

# Git Básico

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Try New Roads

# Soluciones Ramas

## Escenario inicial

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Tu equipo está trabajando en un proyecto y necesitan manejar múltiples tareas simultáneamente.

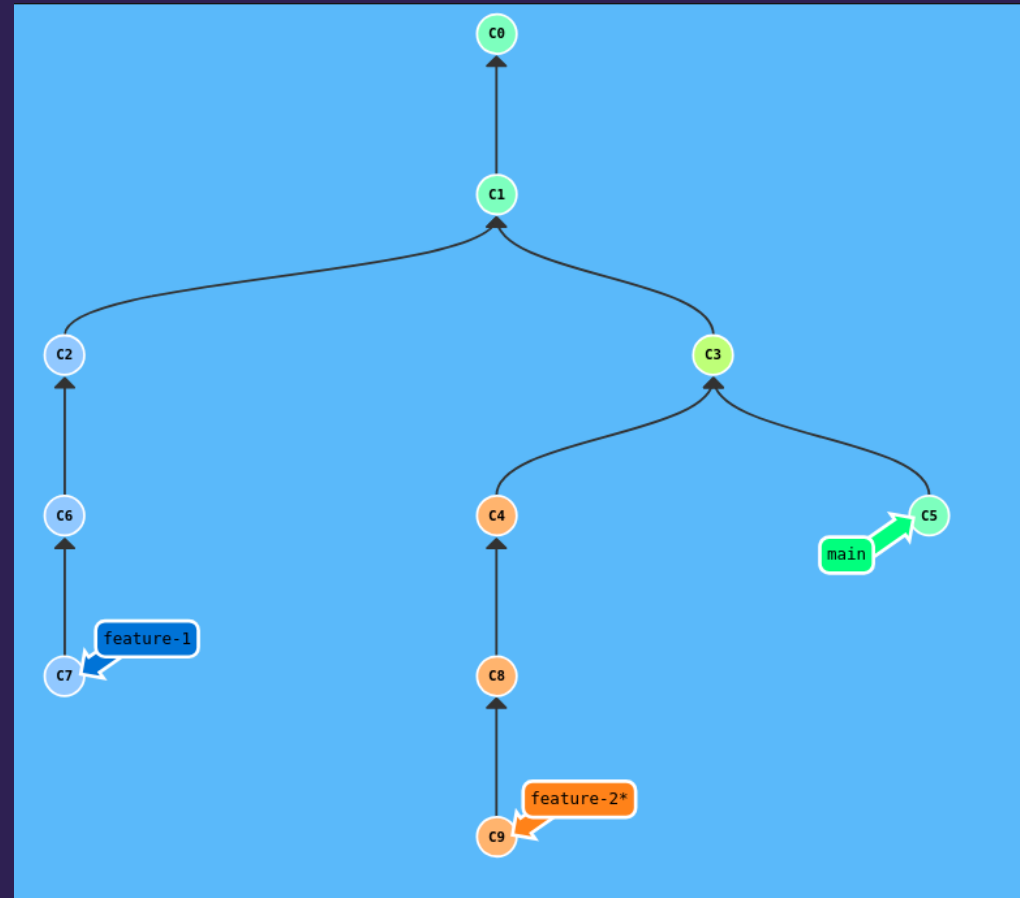
### Tareas a realizar:

1. **Nueva característica:** Te asignan desarrollar `feature-1`
2. **Bug crítico:** Durante el desarrollo encuentras un error que necesita solución inmediata
3. **Desarrollo paralelo:** Un compañero debe crear `feature-2` al mismo tiempo
4. **Segundo bug:** Se reporta otro error en la aplicación principal mientras todos trabajan

## Cargar el nivel

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1. **Learn Git Branching**
2. Escribimos `import level`
3. Copiamos el fichero `ejercicios_1.json` y lo pegamos.



```
# Creamos la rama para trabajar en la nueva características
git switch -c feature-1
# Subimos cambios en la rama
git commit
# Nos movemos a main para arreglar el bug
git switch main
# Arreglamos el bug
git commit
# Creamos la rama para trabajar en la nueva características
git switch -c feature-2
# Subimos cambios en la rama
git commit
# Nos movemos a main para arreglar el bug
git switch main
# Arreglamos el bug
git commit
# Nos movemos a la rama para seguir trabajando en ella
git switch feature-1
# Subimos cambios en la rama
git commit
# Subimos cambios en la rama
git commit
# Nuestro compañero sigue trabajando en su rama
git switch feature-2
# Subimos cambios en la rama
git commit
# Subimos cambios en la rama
git commit
```

## Ejercicio 1: Fast-Forward Merge

---

```
# Verificar que estás en main
git switch main

# Hacer merge fast-forward
git merge --ff-only feature/fast-forward

# Verificar el resultado
git log --oneline --graph
```

**learngitbranching**

```
silvelo@silvelo-Inspiron-7559 ~/..📁../git-merge-practice 📁 feature/fast-forward > git log --oneline --graph --all
* 986cc60 (HEAD -> feature/fast-forward) Add documentation for fast forward feature
* 9e08072 Add fast forward feature function
* c8089e5 (main) Add basic styles
* 2306e01 Add main application file
* 03b3d04 Initial commit: Add README
silvelo@silvelo-Inspiron-7559 ~/..📁../git-merge-practice 📁 feature/fast-forward > git branch -a
* feature/fast-forward
  main
silvelo@silvelo-Inspiron-7559 ~/..📁../git-merge-practice 📁 feature/fast-forward > git checkout main
Switched to branch 'main'
silvelo@silvelo-Inspiron-7559 ~/..📁../git-merge-practice 📁 main > git merge --ff-only feature/fast-forward
Updating c8089e5..986cc60
Fast-forward
 app.js | 4 ++++
 docs.md | 2 ++
 2 files changed, 6 insertions(+)
 create mode 100644 docs.md
silvelo@silvelo-Inspiron-7559 ~/..📁../git-merge-practice 📁 main > git log --oneline --graph --all
* 986cc60 (HEAD -> main, feature/fast-forward) Add documentation for fast forward feature
* 9e08072 Add fast forward feature function
* c8089e5 Add basic styles
* 2306e01 Add main application file
* 03b3d04 Initial commit: Add README
silvelo@silvelo-Inspiron-7559 ~/..📁../git-merge-practice 📁 main > □
```



## Ejercicio 2: No Fast-Forward Merge

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```
# Verificar que estás en main
git branch -a
git switch main

# Ver estado logs
git log --oneline --graph

# Realizar el merge
git merge --no-ff feature/fast-forward
```

```
silvelo@silvelo-Inspiron-7559 ~/../git-merge-practice % main > git log --oneline --graph --all
* b238b59 (feature/fast-forward) Add documentation for fast forward feature
* a9ffc7a Add fast forward feature function
| * dfe2e6f (feature/squash-merge) Add final styles for squash feature
| * bf83917 Move squash feature to main app file
| * 974b76a Implement complete squash feature logic
| * 7830fae Add temporary implementation
| * a1a2521 Add squash feature skeleton
| * a80c52e WIP: Start squash merge feature
| * 6970348 (HEAD -> main) Add maintenance function in main
| * 031a4eb Update README with additional info
| /
* 422e3d1 Add basic styles
* 8c512fb Add main application file
* ace34af Initial commit: Add README
silvelo@silvelo-Inspiron-7559 ~/../git-merge-practice % main > git branch -a
feature/fast-forward
feature/squash-merge
* main
silvelo@silvelo-Inspiron-7559 ~/../git-merge-practice % main > git switch main
Already on 'main'
silvelo@silvelo-Inspiron-7559 ~/../git-merge-practice % main > git merge --no-ff feature/fast-forward
Auto-merging app.js
CONFLICT (content): Merge conflict in app.js
Automatic merge failed; fix conflicts and then commit the result.
```

```
GNU nano 7.2
console.log('Aplicación principal');
<<<<<< HEAD
function maintenanceFunction() {
    console.log('Función de mantenimiento agregada en main');
}
=====
function fastForwardFeature() {
    console.log('Esta es una nueva característica');
    return 'Fast Forward Feature';
}
>>>>>> feature/fast-forward
```

```
GNU nano 7.2
console.log('Aplicación principal');
function fastForwardFeature() {
    console.log('Esta es una nueva característica');
    return 'Fast Forward Feature';
}
```

```
# Añadir el fichero
git add app.js

# Crear el commit
git commit -m "Merge conflict resolve"

# Ver estado logs
git log --oneline --graph
```

```
silvelo@silvelo-Inspiron-7559 ~/.../git-merge-practice ♻ main > git add app.js
silvelo@silvelo-Inspiron-7559 ~/.../git-merge-practice ♻ main > git commit -m "Merge conflict resolve"
[main 43140ae] Merge conflict resolve
silvelo@silvelo-Inspiron-7559 ~/.../git-merge-practice ♻ main > git log --oneline --graph --all
* 43140ae (HEAD -> main) Merge conflict resolve
| \
| * b238b59 (feature/fast-forward) Add documentation for fast forward feature
| * a9ffc7a Add fast forward feature function
| | * dfe2e6f (feature/squash-merge) Add final styles for squash feature
| | * bf83917 Move squash feature to main app file
| | * 974b76a Implement complete squash feature logic
| | * 7830fae Add temporary implementation
| | * a1a2521 Add squash feature skeleton
| | * a80c52e WIP: Start squash merge feature
| | /
| | /
| | /
| * 6970348 Add maintenance function in main
| * 031a4eb Update README with additional info
| /
| /
* 422e3d1 Add basic styles
* 8c512fb Add main application file
* ace34af Initial commit: Add README
silvelo@silvelo-Inspiron-7559 ~/.../git-merge-practice ♻ main > 
```

