# **SEMANA 04: GIT FLOW**

#### 1. Inicializando un proyecto

En nuestra consola bash se crea una carpeta y se escribe los siguientes comandos git:

```
$git init
$git flow init
$git branch
```

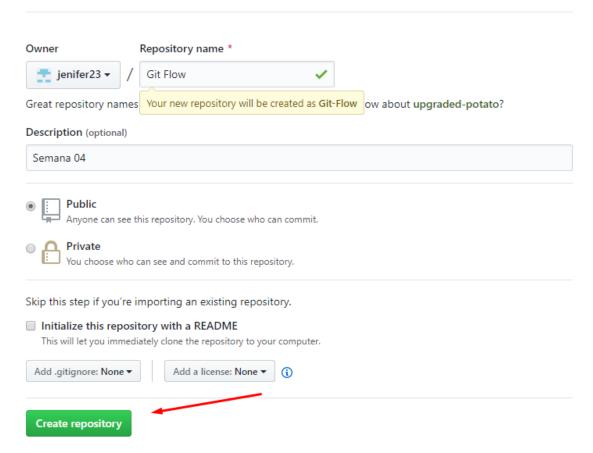
Git flow crea todas las branches necesarias.

```
MINGW64:/c/Users/Ruth/Desktop/programa
                                                                                    ×
 Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop
$ cd programa/
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa
$ git init
Initialized empty Git repository in C:/Users/Ruth/Desktop/programa/.git/
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (master)
$ git flow init
No branches exist yet. Base branches must be created now.
Branch name for production releases: [master]
Branch name for "next release" development: [develop]
How to name your supporting branch prefixes?
Feature branches? [feature/]
Bugfix branches? [bugfix/]
Release branches? [release/]
Hotfix branches? [hotfix/]
Support branches? [support/]
Version tag prefix? []
Hooks and filters directory? [C:/Users/Ruth/Desktop/programa/.git/hooks]
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
                                                                                            X
 MINGW64:/c/Users/Ruth/Desktop/programa
                                                                                    \Box
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git branch
  master
```

Luego se crea el repositorio en GitHub

# Create a new repository

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



En nuestra consola bash se escribe los comandos:

```
$git remote add origin direction

$git push -u origin master

$git branch -a

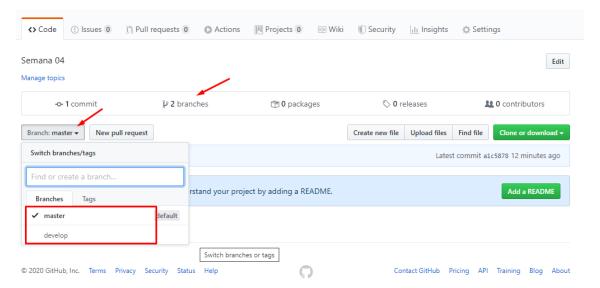
$git push -u origin develop

$git branch -a
```

Se sube nuestro proyecto y sus nuevas ramas (*master y develop*) a un servidor remoto creado en Github

```
Х
 MINGW64:/c/Users/Ruth/Desktop/programa
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git remote add origin https://github.com/jenifer23/Git-Flow.git
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git push -u origin master
Enumerating objects: 2, done.
Counting objects: 100% (2/2), done.
Writing objects: 100% (2/2), 165 bytes | 165.00 KiB/s, done.
Total 2 (delta 0), reused 0 (delta 0)
To https://github.com/jenifer23/Git-Flow.git
  [new branch] master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git branch -a
 develop
 master
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git push -u origin develop
Total O (delta O), reused O (delta O)
remote:
remote: Create a pull request for 'develop' on GitHub by visiting:
             https://github.com/jenifer23/Git-Flow/pull/new/develop
emote:
emote:
To https://github.com/jenifer23/Git-Flow.git
  [new branch] develop -> develop
Branch 'develop' set up to track remote branch 'develop' from 'origin'.
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git branch -a
  develop
 master
```

En nuestro repositorio remoto se mostraría así:



## 2. Creando una rama feature

Con el uso de los comandos Git Flow en nuestra consola bash se escribe:

```
$git flow feature start feature_branch
```

Sin git flow el flujo sería el siguiente:

```
$git checkout develop
$git checkout -b feature_branch
```

Git flow automáticamente crea la nueva rama e hizo un checkout a ésta.

```
MINGW64:/c/Users/Ruth/Desktop/programa — 

Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git flow feature start feature_branch
Switched to a new branch 'feature/feature_branch'

Summary of actions:
- A new branch 'feature/feature_branch' was created, based on 'develop'
- You are now on branch 'feature/feature_branch'

Now, start committing on your feature. When done, use:

    git flow feature finish feature_branch

Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (feature/feature_branch)
$
```

