

# DESARROLLO WEB EN ENTORNO CLIENTE

Práctica tema 1: Uso de Git y Github

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# 1. Fundamentos de Git

## 1. Instalación de Git

```

MINGW64:/c/Users/blanc
blanc@Blanca MINGW64 ~
$ 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-optional-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
  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
  push       Update remote refs along with associated objects

'git help -a' and 'git help -g' list available subcommands and some
concept guides. See 'git help <command>' or 'git help <concept>'
to read about a specific subcommand or concept.
See 'git help git' for an overview of the system.

blanc@Blanca MINGW64 ~
$ git --version
git version 2.46.2.windows.1

blanc@Blanca MINGW64 ~
$

```

Figura 1. Ejecución comando `git --version`.

## 2. Configuración de Git

```
blanc@Blanca MINGW64 ~  
$ git config --global user.name "Blanca Civieta"  
  
blanc@Blanca MINGW64 ~  
$ git config --global user.email blancivi@gmail.com  
  
blanc@Blanca MINGW64 ~  
$ git config --global user.email  
blancivi@gmail.com  
  
blanc@Blanca MINGW64 ~  
$ git config --global user.name  
Blanca Civieta  
  
blanc@Blanca MINGW64 ~  
$ git config --global core.editor "'C:/Program Files/Notepad++/notepad++.exe' -multiInst -notabbar -nosessi
```

Figura 2. Configuración del nombre, correo electrónico, y editor de preferencia.

## 3. Creación de carpeta S1R1

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)  
$ git status  
On branch master  
Untracked files:  
  (use "git add <file>..." to include in what will be committed)  
    películas.txt  
  
nothing added to commit but untracked files present (use "git add" to track)  
  
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)  
$ |
```

Figura 3. Captura de pantalla de git status ( punto g ).

```

blanc@Blanca MINGW64 ~
$ cd /C/Blanca/DAW2/Cliente/GitHub/S1R1/

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1
$ git init
Initialized empty Git repository in C:/Blanca/DAW2/Cliente/GitHub/S1R1/.git/

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git add libros.txt

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git commit -m "Se crea libros y se añaden 3 titulos"
[master (root-commit) 6cb7877] Se crea libros y se añaden 3 titulos
1 file changed, 3 insertions(+)
create mode 100644 libros.txt

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git add libros.txt

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git commit -m "Se añaden dos titulos a libros"
[master a456e57] Se añaden dos titulos a libros
1 file changed, 3 insertions(+), 1 deletion(-)

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
      peliculas.txt

nothing added to commit but untracked files present (use "git add" to track)

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git add peliculas.txt comidas.txt

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git commit -m "Se crea peliculas con 3 titulos y comidas con 3 comidas"
[master 1dfab3c] Se crea peliculas con 3 titulos y comidas con 3 comidas
2 files changed, 6 insertions(+)
create mode 100644 comidas.txt
create mode 100644 peliculas.txt

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git diff
diff --git a/comidas.txt b/comidas.txt
deleted file mode 100644
index a233c96..0000000
--- a/comidas.txt
+++ /dev/null
@@ -1,3 +0,0 @@
-Paella
-Cocido
-Ensalada
\ No newline at end of file
diff --git a/peliculas.txt b/peliculas.txt
index b9f4205..1c65384 100644
--- a/peliculas.txt
+++ b/peliculas.txt
@@ -1,3 +1,5 @@
El cuarto pasajero
El libro de la selva
-Azul oscuro casi negro
\ No newline at end of file
+Azul oscuro casi negro
+Gris
+Titanic
\ No newline at end of file

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ |

```

Figura 4. Cambios hasta el momento en el directorio de trabajo ( punto I ).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        deleted:    comidas.txt
        modified:   películas.txt

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$

```

Figura 5. Captura del comando git status en el punto n).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        datos.bank
        output/

nothing added to commit but untracked files present (use "git add" to track)
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ |

```

Figura 6. Captura de pantalla punto q).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .gitignore

nothing added to commit but untracked files present (use "git add" to track)
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$

```

Figura 7. Captura de git status donde no aparecen los archivos .bank y la carpeta output, punto s).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$ git log
commit 5f9b70162d8c0e0750618dbe9b6c5687188936a8 (HEAD -> master)
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Wed Oct 2 18:57:02 2024 +0200

    Se crea gitignore

commit b251f1e2bd7a190ee865ad4308424041bf2a41a3
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Wed Oct 2 18:45:37 2024 +0200

    Se añaden dos titulos a peliculas y se elimina comidas

commit 1dfab3cb37d55cb6b09abb117f238c249f36941b
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Wed Oct 2 18:35:53 2024 +0200

    Se crea peliculas con 3 titulos y comidas con 3 comidas

commit a456e573d5783cc4a20c2f7b31eed498115da299
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Wed Oct 2 18:30:52 2024 +0200

    Se añaden dos titulos a libros

commit 6cb787736af6111d6f01d318146bd86374aaba78
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Wed Oct 2 18:29:14 2024 +0200

    Se crea libros y se añaden 3 titulos

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S1R1 (master)
$

```

Figura 8. Histórico de cambios en el repositorio, punto u).

## 2. Fundamentos de Git II

### 1. Creación carpeta S2R1

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R1 (test)
$ git log --graph --all
* commit 611f55653bf6128bfcf523b134b32e53527e63a8 (HEAD -> test)
   Author: Blanca Civieta <blancivi@gmail.com>
   Date:   Thu Oct 3 16:36:48 2024 +0200

       Se crea actrices y de añaden 3 nombres

* commit fbee6c6acdb044a525ac5e2b5ae1850ca02a1606 (master)
   Author: Blanca Civieta <blancivi@gmail.com>
   Date:   Thu Oct 3 16:34:31 2024 +0200

       Se crea actores con 3 nombres

```

Figura 9. Primera captura del comando git log --graph --all del punto g).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R1 (master)
$ git merge test
Updating fbee6c6..611f556
Fast-forward
 actrices.txt | 3 +++
 1 file changed, 3 insertions(+)
 create mode 100644 actrices.txt

```

Figura 10. Captura del merge del punto i).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R1 (test2)
$ git log --graph --all
* commit 4aa88502884b534db56bf82180d69d92876d229d (HEAD -> test2)
   Author: Blanca Civieta <blancivi@gmail.com>
   Date: Thu Oct 3 16:46:09 2024 +0200

       Se añade Belén Rueda a actrices

* commit 00ecf608f69755e891c4a52965901dff219907a0 (master)
   / Author: Blanca Civieta <blancivi@gmail.com>
   / Date: Thu Oct 3 16:44:07 2024 +0200

       Se añade Blanca Suarez al archivo actrices

* commit 611f55653bf6128bfcf523b134b32e53527e63a8 (test)
   | Author: Blanca Civieta <blancivi@gmail.com>
   | Date: Thu Oct 3 16:36:48 2024 +0200

       Se crea actrices y se añaden 3 nombres

* commit fbee6c6acdb044a525ac5e2b5ae1850ca02a1606
   | Author: Blanca Civieta <blancivi@gmail.com>
   | Date: Thu Oct 3 16:34:31 2024 +0200

       Se crea actores con 3 nombres

```

Figura 11. Captura de pantalla del comando git log --graph --all del punto n).

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R1 (master)
$ git merge test2
Auto-merging actrices.txt
CONFLICT (content): Merge conflict in actrices.txt
Automatic merge failed; fix conflicts and then commit the result.

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R1 (master|MERGING)
$ git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

Unmerged paths:
  (use "git add <file>..." to mark resolution)
        both modified:   actrices.txt

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

```

Figura 12. Captura de pantalla del comando git status del punto o).



```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R1 (master)
$ git log --graph --all
*   commit 6d8ac1bdd8c28fd09a47aeaed9a63a89411e8a14 (HEAD -> master)
| \
|  Merge: 00ecf60 4aa8850
|  Author: Blanca Civieta <blancivi@gmail.com>
|  Date:   Thu Oct 3 16:51:54 2024 +0200
|
|      Se resuelve el conflicto incorporando los dos nombre
|
| *   commit 4aa88502884b534db56bf82180d69d92876d229d (test2)
|  | Author: Blanca Civieta <blancivi@gmail.com>
|  | Date:   Thu Oct 3 16:46:09 2024 +0200
|  |
|  |      Se añade Belén Rueda a actrices
|  |
|  | *   commit 00ecf608f69755e891c4a52965901dff219907a0
|  | / Author: Blanca Civieta <blancivi@gmail.com>
|  |   Date:   Thu Oct 3 16:44:07 2024 +0200
|  |   |
|  |   |      Se añade Blanca Suarez al archivo actrices
|  |   |
|  |   | *   commit 611f55653bf6128bfcf523b134b32e53527e63a8 (test)
|  |   | | Author: Blanca Civieta <blancivi@gmail.com>
|  |   | | Date:   Thu Oct 3 16:36:48 2024 +0200
|  |   | |
|  |   | |      Se crea actrices y de añaden 3 nombres
|  |   | |
|  |   | | *   commit fbee6c6acdb044a525ac5e2b5ae1850ca02a1606
|  |   | | / Author: Blanca Civieta <blancivi@gmail.com>
|  |   | |   Date:   Thu Oct 3 16:34:31 2024 +0200
|  |   | |   |
|  |   |   |      Se crea actores con 3 nombres

```

Figura 13. Captura del comando `git log --graph --all` con el commit que integra los cambios, punto q).

2. Creación de la carpeta S2R2- remoto
3. Clonación del repositorio S2R2-remoto en la carpeta S2R2

```

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub
$ git clone S2R2-remoto/ S2R2
Cloning into 'S2R2'...
warning: You appear to have cloned an empty repository.
done.

```

Figura 14. Captura del clonado del repositorio remoto punto 3.

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (master)
$ git push
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 277 bytes | 277.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To C:/Blanca/DAW2/Cliente/GitHub/S2R2-remoto/
 * [new branch]      master -> master
```

Figura 15. Captura del comando push del punto c).

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (version1)
$ git push --set-upstream origin version1
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 308 bytes | 308.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To C:/Blanca/DAW2/Cliente/GitHub/S2R2-remoto/
 * [new branch]      version1 -> version1
branch 'version1' set up to track 'origin/version1'.
```

Figura 16. Captura de push al repositorio remoto asociada al mismo nombre, punto g).

#### 4. Clonado del repositorio S2R2-remoto en carpeta S2R3

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R3 (master)
$ cat directores.txt
Buñuel
Amenabar
Almodobar
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R3 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean
```

Figura 17. Captura del contenido de directores.txt y el comando git status, punto a)

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R3 (master)
$ git checkout version1
Switched to a new branch 'version1'
branch 'version1' set up to track 'origin/version1'.
```

Figura 18. Captura de como al cambiar a la rama version1 se crea una rama local version1, punto b).

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R3 (version1)
$ cat directores.txt
Buñuel
Amenabar
Almodobar
Burton
Tarantino
```

Figura 19. Captura del contenido del fichero directores.txt en la rama local version1, punto c).

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R3 (master)
$ git push
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To C:/Blanca/DAW2/Cliente/GitHub/S2R2-remoto/
    01c0c90..414d0aa  master -> master
```

Figura 20. Captura del push de la rama master actualizada, punto f).

## 5. Vuelta a la carpeta S2R2

Vemos como despues del fetch git sabe que la rama master local está por detrás de la rama origin/master del remoto, y que después del merge, todas las ramas están al mismo nivel.

```
blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (master)
$ git fetch
From C:/Blanca/DAW2/Cliente/GitHub/S2R2-remoto
   01c0c90..414d0aa  master    -> origin/master

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (master)
$ git log --all
commit 414d0aa8e5ada6e1e458831d8e3edc3d353065a5 (origin/version1, origin/master, version1)
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Fri Oct 4 19:08:19 2024 +0200

    Se añade Burton y Tarantino

commit 01c0c9006fac10f8b16609b672e4fc30cac0d051 (HEAD -> master)
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Fri Oct 4 19:04:35 2024 +0200

    Se crea directores.txt con Buñuel, Amenabar, Almodobar

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (master)
$ git merge origin/master
Updating 01c0c90..414d0aa
Fast-forward
   directores.txt | 4 +++-
   1 file changed, 3 insertions(+), 1 deletion(-)

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (master)
$ git log --all
commit 414d0aa8e5ada6e1e458831d8e3edc3d353065a5 (HEAD -> master, origin/version1, origin/master, version1)
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Fri Oct 4 19:08:19 2024 +0200

    Se añade Burton y Tarantino

commit 01c0c9006fac10f8b16609b672e4fc30cac0d051
Author: Blanca Civieta <blancivi@gmail.com>
Date:   Fri Oct 4 19:04:35 2024 +0200

    Se crea directores.txt con Buñuel, Amenabar, Almodobar

blanc@Blanca MINGW64 /C/Blanca/DAW2/Cliente/GitHub/S2R2 (master)
$ cat directores.txt
Buñuel
Amenabar
Almodobar
Burton
Tarantino
```

Figura 21. Captura del comando git fetch del punto a), el comando git merge punto b) y el nombre de los 5 directores.

## 3. GitHub

```
blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git add .

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git commit -m " Pongo mi nombre y apellidos en README.dm"
[master f11184f] Pongo mi nombre y apellidos en README.dm
1 file changed, 2 insertions(+), 1 deletion(-)
```

Figura 22. Primer commit poniendo mi nombre y apellidos, punto a).

```

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git add discos.txt

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git commit -m "Se añaden 3 discos. Close #3"
[master 8ae787d] Se añaden 3 discos. Close #3
3 files changed, 5 insertions(+)

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git add .

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git commit -m "Se añaden 3 libros. Close #1"
[master cfe3013] Se añaden 3 libros. Close #1
1 file changed, 3 insertions(+), 1 deletion(-)

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git add .

blanc@Blanca MINGW64 /C/Users/blanc/source/Repos/sesion3-practica (master)
$ git commit -m "Se añaden 3 películas. Close #2"
[master 7a6633f] Se añaden 3 películas. Close #2
1 file changed, 3 insertions(+), 1 deletion(-)

```

Figura 23. Captura de los commits y los cierres de issues correspondientes.

En la tarea de cambiar los 3 archivos, al principio cambié los 3 e hice un `add .` de todos los cambios, para que no se subieran en el commit de cierre del primer issue los archivos con las tres películas y los tres libros añadidos, borre lo que había añadido a los archivos y volví a hacer un `add .`. A partir de ahí, añadí solo los cambios del archivo del cual tenía que cerrar la tarea, al área de espera. Por eso en el primer commit se ven 3 archivos cambiados.