```
# Cancelar el merge
git merge --abort
```

```
# Resolver conflictos favoreciendo nuestra rama (main)
git merge --no-ff -X ours feature/fast-forward
```

```
# Resolver conflictos favoreciendo la rama que se fusiona
git merge --no-ff -X theirs feature/fast-forward
```

```
silvelo@silvelo-Inspiron-7559 ~/..📁./git-merge-practice 📁 main > git merge --no-ff -X ours
feature/fast-forward
Auto-merging app.js
Merge made by the 'ort' strategy.
 docs.md | 2 ++
 1 file changed, 2 insertions(+)
 create mode 100644 docs.md
silvelo@silvelo-Inspiron-7559 ~/..📁./git-merge-practice 📁 main > cat app.js
console.log('Aplicación principal');
function maintenanceFunction() {
  console.log('Función de mantenimiento agregada en main');
}
silvelo@silvelo-Inspiron-7559 ~/..📁./git-merge-practice 📁 main > █
```

```
silvelo@silvelo-Inspiron-7559 ~/..📁./git-merge-practice 📁 main > git merge --no-ff -X theirs
feature/fast-forward
Auto-merging app.js
Merge made by the 'ort' strategy.
 app.js | 5 +++--
 docs.md | 2 ++
 2 files changed, 5 insertions(+), 2 deletions(-)
 create mode 100644 docs.md
silvelo@silvelo-Inspiron-7559 ~/..📁./git-merge-practice 📁 main > cat app.js
console.log('Aplicación principal');
function fastForwardFeature() {
  console.log('Esta es una nueva característica');
  return 'Fast Forward Feature';
}
```

## Ejercicio 3: Squash Merge

```
# Ver commits de la rama antes del squash
git log --oneline --graph --all

git log --oneline feature/squash-merge

# Hacer squash merge
git merge --squash feature/squash-merge
git commit -m "Add complete squash feature"

# Verificar el resultado
git log --oneline --graph
```

```
silvelo@silvelo-Inspiron-7559 ~/..$ ./git-merge-practice $ main > git merge --squash feature/squash-merge
Auto-merging app.js
Squash commit -- not updating HEAD
Automatic merge went well; stopped before committing as requested
silvelo@silvelo-Inspiron-7559 ~/..$ ./git-merge-practice $ main > git commit -m "Add complete squash feature"
[main fb8dc02] Add complete squash feature
2 files changed, 20 insertions(+)
silvelo@silvelo-Inspiron-7559 ~/..$ ./git-merge-practice $ main > git log --oneline --graph --all
* fb8dc02 (HEAD -> main) Add complete squash feature
* de5f9fc Merge branch 'feature/fast-forward'
| \
| * b238b59 (feature/fast-forward) Add documentation for fast forward feature
| * a9ffc7a Add fast forward feature function
| | * dfe2e6f (feature/squash-merge) Add final styles for squash feature
| | * bf83917 Move squash feature to main app file
| | * 974b76a Implement complete squash feature logic
| | * 7830fae Add temporary implementation
| | * a1a2521 Add squash feature skeleton
| | * a80c52e WIP: Start squash merge feature
| | /
| | /
| | /
| * 6970348 Add maintenance function in main
| * 031a4eb Update README with additional info
| /
| /
| * 422e3d1 Add basic styles
| * 8c512fb Add main application file
| * ace34af Initial commit: Add README
```

# REBASE

# Ejercicio 1

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## Pasos:

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```
git rebase -i main
```

## Configuración sugerida:

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```
drop mno345j F1: WIP - Start login implementation  
pick jkl012i F2: Implement user login functionality  
squash ghi789h F3: Add user registration  
drop def456g F4: Fix typo in console message  
reword abc123f F5: Add password validation function
```



## Ejercicio 2

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### Pasos

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#### 1. Cuando aparezca el conflicto:

```
git status # Ver archivos en conflicto
```

## 2. Abrir `user-manager.js` y verás:

```
<<<<<<< HEAD
=====
>>>>>>> F2: Implement user login functionality
```

Mover la funcion login dentro de la clase

3. Resolver el conflicto manteniendo la versión mejorada de main:

4. Continuar el rebase:

```
git add user-manager.js  
git rebase --continue
```

5. Si aparecen más conflictos, repetir el proceso

## Ejercicio 3 y 4

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Editar los mensaje de la operacion `squash` y `reword`

## Ejercicio 5: Integrar con main

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### Fast-forward merge

```
git switch main  
git merge feature/user-authentication # Debería ser fast-forward  
git log --oneline --graph
```

### Limpiar:

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```
git branch -d feature/user-authentication
```