En nuestro repositorio creamos un archivo inicio.html

Guardamos los cambios realizados y hacemos un commit.

```
$git status
$git add .
$git status
$git commit -m 'Agregando inicio.html'
```

```
MINGW64:/c/Users/Ruth/Desktop/programa
                                                                           П
                                                                                  Х
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (feature/feature_branch)
$ git status
On branch feature/feature_branch
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (feature/feature_branch)
$ git add .
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (feature/feature_branch)
$ git status
On branch feature/feature_branch
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)
        new file: inicio.html
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (feature/feature_branch)
$ git commit -m 'Agregando inicio.html'
[feature/feature_branch 4896330] Agregando inicio.html
1 file changed, 10 insertions(+)
create mode 100644 inicio.html
```

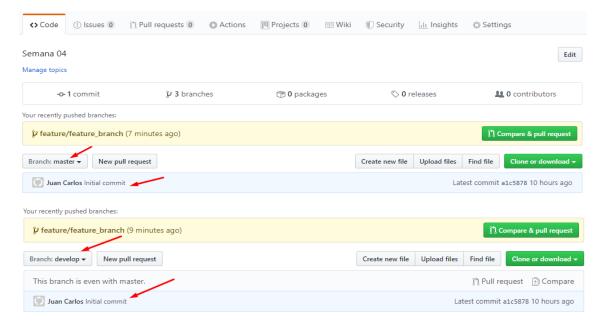
Luego publicaremos la nueva rama para su colaboración, para ello en nuestra consola bash escribimos:

\$git flow feature publish feature\_branch

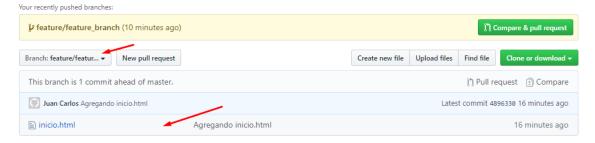
```
MINGW64:/c/Users/Ruth/Desktop/programa
                                                                                              X
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (feature/feature_branch)
$ git flow feature publish feature_branch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 362 bytes | 362.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'feature/feature_branch' on GitHub by visiting
remote:
               https://github.com/jenifer23/Git-Flow/pull/new/feature/feature_bran
ch
remote:
To https://github.com/jenifer23/Git-Flow.git
 * [new branch]
                        feature/feature_branch -> feature/feature_branch
Branch 'feature/feature_branch' set up to track remote branch 'feature/feature_b
ranch' from 'origin'.
Already on 'feature/feature_branch'
Your branch is up to date with 'origin/feature/feature_branch'.
Summary of actions:
 The remote branch 'feature/feature_branch' was created or updated
The local branch 'feature/feature_branch' was configured to track the remote b
ranch
  You are now on branch 'feature/feature_branch'
```

#### Revisamos GitHub para ver los cambios:

#### Rama master y develop:



#### Rama feature\_branch:



Cuando se termine el trabajo de desarrollo de la característica, el siguiente paso es fusionar el *feature* con la rama *develop* escribimos en la consola el siguiente comando:

```
$git flow feature finish feature_branch
```

Nos abrirá el editor de texto de Git que por defecto es Vim, nos pedirá ingresar o modificar el commit, estos son los pasos para salir de Vim:

Primero se pulsa la Tecla ESC, para situarnos en el buffer inferior

:q → sale del archivo, si no tenemos cambios sin guardar sale sin más.

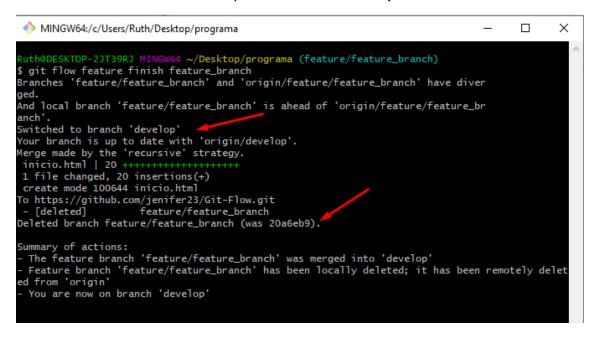
:q! → sale del archivo descartando los cambios no guardados.

:w → guarda los cambios del archivo, pero no sale de Vim para seguir editando el archivo.

