Universidad Tecnológica de Aguascalientes

ING. EN SISTEMAS Y DESARROLLO DE SOFTWARE

Actividad: Tarea I - Unidad I - Conceptos y aplicaciones de git

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Materia: *Desarrollo Web Profesional*

Fecha de entrega: *13/05/2022*

Realizar una investigación de git que cubra los siguientes conceptos. Poner una explicación con TUS PROPIAS PALABRAS y un EJEMPLO PRÁCTICO. El contenido de la investigación deberá ser en inglés. Si quieren tener un poco mas de contexto de todos los temas puede ver este curso exprés que impartí hace algunos cuatrimestres. https://www.youtube.com/watch?v=vEoFV9GKOb8

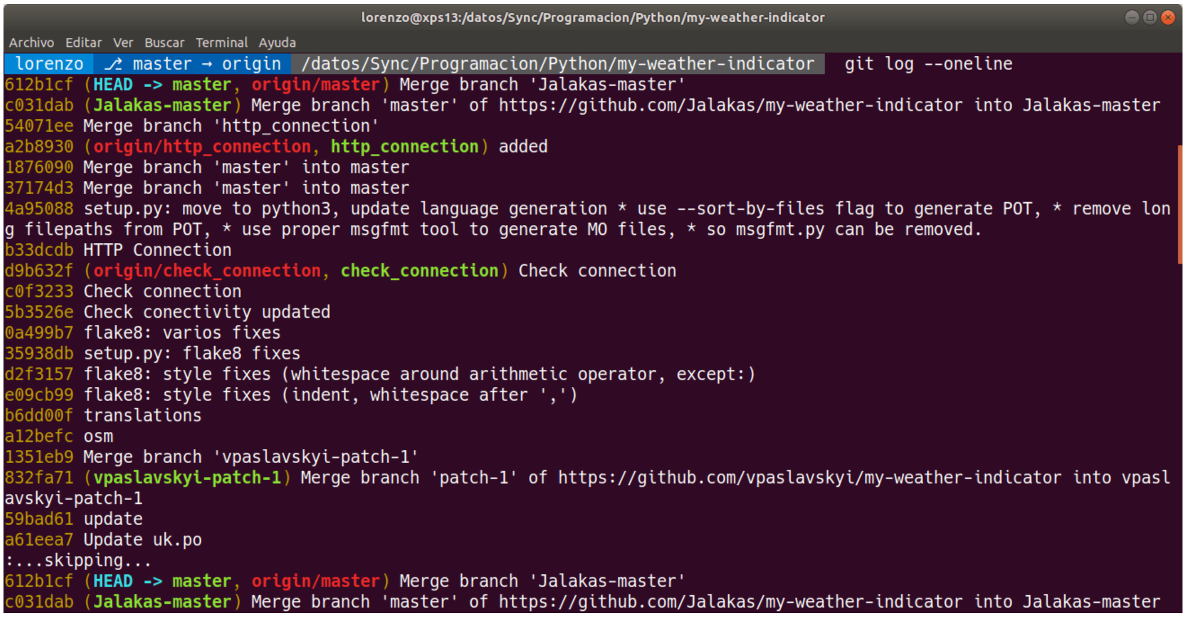
La actividad deberá ser entregada en formato PDF con la siguiente nomenclatura APELLIDO_APELLIDO_NOMBRE_ACTIVIDAD1.PDF

Deberá contener una portada institucional y formato profesional en el contenido de su trabajo.

En caso de encontrar trabajos iguales, todos los involucrados tendrán 0 de calificación en la actividad y perderán 2 puntos de la parte de SER.

Git

Git is the most widely used modern version control system in the world. Git is a mature and actively maintained open source project that was originally developed by Linus Torvalds, the famous creator of the Linux operating system kernel, in 2005.

