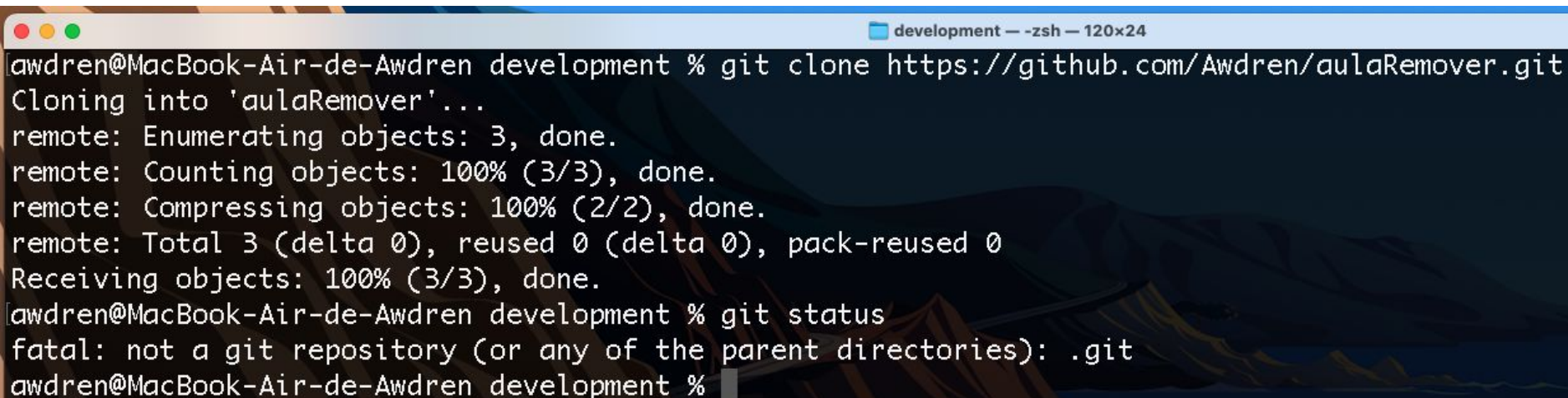


# **GCS 2023/1**

# Aula de Exercícios

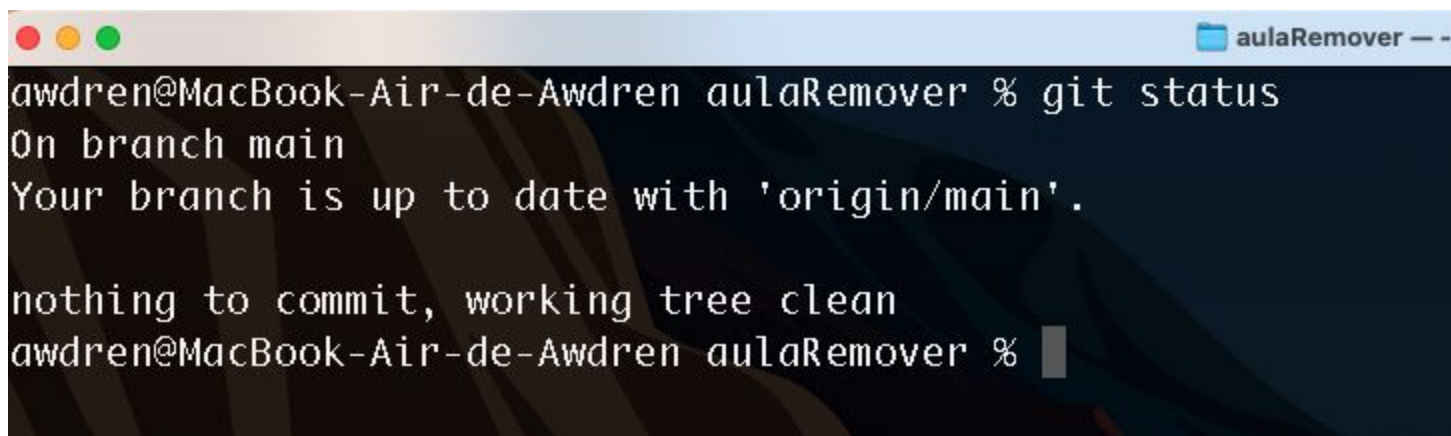
22 de Maio de 2023

# Primeiro Cenário



A terminal window titled "development — -zsh — 120x24" is shown. The background of the terminal is a dark, stylized landscape with mountains and a body of water. The terminal text shows the execution of two git commands. The first command is "git clone https://github.com/Awdren/aulaRemover.git", which successfully clones the repository. The second command is "git status", which results in a "fatal: not a git repository (or any of the parent directories): .git" error because the current directory is not a git repository.

```
awdren@MacBook-Air-de-Awdren development % git clone https://github.com/Awdren/aulaRemover.git
Cloning into 'aulaRemover'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
awdren@MacBook-Air-de-Awdren development % git status
fatal: not a git repository (or any of the parent directories): .git
awdren@MacBook-Air-de-Awdren development %
```

A screenshot of a macOS terminal window. The title bar at the top shows three colored window control buttons (red, yellow, green) on the left and a folder icon followed by the text 'aulaRemover --' on the right. The terminal content shows a user named 'awdren' at a 'MacBook-Air-de-Awdren' machine, in a directory named 'aulaRemover', running the command 'git status'. The output indicates the user is on the 'main' branch and that the branch is up to date with 'origin/main'. It also states 'nothing to commit, working tree clean'. The prompt 'awdren@MacBook-Air-de-Awdren aulaRemover %' is followed by a cursor.

```
awdren@MacBook-Air-de-Awdren aulaRemover % git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git status
On branch main
Your branch is up to date with 'origin/main'.
```

```
Untracked files:
```

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

```
Exemplo.py
```

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

```
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git add Exemplo.py