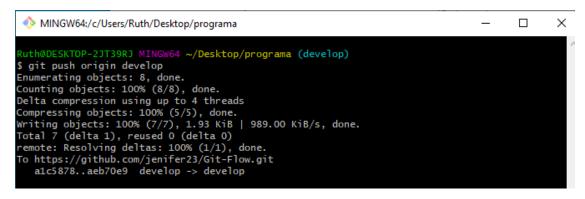
:wq → guarda los cambios y sale de Vim.

:x → igual que el anterior.

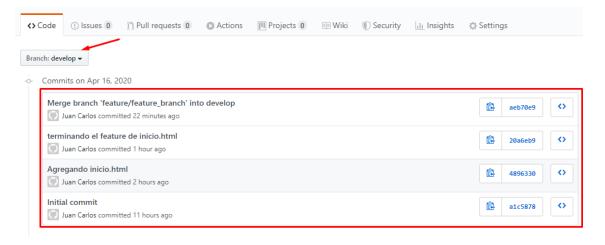
Git Flow automáticamente fusiona la rama *feature\_branch* a *develop* y lo elimina, también elimina la rama del servidor remoto y cambia a la rama *develop*.



Guardamos los cambios en el servidor remoto.



## En GitHub nos muestra la rama develop:



#### 3. Creando una rama release

Con el uso de los comandos Git Flow en nuestra consola bash se escribe:

```
$git flow release start 0.0.1
```

Git flow automáticamente crea la nueva rama e hizo un checkout a ésta.

Los cambios se pueden enviar al servidor remoto para que los colaboradores puedan descargar:

```
$git push origin release/0.0.1

MINGW64:/c/Users/Ruth/Desktop/programa — 

Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (release/0.0.1)

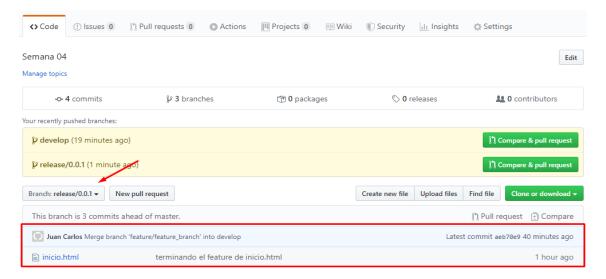
$ git push origin release/0.0.1

Total 0 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'release/0.0.1' on GitHub by visiting:
remote: https://github.com/jenifer23/Git-Flow/pull/new/release/0.0.1

To https://github.com/jenifer23/Git-Flow.git

* [new branch] release/0.0.1 -> release/0.0.1
```

Se crea una copia de todo el contenido de la rama develop a la rama 0.0.1



Creamos la carpeta donde se guardará la documentación técnica del proyecto, luego guardamos los cambios.

```
$git status
$git add .
$git status
$git commit -m 'Agregando documentación técnica'

MINGW64:/c/Users/Ruth/Desktop/programa
-
On branch release/0.0.1
Untracked files:

("Yes "sit of files : " to isoludo in what will be committed)
```

```
MINGW64:/c/Users/Ruth/Desktop/programa
On branch release/0.0.1
Untracked files:
   (use "git add <file>..." to include in what will be committed)
        "Documentos T\303\251cnicos/"
nothing added to commit but untracked files present (use "git add" to track)

Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (release/0.0.1)
$ git add .

Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (release/0.0.1)
$ git status
On branch release/0.0.1
Changes to be committed:
   (use "git reset HEAD <file>..." to unstage)
        new file: "Documentos T\303\251cnicos/Arquitectura de software.docx"
        new file: "Documentos T\303\251cnicos/Plan de Trabajo.mpp"
```

```
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (release/0.0.1)
$ git commit -m 'Agregando documentación técnica'
[release/0.0.1 3370f9d] Agregando documentación técnica
2 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 "Documentos T\303\251cnicos/Arquitectura de software.docx"
create mode 100644 "Documentos T\303\251cnicos/Plan de Trabajo.mpp"
```

En ese punto se poder hacer Quality Assurance, todo lo que tenga que ver con testing y aseguramiento de calidad.

Para finalizar el reléase se escribe el siguiente comando:

```
$git flow release finish 0.0.1
```

Nos muestra el editor de Vim, primero pedirá la descripción del commit y luego el número del tag para la rama *master* y luego el commit para la rama *develop*.