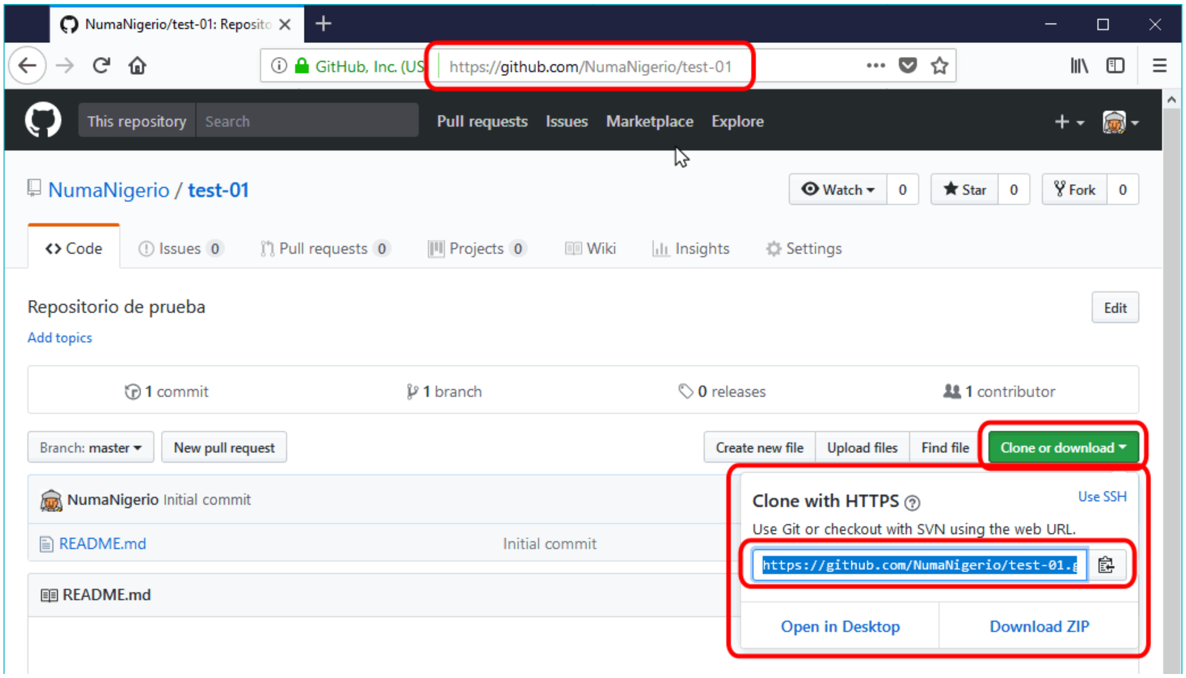

lorenzo@xps13:/datos/Sync/Programacion/Python/my-weather-indicator
Archivo Editar Ver Buscar Terminal Ayuda

```
 lorenzo  ⎇ master → origin  /datos/Sync/Programacion/Python/my-weather-indicator   git log --oneline
612b1cf (HEAD -> master, origin/master) Merge branch 'Jalakas-master'
c031dab (Jalakas-master) Merge branch 'master' of https://github.com/Jalakas/my-weather-indicator into Jalakas-master
54071ee Merge branch 'http_connection'
a2b8930 (origin/http_connection, http_connection) added
1876090 Merge branch 'master' into master
37174d3 Merge branch 'master' into master
4a95088 setup.py: move to python3, update language generation * use --sort-by-files flag to generate POT, * remove lon
g filepaths from POT, * use proper msgfmt tool to generate MO files, * so msgfmt.py can be removed.
b33dcdb HTTP Connection
d9b632f (origin/check_connection, check_connection) Check connection
c0f3233 Check connection
5b3526e Check conectivity updated
0a499b7 flake8: varios fixes
35938db setup.py: flake8 fixes
d2f3157 flake8: style fixes (whitespace around arithmetic operator, except:)
e09cb99 flake8: style fixes (indent, whitespace after ',')
b6dd00f translations
a12befc osm
1351eb9 Merge branch 'vpaslavskyi-patch-1'
832fa71 (vpaslavskyi-patch-1) Merge branch 'patch-1' of https://github.com/vpaslavskyi/my-weather-indicator into vpasl
avskyi-patch-1
59bad61 update
a61eea7 Update uk.po
:...skipping...
612b1cf (HEAD -> master, origin/master) Merge branch 'Jalakas-master'
c031dab (Jalakas-master) Merge branch 'master' of https://github.com/Jalakas/my-weather-indicator into Jalakas-master
```

Github

GitHub offers cloud repository hosting service, makes it easy for individuals and teams to use Git as version control and collaboration.

GitHub's interface is quite easy to use for those who want to take advantage of Git



https://github.com/NumaNigerio/test-01

NumaNigerio / test-01

Repositorio de prueba

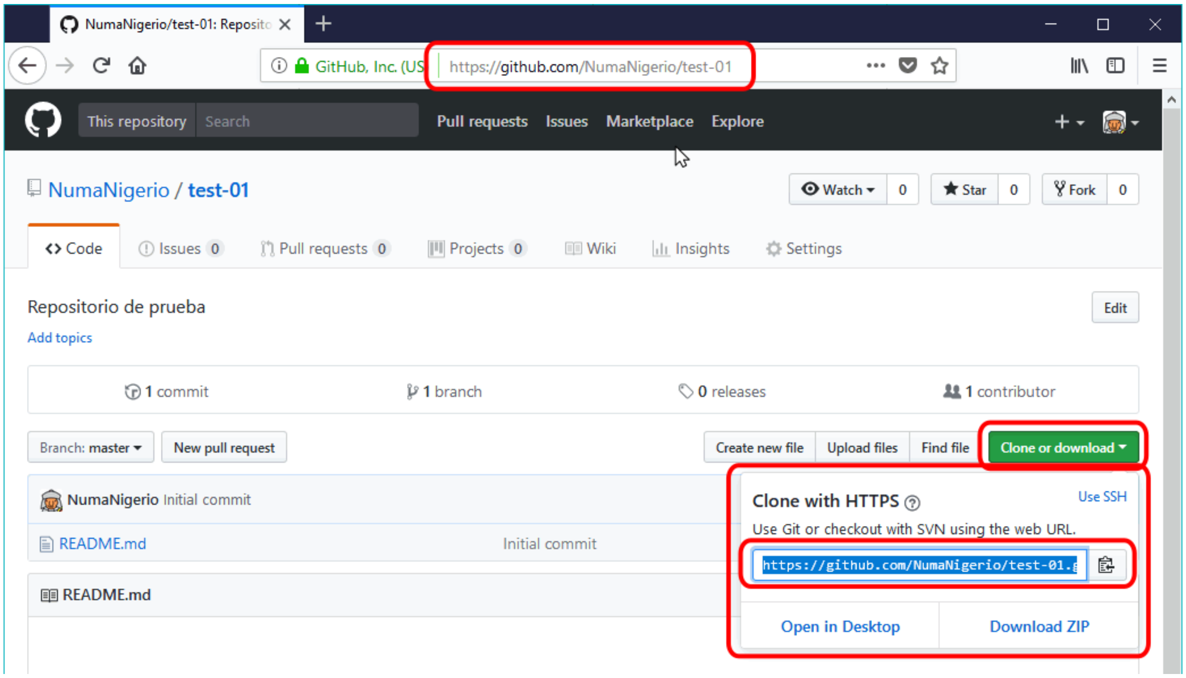
Clone with HTTPS

Use Git or checkout with SVN using the web URL.

https://github.com/NumaNigerio/test-01.g

Repositorie

A digital or virtual repository is a website where digital information from companies or institutions is stored; the stored files can be accessed by those allowed by the institution or the administrator.



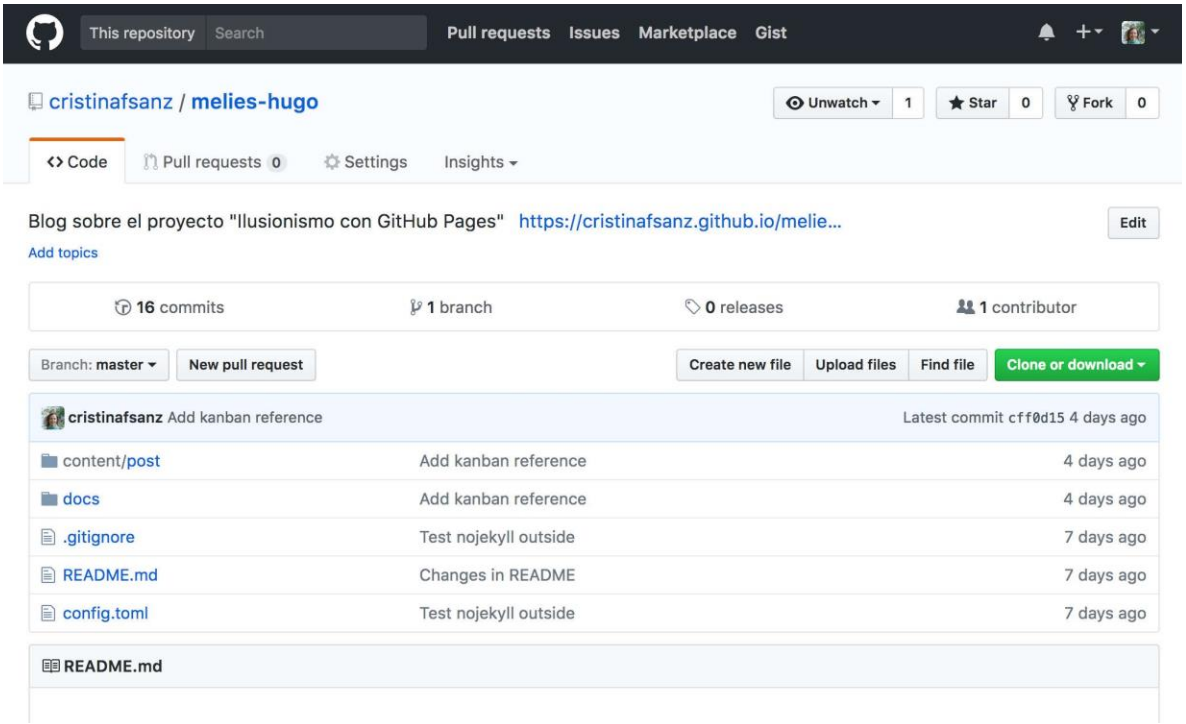
Repositorio de prueba

NumaNigerio Initial commit

README.md	Initial commit

Use Git or checkout with SVN using the web URL.

```
https://github.com/NumaNigerio/test-01.g
```



Blog sobre el proyecto "Ilusionismo con GitHub Pages" https://cristinafsanz.github.io/melie...

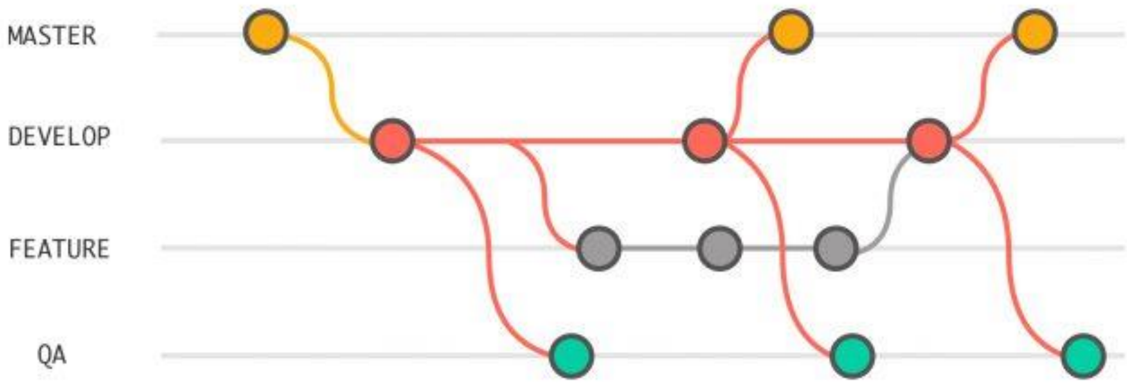
cristinafsanz Add kanban reference — Latest commit cff0d15 4 days ago

content/post	Add kanban reference	4 days ago
docs	Add kanban reference	4 days ago
.gitignore	Test nojekyll outside	7 days ago
README.md	Changes in README	7 days ago
config.toml	Test nojekyll outside	7 days ago

git flow

Git-flow is a set of extensions that save us a lot of work when executing all these commands, simplifying the management of our repository branches.

Gitflow is an alternative Git branching model that uses function branches and multiple parent branches.

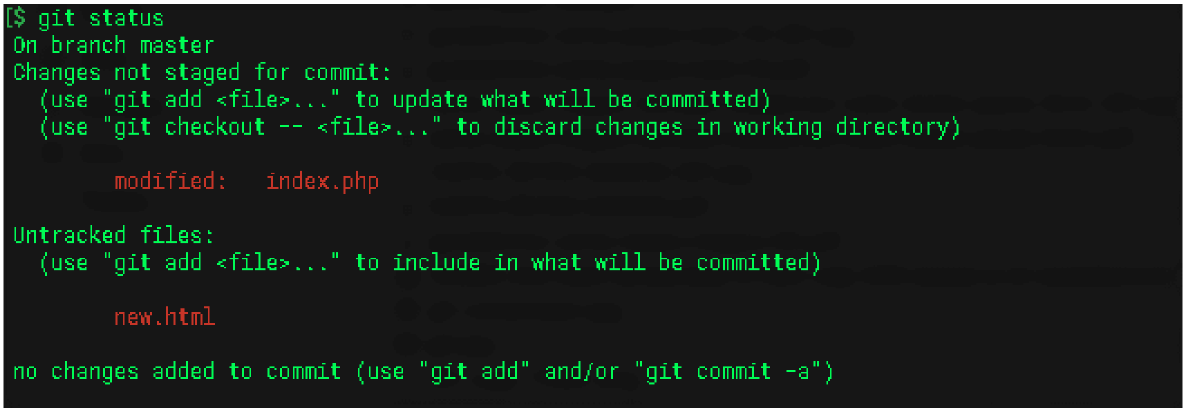


local / stagging / remote áreas

It's a file in your Git directory, it contains what information will be in the next commit. It is the index. The basic workflow in Git is something like You modify files in your working directory.