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git status
```

```
On branch main
```

```
Your branch is up to date with 'origin/main'.
```

```
Changes to be committed:
```

```
(use "git restore --staged <file>..." to unstage)
```

```
new file:   Exemplo.py
```

```
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git commit -m "feat: Adicionando um arquivo que trata de exemplos para a aula de git"
[main a541795] feat: Adicionando um arquivo que trata de exemplos para a aula de git
1 file changed, 1 insertion(+)
create mode 100644 Exemplo.py
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git push origin master
error: src refspec master does not match any
error: failed to push some refs to 'https://github.com/Awdren/aulaRemover.git'
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 341 bytes | 341.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Awdren/aulaRemover.git
    6144920..a541795  main -> main
awdren@MacBook-Air-de-Awdren aulaRemover %
```



```
awdren@MacBook-Air-de-Awdren aulaRemove % git log
commit a541795d9467deed4e388430670ec34e53e8c448 (HEAD -> main, origin/main, origin/HEAD)
Author: awdren.fontao <awdren.fontao@ufms.br>
Date: Mon May 22 09:21:55 2023 -0400
```

feat: Adicionando um arquivo que trata de exemplos para a aula de git

```
commit 61449201136b8f633f405754da3eda778757b658
Author: Awdren Fontão <61323242+Awdren@users.noreply.github.com>
Date: Mon May 22 09:13:55 2023 -0400
```

Initial commit

```
awdren@MacBook-Air-de-Awdren aulaRemove % █
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git log --graph
```

```
* commit a541795d9467deed4e388430670ec34e53e8c448 (HEAD -> main, origin/main, origin/HEAD)
```

```
Author: awdren.fontao <awdren.fontao@ufms.br>
```

```
Date: Mon May 22 09:21:55 2023 -0400
```

```
feat: Adicionando um arquivo que trata de exemplos para a aula de git
```

```
* commit 61449201136b8f633f405754da3eda778757b658
```

```
Author: Awdren Fontão <61323242+Awdren@users.noreply.github.com>
```

```
Date: Mon May 22 09:13:55 2023 -0400
```

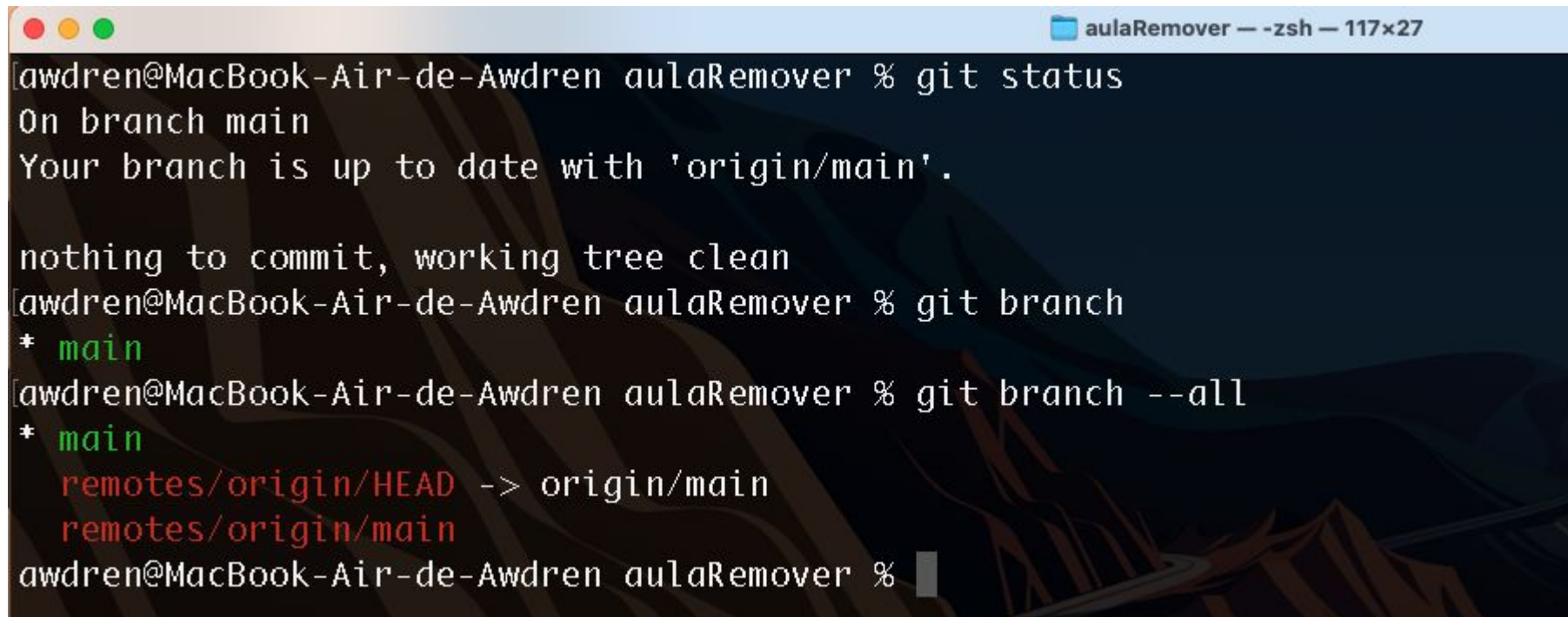
```
Initial commit
```

```
awdren@MacBook-Air-de-Awdren aulaRemover %
```