Git flow, automáticamente fusiona la rama **0.0.1** a la rama **master**, le asigna un **tag** y elimina de forma local y remota la rama **0.0.1**.

```
MINGW64:/c/Users/Ruth/Desktop/programa
                                                                                                                                                                              ×
  Ruth@DESKTOP-2JT39RJ MIN
                                                       64 ~/Desktop/programa (release/0.0.1)
$ git flow release finish 0.0.1
Branches 'release/0.0.1' and 'origin/release/0.0.1' have diverged.
 And local branch 'release/0.0.1' is ahead of 'origin/release/0.0.1'.
 Switched to branch 'master
 Your branch is up to date with 'origin/master'.
 hint: Waiting for your editor to close the file...
                                                                                                                   1 [sig] sh 15652! sigpacket::process:
hint: Waiting for your editor to close the file... 1 [sig] sh 15652! sigpacket::process: Suppressing signal 18 to win32 process (pid 5688)

1 [sig] bash 6012! sigpacket::process: Suppressing signal 18 to win32 process (pid 8300)

891132 [sig] sh 15652! sigpacket::process: Suppressing signal 18 to win32 process (pid 5688)

899559 [sig] bash 6012! sigpacket::process: Suppressing signal 18 to win32 process (pid 8300)

1360242 [sig] sh 15652! sigpacket::process: Suppressing signal 18 to win32 process (pid 5688)

1367754 [sig] bash 6012! sigpacket::process: Suppressing signal 18 to win32 process (pid 8300)

1654440 [sig] sh 15652! sigpacket::process: Suppressing signal 18 to win32 process (pid 5688)

1664522 [sig] bash 6012! sigpacket::process: Suppressing signal 18 to win32 process (pid 8300)

1856650 [sig] sh 15652! sigpacket::process: Suppressing signal 18 to win32 process (pid 5688)

1859867 [sig] bash 6012! sigpacket::process: Suppressing signal 18 to win32 process (pid 8300)

Merge made by the 'recursive' strategy.
 Merge made by the 'recursive' strategy.
    ../Arquitectura de software.docx
                                                                                                               Bin 0 -> 1452015 bytes
Bin 0 -> 275968 bytes
                                                                                                                           -> 1452015 bytes
  "Documentos T\303\251cnicos/Plan de Trabajo.mpp"
   inicio.html
                                                                                                                 20 ++++++++++
  3 files changed, 20 insertions(+) create mode 100644 "Documentos T\303\251cnicos/Arquitectura de software.docx" create mode 100644 "Documentos T\303\251cnicos/Plan de Trabajo.mpp"
  create mode 100644 inicio.html
 Already on 'master
 Your branch is ahead of 'origin/master' by 5 commits.
  (use "git push" to publish your local commits)
Herge made by the 'recursive' strategy.
  .../Arquitectura de software.docx"
"Documentos T\303\251cnicos/Plan de Trabajo.mpp"
                                                                                                                | Bin 0 -> 1452015 bytes
| Bin 0 -> 275968 bytes
  2 files changed, 0 insertions(+), 0 deletions(-)
create mode 100644 "Documentos T\303\251cnicos/Arquitectura de software.docx"
create mode 100644 "Documentos T\303\251cnicos/Plan de Trabajo.mpp"
 To https://github.com/jenifer23/Git-Flow.git
     [deleted]
                                          release/0.0.1
 Deleted branch release/0.0.1 (was 3370f9d).
 Summary of actions:
                                   'release/0.0.1' has been merged into 'master'
    Release branch
    The release was tagged '0.0.1'

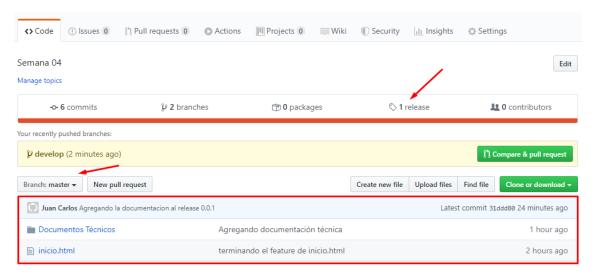
Release tag '0.0.1' has been back-merged into 'develop'

Release branch 'release/0.0.1' has been locally deleted; it has been remotely deleted from
  rigin'
    You are now on branch 'develop'
```

Para guardar los cambios en el servidor remoto:

```
$git push origin master
$git push origin develop
$git push --tags
```

En GitHub, nos mostraría lo siguiente:

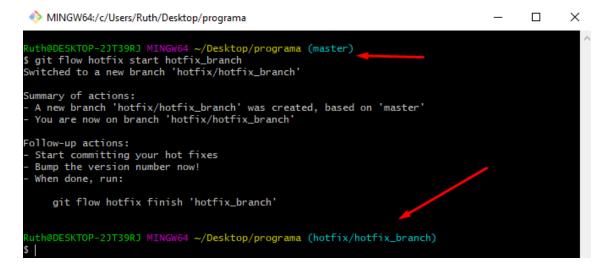


#### 4. Creando una rama hotfix

Con el uso de los comandos Git Flow en nuestra consola bash desde la rama *master* se escribe:

```
$git flow hotfix start hotfix_branch
```

Git flow automáticamente crea la nueva rama e hizo un checkout a ésta.