status

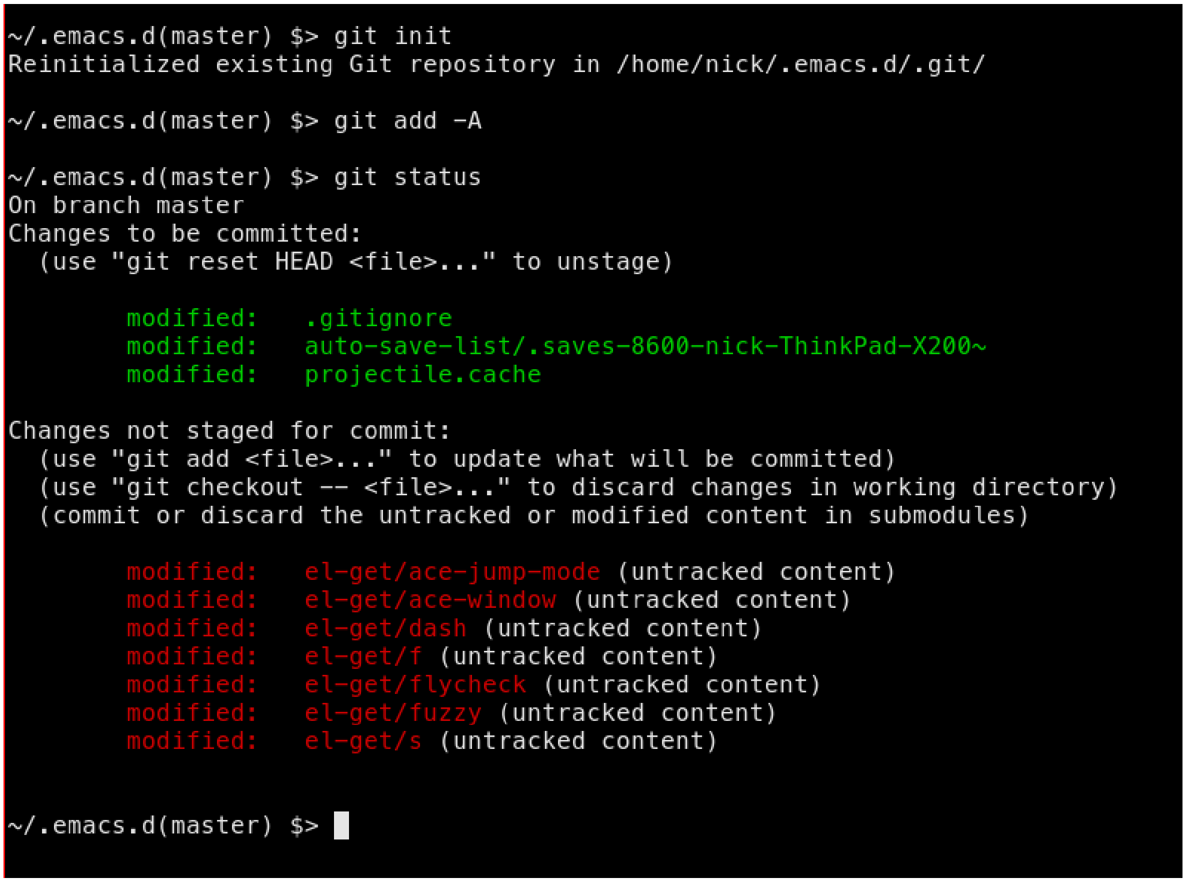
The git status command shows us the status of the working directory and the staging environment area. Likewise, it helps us to see the changes that have been prepared, those that have not and the files in which Git will not perform the continuation.



```
[$ git status
 On branch master
 Changes not staged for commit:
   (use "git add <file>..." to update what will be committed)
   (use "git checkout -- <file>..." to discard changes in working directory)

         modified:   index.php

 Untracked files:
   (use "git add <file>..." to include in what will be committed)

         new.html

 no changes added to commit (use "git add" and/or "git commit -a")
```

Add

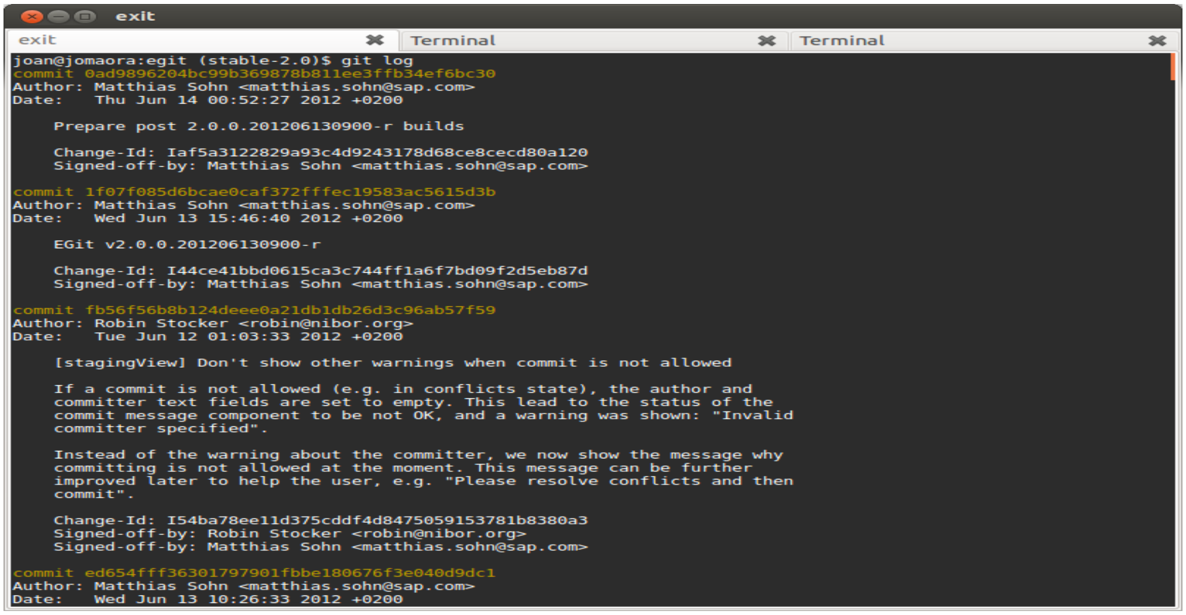
The git add command is very useful because it adds a change from the working directory to the staging environment, this tells Git that you want to include updates to a file on the next commit.



```
~/.emacs.d(master) $> git init
Reinitialized existing Git repository in /home/nick/.emacs.d/.git/

~/.emacs.d(master) $> git add -A

~/.emacs.d(master) $> git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   .gitignore
        modified:   auto-save-list/.saves-8600-nick-ThinkPad-X200~
        modified:   projectile.cache

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)
  (commit or discard the untracked or modified content in submodules)

        modified:   el-get/ace-jump-mode (untracked content)
        modified:   el-get/ace-window (untracked content)
        modified:   el-get/dash (untracked content)
        modified:   el-get/f (untracked content)
        modified:   el-get/flycheck (untracked content)
        modified:   el-get/fuzzy (untracked content)
        modified:   el-get/s (untracked content)


~/.emacs.d(master) $>
```

Log

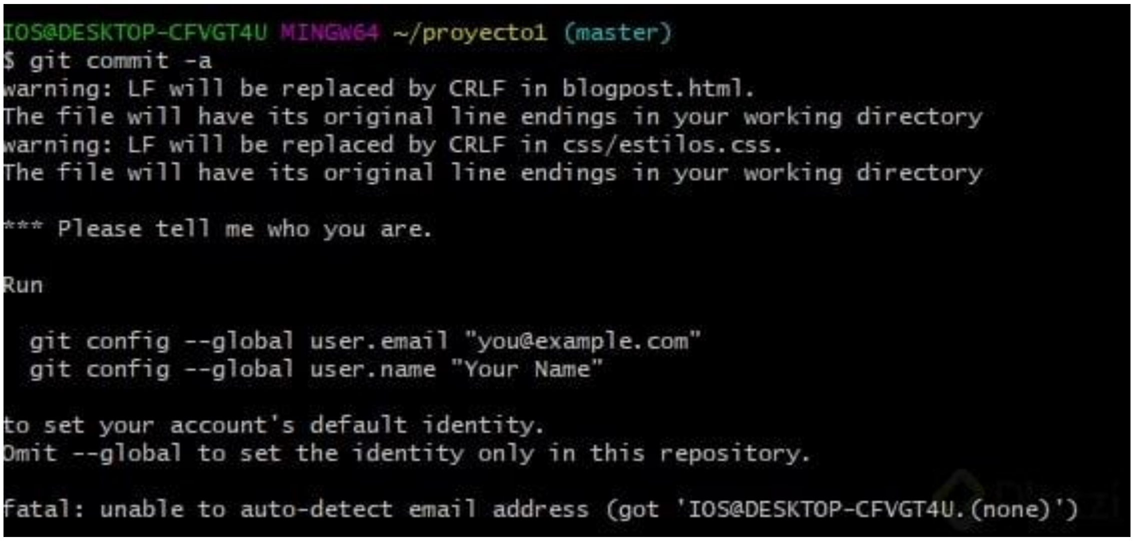
The git log command serves as a basic Git tool for exploring repository history. This command is used when you need to find a specific version of a project or know what changes will be introduced by the in a feature branch.



```
joan@jomaora:egit (stable-2.0)$ git log
commit 0ad9896204bc99b369878b811ee3ffb34ef6bc30
Author: Matthias Sohn <matthias.sohn@sap.com>
Date:   Thu Jun 14 00:52:27 2012 +0200

    Prepare post 2.0.0.201206130900-r builds

    Change-Id: Iaf5a3122829a93c4d9243178d68ce8cecd80a120
    Signed-off-by: Matthias Sohn <matthias.sohn@sap.com>

commit 1f07f085d6bcae0caf372fffec19583ac5615d3b
Author: Matthias Sohn <matthias.sohn@sap.com>
Date:   Wed Jun 13 15:46:40 2012 +0200

    EGit v2.0.0.201206130900-r

    Change-Id: I44ce41bbd0615ca3c744ff1a6f7bd09f2d5eb87d
    Signed-off-by: Matthias Sohn <matthias.sohn@sap.com>

commit fb56f56b8b124deee0a21db1db26d3c96ab57f59
Author: Robin Stocker <robin@nibor.org>
Date:   Tue Jun 12 01:03:33 2012 +0200

    [stagingView] Don't show other warnings when commit is not allowed

    If a commit is not allowed (e.g. in conflicts state), the author and
    committer text fields are set to empty. This lead to the status of the
    commit message component to be not OK, and a warning was shown: "Invalid
    committer specified".

    Instead of the warning about the committer, we now show the message why
    committing is not allowed at the moment. This message can be further
    improved later to help the user, e.g. "Please resolve conflicts and then
    commit".

    Change-Id: I54ba78ee11d375cddf4d8475059153781b8380a3
    Signed-off-by: Robin Stocker <robin@nibor.org>
    Signed-off-by: Matthias Sohn <matthias.sohn@sap.com>

commit ed654fff36301797901fbbe180676f3e040d9dc1
Author: Matthias Sohn <matthias.sohn@sap.com>
Date:   Wed Jun 13 10:26:33 2012 +0200
```

Commit

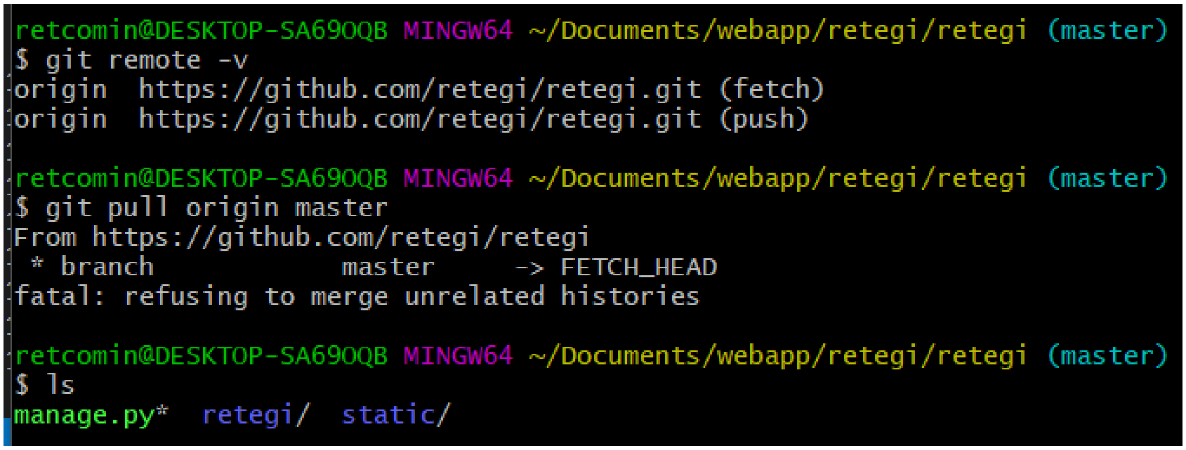
The git commit command will save all changes made to the application or code, along with a brief description of the user, in a Commit to the local repository.



```
IOS@DESKTOP-CFVGT4U MINGW64 ~/proyecto1 (master)
$ git commit -a
warning: LF will be replaced by CRLF in blogpost.html.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in css/estilos.css.
The file will have its original line endings in your working directory

*** Please tell me who you are.

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 'IOS@DESKTOP-CFVGT4U.(none)')
```

Pull

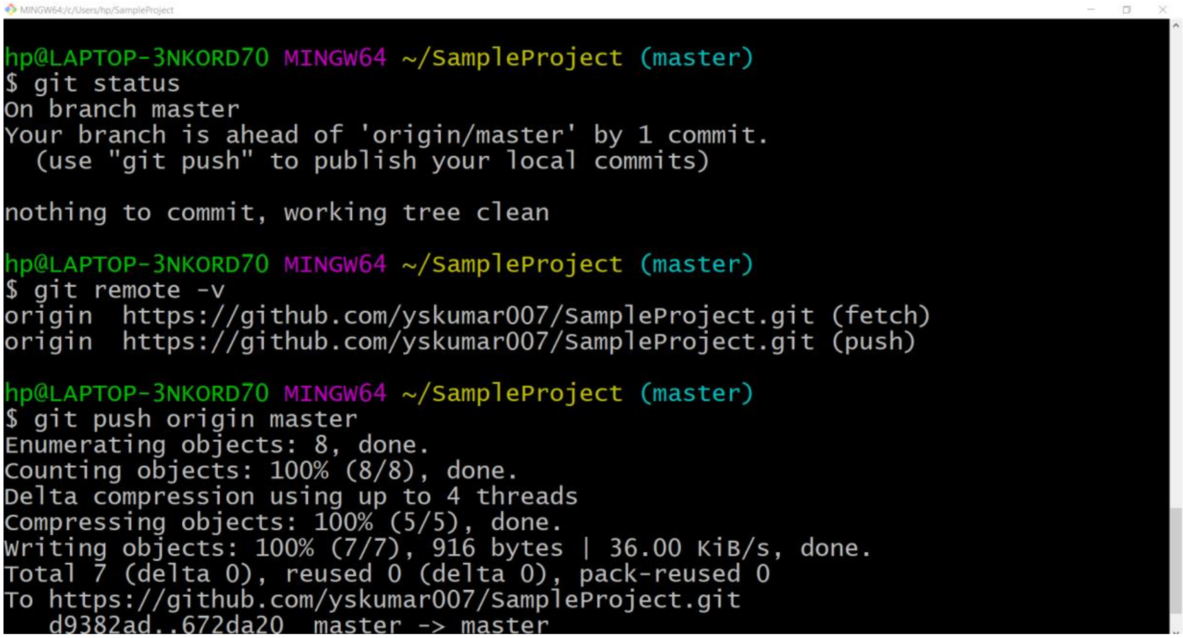
The git pull command is used to pull and download content from a remote repository and instantly update the local repository to display that content.



```
retcomin@DESKTOP-SA69OQB MINGW64 ~/Documents/webapp/retegi/retegi (master)
$ git remote -v
origin  https://github.com/retegi/retegi.git (fetch)
origin  https://github.com/retegi/retegi.git (push)

retcomin@DESKTOP-SA69OQB MINGW64 ~/Documents/webapp/retegi/retegi (master)
$ git pull origin master
From https://github.com/retegi/retegi
 * branch            master     -> FETCH_HEAD
fatal: refusing to merge unrelated histories

retcomin@DESKTOP-SA69OQB MINGW64 ~/Documents/webapp/retegi/retegi (master)
$ ls
manage.py*  retegi/  static/
```

Push

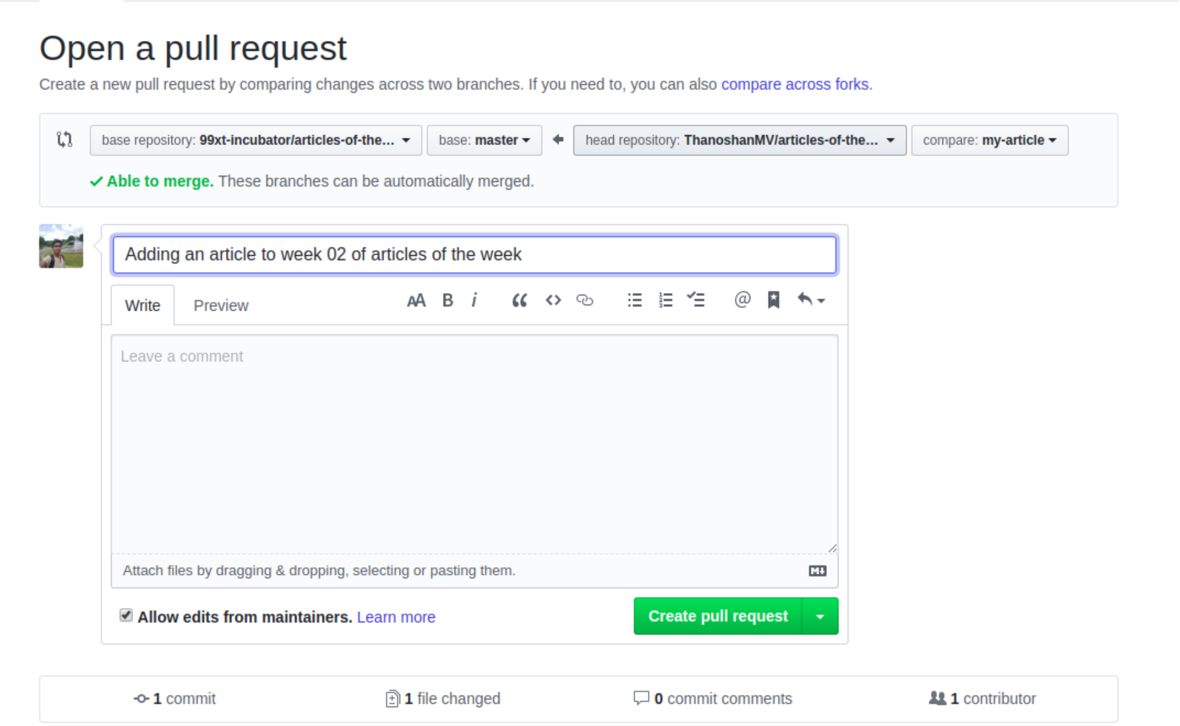
The git push command is used to push the content of the local repository to a remote repository. Pushing serves as the way to transfer commits from your local repository to a remote repository.



```
hp@LAPTOP-3NKORD70 MINGW64 ~/SampleProject (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

hp@LAPTOP-3NKORD70 MINGW64 ~/SampleProject (master)
$ git remote -v
origin  https://github.com/yskumar007/SampleProject.git (fetch)
origin  https://github.com/yskumar007/SampleProject.git (push)

hp@LAPTOP-3NKORD70 MINGW64 ~/SampleProject (master)
$ git push origin master
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 4 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (7/7), 916 bytes | 36.00 KiB/s, done.
Total 7 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/yskumar007/SampleProject.git
   d9382ad..672da20  master -> master
```

pull request

Pull requests allow tasks to be carried out in an orderly manner in the development stage, in addition to also creating proposals or changes that can be later integrated into said project.



Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks.

base repository: **99xt-incubator/articles-of-the...** base: **master** ← head repository: **ThanoshanMV/articles-of-the...** compare: **my-article**

✓ **Able to merge.** These branches can be automatically merged.

Adding an article to week 02 of articles of the week

Leave a comment

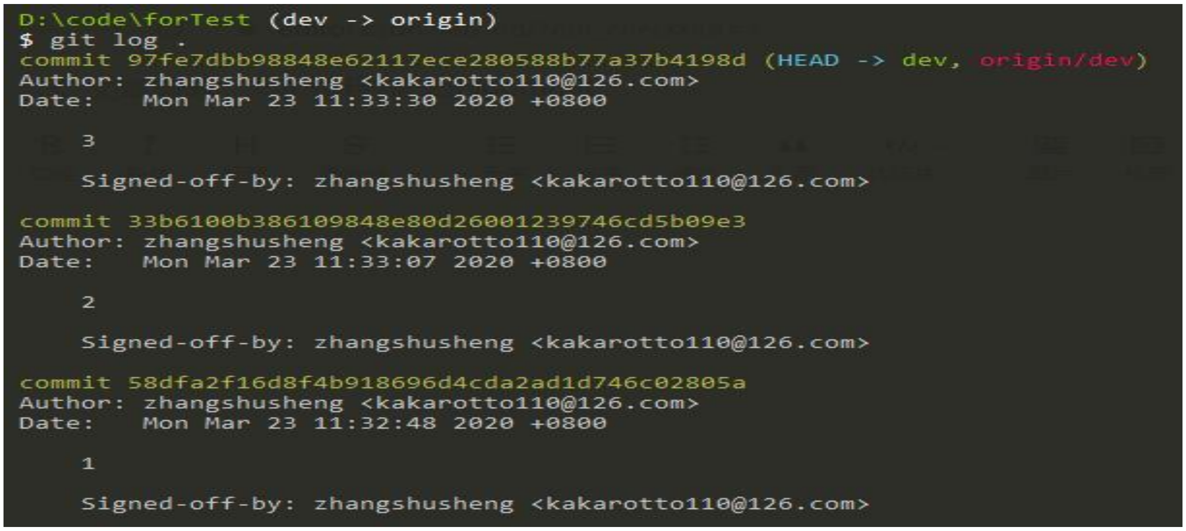
Attach files by dragging & dropping, selecting or pasting them.