## Segundo cenário

Crie uma branch pelo github chamada develop

A terminal window titled 'aulaRemover — -zsh — 117x27' is shown. The background of the terminal has a dark, abstract pattern. The text in the terminal is as follows:

```
[awdren@MacBook-Air-de-Awdren aulaRemover % git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
[awdren@MacBook-Air-de-Awdren aulaRemover % git branch
* main
[awdren@MacBook-Air-de-Awdren aulaRemover % git branch --all
* main
remotes/origin/HEAD -> origin/main
remotes/origin/main
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git fetch
```

```
From https://github.com/Awdren/aulaRemover
```

```
* [new branch]      develop    -> origin/develop
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git log --graph
```

```
* commit a541795d9467deed4e388430670ec34e53e8c448 (HEAD -> main, origin/main, origin/develop, origin/HEAD)
```

```
| Author: awdren.fontao <awdren.fontao@ufms.br>
```

```
| Date:   Mon May 22 09:21:55 2023 -0400
```

```
|     feat: Adicionando um arquivo que trata de exemplos para a aula de git
```

```
* commit 61449201136b8f633f405754da3eda778757b658
```

```
| Author: Awdren Fontão <61323242+Awdren@users.noreply.github.com>
```

```
| Date:   Mon May 22 09:13:55 2023 -0400
```

```
|     Initial commit
```

```
awdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git branch --all
```

```
* main
remotes/origin/HEAD -> origin/main
remotes/origin/develop
remotes/origin/main
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git checkout develop
branch 'develop' set up to track 'origin/develop'.
Switched to a new branch 'develop'
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git branch --all
```

```
* develop
main
remotes/origin/HEAD -> origin/main
remotes/origin/develop
remotes/origin/main
```

```
awdren@MacBook-Air-de-Awdren aulaRemover %
```

# E se eu realizar um commit agora? Para onde vai?

```
awdren@MacBook-Air-de-Awdren aulaRemover % git log --graph
* commit a541795d9467deed4e388430670ec34e53e8c448 (HEAD -> develop, origin/main, origin/develop, origin/HEAD, main)
   Author: awdren.fontao <awdren.fontao@ufms.br>
   Date:   Mon May 22 09:21:55 2023 -0400

       feat: Adicionando um arquivo que trata de exemplos para a aula de git

* commit 61449201136b8f633f405754da3eda778757b658
   Author: Awdren Fontão <61323242+Awdren@users.noreply.github.com>
   Date:   Mon May 22 09:13:55 2023 -0400

       Initial commit
awdren@MacBook-Air-de-Awdren aulaRemover %
```



```
[awdren@MacBook-Air-de-Awdren aulaRemover % git branch
```

```
* develop
```

```
main
```

```
[awdren@MacBook-Air-de-Awdren aulaRemover % git status
```

```
On branch develop
```

```
Your branch is up to date with 'origin/develop'.
```

```
Changes not staged for commit:
```

```
(use "git add <file>..." to update what will be committed)
```

```
(use "git restore <file>..." to discard changes in working directory)
```

```
modified:   Exemplo.py
```

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

```
awdren@MacBook-Air-de-Awdren aulaRemover %
```



```
awdren@MacBook-Air-de-Awdren aulaRemover % git add .  
awdren@MacBook-Air-de-Awdren aulaRemover % git commit -m "fix: Atualizando mensagem de comentário para estar aderente  
ao contexto do exercício"  
[develop 37a9a64] fix: Atualizando mensagem de comentário para estar aderente ao contexto do exercício  
1 file changed, 1 insertion(+), 1 deletion(-)  
awdren@MacBook-Air-de-Awdren aulaRemover %
```