Los cambios se pueden enviar al servidor remoto para que los colaboradores puedan descargar:

\$\text{Sgit push origin hotfix/hotfix\_branch}\$

\times MINGW64:/c/Users/Ruth/Desktop/programa - \times X

Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (hotfix/hotfix\_branch)

\$\text{ git push origin hotfix/hotfix\_branch}\$

Total 0 (delta 0), reused 0 (delta 0)

remote:

remote: Create a pull request for 'hotfix/hotfix\_branch' on GitHub by visiting:

remote: https://github.com/jenifer23/Git-Flow/pull/new/hotfix/hotfix\_branch

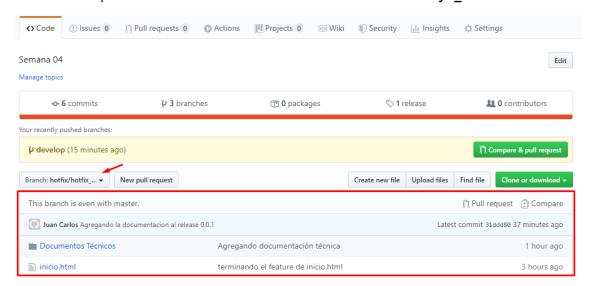
remote:

To https://github.com/jenifer23/Git-Flow.git

hotfix/hotfix\_branch -> hotfix/hotfix\_branch

Se crea una copia de todo el contenido de la rama master a la rama hotfix\_branch

[new branch]



Modificamos nuestro inicio.html para que pueda ser responsive.

```
$git status
$git add .
$git status
$git commit -m 'Mejorando el responsive de inicio.html'
```

```
×
 MINGW64:/c/Users/Ruth/Desktop/programa
                                                                             Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (hotfix/hotfix_branch)
$ git status
On branch hotfix/hotfix_branch
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)
no changes added to commit (use "git add" and/or "git commit -a")
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (hotfix/hotfix_branch)
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (hotfix/hotfix_branch)
$ git status
On branch hotfix/hotfix_branch
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)
        modified: inicio.html
Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (hotfix/hotfix_branch)
$ git commit -m 'Mejorando el responsive de inicio.html'
[hotfix/hotfix_branch 8ac685c] Mejorando el responsive de inicio.html
 1 file changed, 1 insertion(+)
```

Para finalizar el hotfix se escribe el siguiente comando:

```
$git flow hotfix finish hotfix_branch
```

Nos muestra el editor de Vim, primero pedirá la descripción del commit y luego el número del tag para la rama *master* y luego el commit para la rama *develop*, esto con el fin de no perder en *develop* los arreglos hechos en *master*.

Git flow, automáticamente fusiona la rama *hotfix\_branch* a la rama *master*, le asigna un *tag* y elimina de forma local y remota la rama *hotfix\_branch*.

Para guardar los cambios en el servidor remoto desde la rama master:

```
$git push origin master
$git push origin develop
$git push --tags
```

```
MINGW64:/c/Users/Ruth/Desktop/programa
                                                                                                                                         ×
 Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (develop)
$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)
 Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (master)
$ git push origin master
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Counting objects: 100% (6/6), done.

Delta compression using up to 4 threads

Compressing objects: 100% (4/4), done.

Writing objects: 100% (4/4), 514 bytes | 514.00 KiB/s, done.

Total 4 (delta 2), reused 0 (delta 0)

remote: Resolving deltas: 100% (2/2), completed with 1 local object.

To https://github.com/jenifer23/Git-Flow.git

31ddd80..fca8255 master -> master
 Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (master)
$ git push origin develop
Enumerating objects: 1, done.

Counting objects: 100% (1/1), done.

Writing objects: 100% (1/1), 228 bytes | 228.00 KiB/s, done.

Total 1 (delta 0), reused 0 (delta 0)

To https://github.com/jenifer23/Git-Flow.git
     afd9652..6d6e8c1 develop -> develop
 Ruth@DESKTOP-2JT39RJ MINGW64 ~/Desktop/programa (master)
$ git push --tags
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), done.
Writing objects: 100% (1/1), 165 bytes | 165.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0)
To https://github.com/jenifer23/Git-Flow.git
                                       hotfix_branch -> hotfix_branch
```

## En GitHub, nos mostraría lo siguiente:

