github

A screenshot of a GitHub repository page for a repository named 'test'. The repository is public. It shows one branch ('main') and zero tags. A search bar at the top right has 'Go to file'. Below the search bar are buttons for 'Add file' and 'Code'. The main area shows a list of commits:

- memoodm subo un archivo y una imagen como prueba (6986b63 · 3 minutes ago)
  - Prueba.txt: subo un archivo y una imagen como prueba (3 minutes ago)
  - README.md: Initial commit (19 minutes ago)
  - pikachu.png: subo un archivo y una imagen como prueba (3 minutes ago)



# 4. Compare

 memoodm	subo un archivo y una imagen como prueba	6986b63 · 5 minutes ago	 2 Commits
 Prueba.txt	subo un archivo y una imagen como prueba	5 minutes ago	
 README.md	Initial commit	21 minutes ago	
 pikachu.png	subo un archivo y una imagen como prueba	5 minutes ago	

## Commits

main ▾

All users ▾ All time ▾

- Commits on Feb 9, 2026

<b>subo un archivo y una imagen como prueba</b>  memoodm committed 5 minutes ago	6986b63  
<b>Initial commit</b>  memoodm authored 21 minutes ago	Verified a458526  



# 4. Changes in git

test Public

main Branch 0 Tags

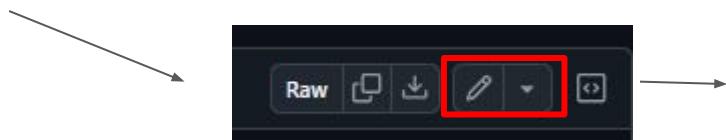
Go to file Add file Code

memoodm subo un archivo y una imagen como prueba 6986b63 - 9 minutes ago 2 Commits

Prueba.txt subo un archivo y una imagen como prueba 9 minutes ago

README.md Initial commit 25 minutes ago

pikachu.png subo un archivo y una imagen como prueba 9 minutes ago



test / Prueba.txt in main

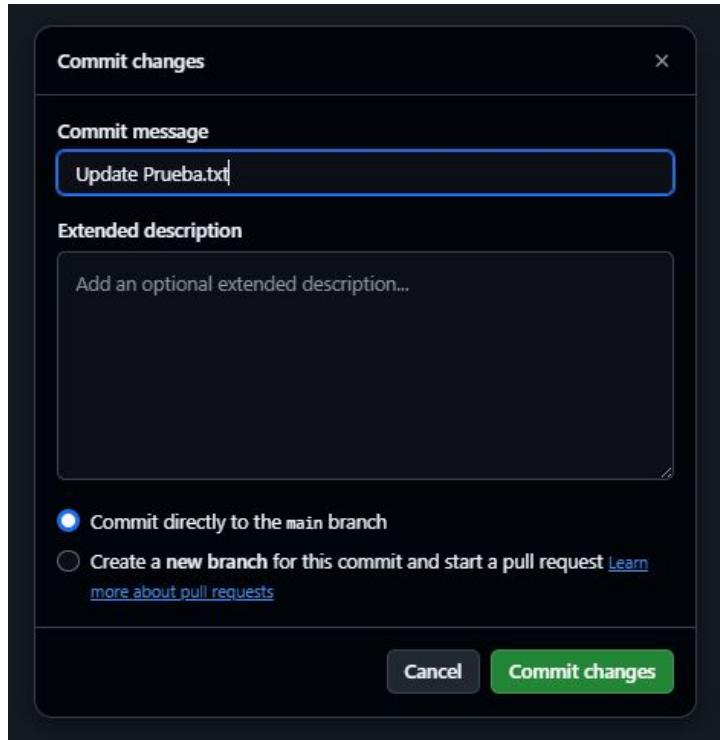
Edit Preview ⚙

```
1  aquí dejo información de prueba
2
3 1234 adicional|
```

Commit changes...

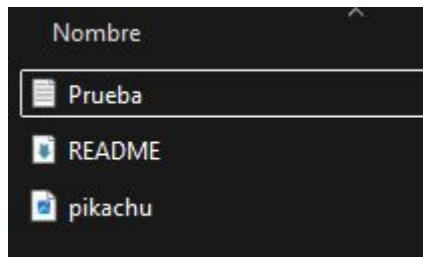


# 4. Changes in git



# 4. Compare

my pc



github

A screenshot of a GitHub repository named "test". The repository is public and has one branch ("main") and no tags. The commit history shows:

- "memoodm Update Prueba.txt" (ee9ab55, 2 minutes ago) - A red box highlights this commit.
- "Prueba.txt" (Update Prueba.txt, 2 minutes ago)
- "README.md" (Initial commit, 33 minutes ago)
- "pikachu.png" (subo un archivo y una imagen como prueba, 16 minutes ago)

The "Prueba.txt" commit details show the content: "Update Prueba.txt".

A screenshot of a text editor window titled "Prueba.txt". The content of the file is: "aquí dejo información de prueba".

A screenshot of a terminal or code editor window showing the content of "Prueba.txt":

```
1  aquí dejo información de prueba
2
3  1234 adicional
```

On the right side of the screen is a yellow and black shield-shaped logo.

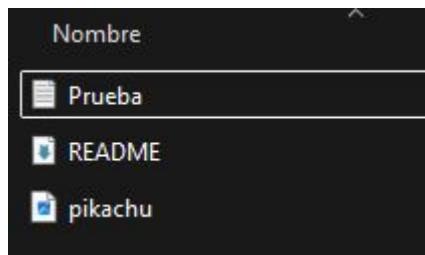
## 4. Pull

```
C:\Windows\System32\cmd.e  X  + | v
C:\Users\memoo\Desktop\git\test>git pull
Updating 6986b63..ee9ab55
Fast-forward
  Prueba.txt | 3 +++
  1 file changed, 3 insertions(+)
```



# 4. Compare

my pc



Prueba.txt

X +

Archivo    Editar    Ver

```
aquí dejo información de prueba
1234 adicional
```

github

test Public

main 1 Branch 0 Tags

memoodm Update Prueba.txt ee9ab55 · 2 minutes ago 3 Commits

Prueba.txt Update Prueba.txt 2 minutes ago

README.md Initial commit 33 minutes ago

pikachu.png subo un archivo y una imagen como prueba 16 minutes ago

README

test

```
1  aquí dejo información de prueba
2
3  1234 adicional
```



# 4. Resume

\*only in master branch