☑ **Allow edits from maintainers.** Learn more

1 commit **1** file changed **0** commit comments **1** contributor

Merge

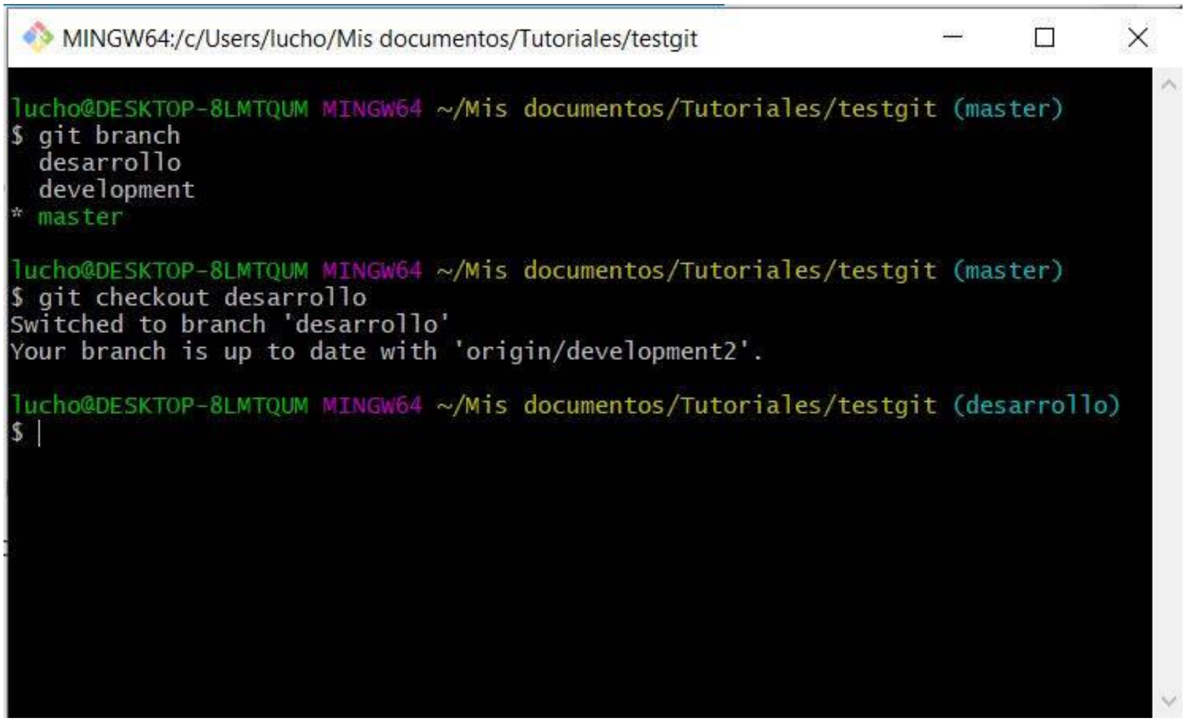
The git merge command serves us or allows us to take all the independent lines of development created by git branch and integrate them into a single branch.



```
D:\code\forTest (dev -> origin)
$ git log .
commit 97fe7dbb98848e62117ece280588b77a37b4198d (HEAD -> dev, origin/dev)
Author: zhangshusheng <kakarotto110@126.com>
Date:   Mon Mar 23 11:33:30 2020 +0800

    3

    Signed-off-by: zhangshusheng <kakarotto110@126.com>

commit 33b6100b386109848e80d26001239746cd5b09e3
Author: zhangshusheng <kakarotto110@126.com>
Date:   Mon Mar 23 11:33:07 2020 +0800

    2

    Signed-off-by: zhangshusheng <kakarotto110@126.com>

commit 58dfa2f16d8f4b918696d4cda2ad1d746c02805a
Author: zhangshusheng <kakarotto110@126.com>
Date:   Mon Mar 23 11:32:48 2020 +0800

    1

    Signed-off-by: zhangshusheng <kakarotto110@126.com>
```

Branch

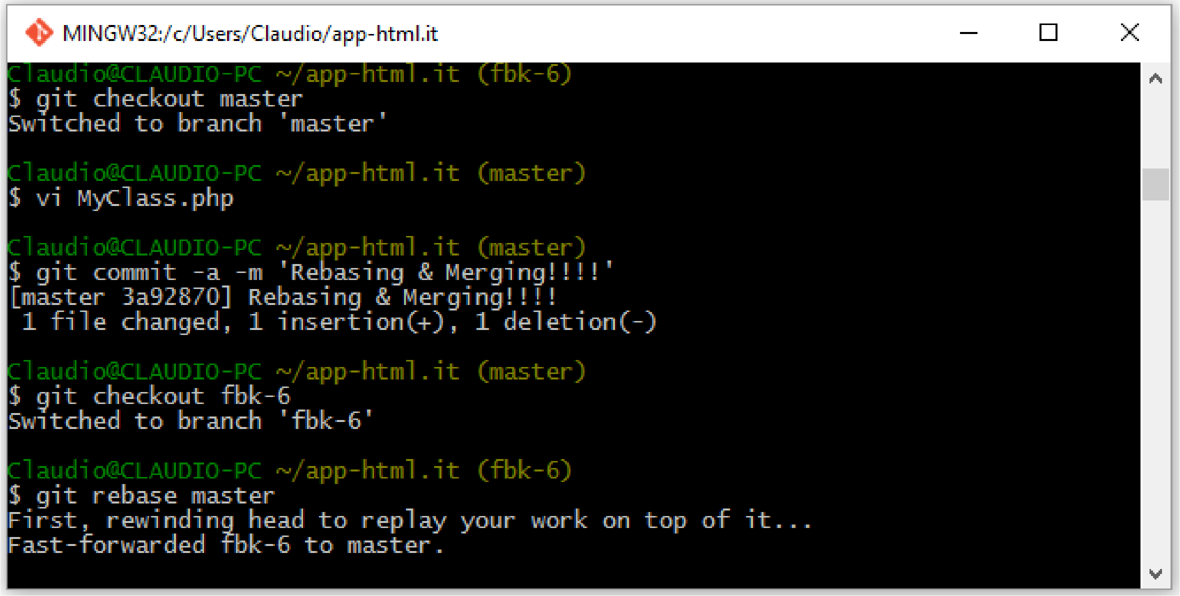
The git branch command allows you to create, list, and remove branches, as well as rename them.



```
lucho@DESKTOP-8LMTQUM MINGW64 ~/Mis documentos/Tutoriales/testgit (master)
$ git branch
  desarrollo
  development
* master

lucho@DESKTOP-8LMTQUM MINGW64 ~/Mis documentos/Tutoriales/testgit (master)
$ git checkout desarrollo
Switched to branch 'desarrollo'
Your branch is up to date with 'origin/development2'.

lucho@DESKTOP-8LMTQUM MINGW64 ~/Mis documentos/Tutoriales/testgit (desarrollo)
$ |
```

Rebase

It consists of changing the base of your branch from one commit to another, making it appear that you created the branch from a different one.



```
Claudio@CLAUDIO-PC ~/app-html.it (fbk-6)
$ git checkout master
Switched to branch 'master'

Claudio@CLAUDIO-PC ~/app-html.it (master)
$ vi MyClass.php

Claudio@CLAUDIO-PC ~/app-html.it (master)
$ git commit -a -m 'Rebasing & Merging!!!!'
[master 3a92870] Rebasing & Merging!!!!
 1 file changed, 1 insertion(+), 1 deletion(-)

Claudio@CLAUDIO-PC ~/app-html.it (master)
$ git checkout fbk-6
Switched to branch 'fbk-6'

Claudio@CLAUDIO-PC ~/app-html.it (fbk-6)
$ git rebase master
First, rewinding head to replay your work on top of it...
Fast-forwarded fbk-6 to master.
```