# Neste caso, minhas alterações já estão no remoto?

```
aulaRemover — zsh — 117x27

wdren@MacBook-Air-de-Awdren aulaRemover % git log --graph
commit 37a9a64ce0858b674a2b74394472dcbdfd3b9cc7 (HEAD -> develop)
Author: awdren.fontao <awdren.fontao@ufms.br>
Date: Mon May 22 09:59:16 2023 -0400

    fix: Atualizando mensagem de comentário para estar aderente ao contexto do exercício

commit a541795d9467deed4e388430670ec34e53e8c448 (origin/main, origin/develop, origin/HEAD, main)
Author: awdren.fontao <awdren.fontao@ufms.br>
Date: Mon May 22 09:21:55 2023 -0400

    feat: Adicionando um arquivo que trata de exemplos para a aula de git

commit 61449201136b8f633f405754da3eda778757b658
Author: Awdren Fontão <61323242+Awdren@users.noreply.github.com>
Date: Mon May 22 09:13:55 2023 -0400

    Initial commit

wdren@MacBook-Air-de-Awdren aulaRemover %
```

```
awdren@MacBook-Air-de-Awdren aulaRemover % git status
On branch develop
Your branch is ahead of 'origin/develop' by 1 commit.
  (use "git push" to publish your local commits)

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   Exemplo.py

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

awdren@MacBook-Air-de-Awdren aulaRemover % git log --graph

\* commit 49dfc57965dfa90b76f6c69fad04d842aa1828d1 (HEAD -> develop)

Author: awdren.fontao <awdren.fontao@ufms.br>

Date: Mon May 22 10:02:55 2023 -0400

fix: Adicionada uma nova linha de comentário para ajudar na compressão da arquitetura

\* commit 37a9a64ce0858b674a2b74394472dcbdfd3b9cc7

Author: awdren.fontao <awdren.fontao@ufms.br>

Date: Mon May 22 09:59:16 2023 -0400

fix: Atualizando mensagem de comentário para estar aderente ao contexto do exercício

\* commit a541795d9467deed4e388430670ec34e53e8c448 (origin/main, origin/develop, origin/HEAD, main)

Author: awdren.fontao <awdren.fontao@ufms.br>

Date: Mon May 22 09:21:55 2023 -0400

feat: Adicionando um arquivo que trata de exemplos para a aula de git

\* commit 61449201136b8f633f405754da3eda778757b658

Author: Awdren Fontão <61323242+Awdren@users.noreply.github.com>

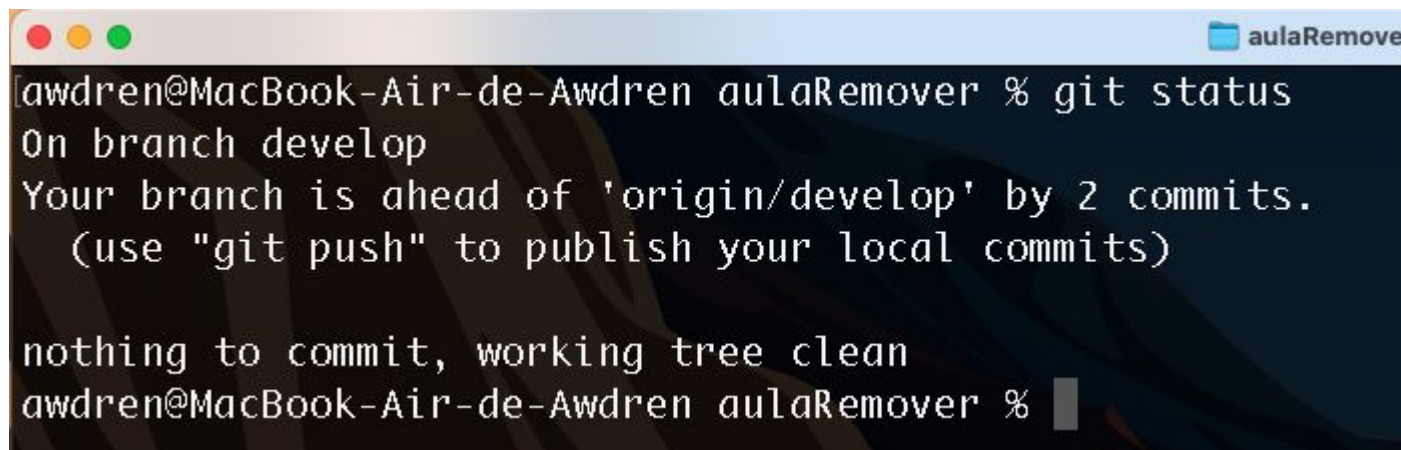
Date: Mon May 22 09:13:55 2023 -0400

Initial commit

awdren@MacBook-Air-de-Awdren aulaRemover %



O que isso representa em um formato de grafo ?

A screenshot of a macOS terminal window. The title bar at the top shows three colored window control buttons (red, yellow, green) on the left and a folder icon labeled 'aulaRemove' on the right. The terminal text is as follows:

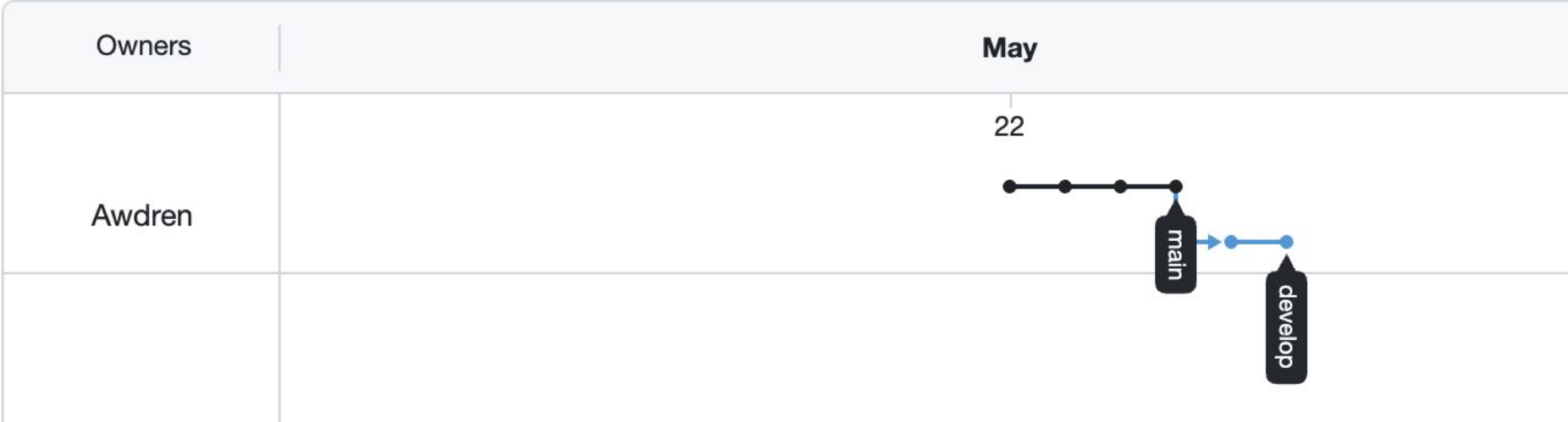
```
[awdren@MacBook-Air-de-Awdren aulaRemover % git status  
On branch develop  
Your branch is ahead of 'origin/develop' by 2 commits.  
  (use "git push" to publish your local commits)  
  
nothing to commit, working tree clean  
awdren@MacBook-Air-de-Awdren aulaRemover % █
```



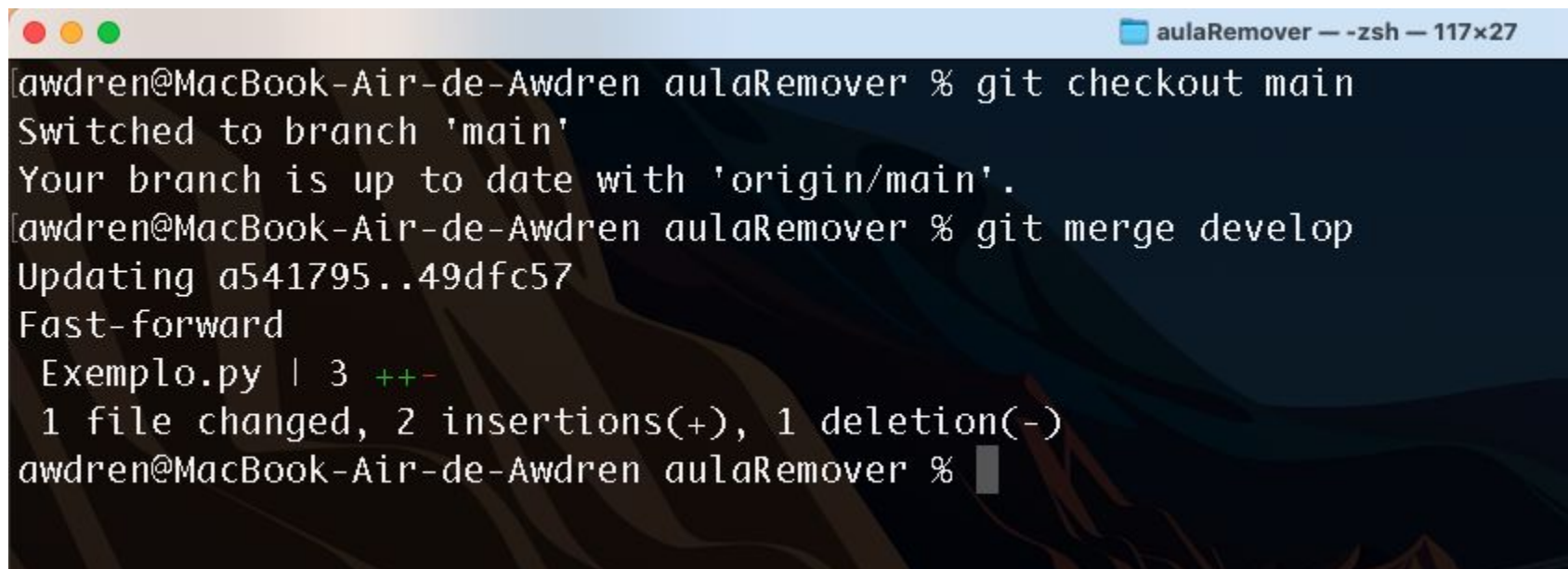
# Agora minhas alterações estão no remoto? Onde?

```
aulaRemover -- zsh -- 117x27
awdren@MacBook-Air-de-Awdren aulaRemover % git log -- graph
awdren@MacBook-Air-de-Awdren aulaRemover % git log --graph
* commit 49dfc57965dfa90b76f6c69fad04d842aa1828d1 (HEAD -> develop, origin/develop)
| Author: awdren.fontao <awdren.fontao@ufms.br>
| Date: Mon May 22 10:02:55 2023 -0400
|
|     fix: Adicionada uma nova linha de comentário para ajudar na compressão da arquitetura
|
* commit 37a9a64ce0858b674a2b74394472dcbdfd3b9cc7
| Author: awdren.fontao <awdren.fontao@ufms.br>
| Date: Mon May 22 09:59:16 2023 -0400
|
|     fix: Atualizando mensagem de comentário para estar aderente ao contexto do exercício
|
* commit a541795d9467deed4e388430670ec34e53e8c448 (origin/main, origin/HEAD, main)
| Author: awdren.fontao <awdren.fontao@ufms.br>
| Date: Mon May 22 09:21:55 2023 -0400
|
|     feat: Adicionando um arquivo que trata de exemplos para a aula de git
```

Timeline of the most recent commits to this repository and its network ordered by most recently pushed to



# E o merge?

A terminal window titled 'aulaRemover — -zsh — 117x27' with a dark background and light text. The window shows the execution of two git commands. The first command is 'git checkout main', which results in a message indicating the branch is up to date. The second command is 'git merge develop', which results in a fast-forward merge of 'a541795..49dfc57'. A diff for 'Exemplo.py' is shown, indicating 3 changes (2 insertions and 1 deletion). The prompt returns to the user's shell.

```
aulaRemover — -zsh — 117x27
[awdren@MacBook-Air-de-Awdren aulaRemover % git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
[awdren@MacBook-Air-de-Awdren aulaRemover % git merge develop
Updating a541795..49dfc57
Fast-forward
 Exemplo.py | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
awdren@MacBook-Air-de-Awdren aulaRemover %
```

# Minha mesclagem já está no remoto?

```
aulaRemover — -zsh — 117x27
awdren@MacBook-Air-de-Awdren aulaRemover % git log
commit 49dfc57965dfa90b76f6c69fad04d842aa1828d1 (HEAD -> main, origin/develop, develop)
Author: awdren.fontao <awdren.fontao@ufms.br>
Date: Mon May 22 10:02:55 2023 -0400

    fix: Adicionada uma nova linha de comentário para ajudar na compressão da arquitetura

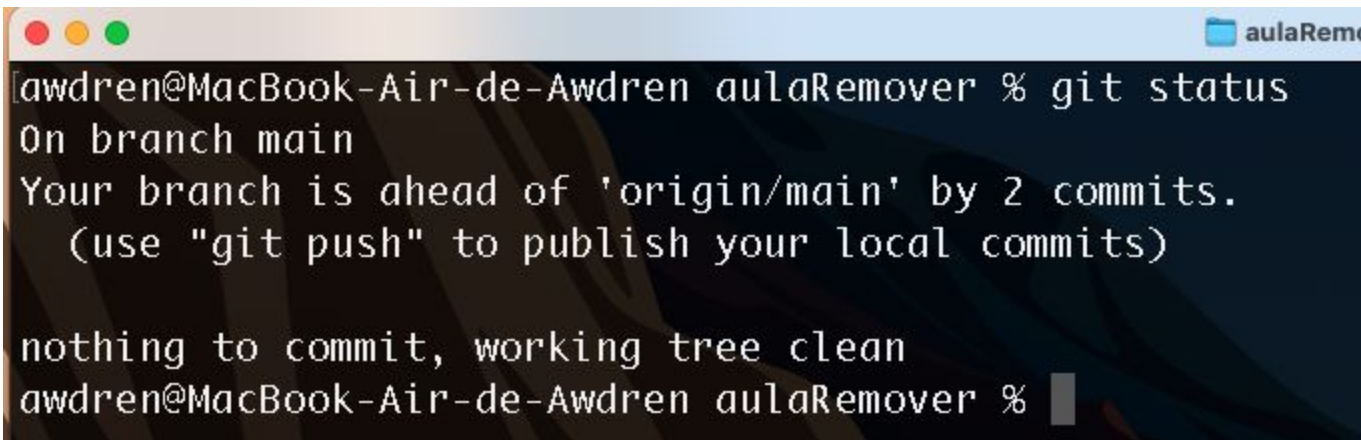
commit 37a9a64ce0858b674a2b74394472dcbdfd3b9cc7
Author: awdren.fontao <awdren.fontao@ufms.br>
Date: Mon May 22 09:59:16 2023 -0400

    fix: Atualizando mensagem de comentário para estar aderente ao contexto do exercício

commit a541795d9467deed4e388430670ec34e53e8c448 (origin/main, origin/HEAD)
Author: awdren.fontao <awdren.fontao@ufms.br>
Date: Mon May 22 09:21:55 2023 -0400

    feat: Adicionando um arquivo que trata de exemplos para a aula de git

commit 61449201136b8f633f405754da3eda778757b658
```

A screenshot of a macOS terminal window. The title bar at the top shows three colored window control buttons (red, yellow, green) on the left and a folder icon labeled 'aulaRemo' on the right. The terminal text is as follows:

```
[awdren@MacBook-Air-de-Awdren aulaRemover % git status  
On branch main  
Your branch is ahead of 'origin/main' by 2 commits.  
  (use "git push" to publish your local commits)  
  
nothing to commit, working tree clean  
awdren@MacBook-Air-de-Awdren aulaRemover %
```



```
awdren@MacBook-Air-de-Awdren aulaRemove % git log --graph
* commit 49dfc57965dfa90b76f6c69fad04d842aa1828d1 (HEAD -> main, origin/main, origin/develop, origin/HEAD, develop)
  Author: awdren.fontao <awdren.fontao@ufms.br>
  Date: Mon May 22 10:02:55 2023 -0400

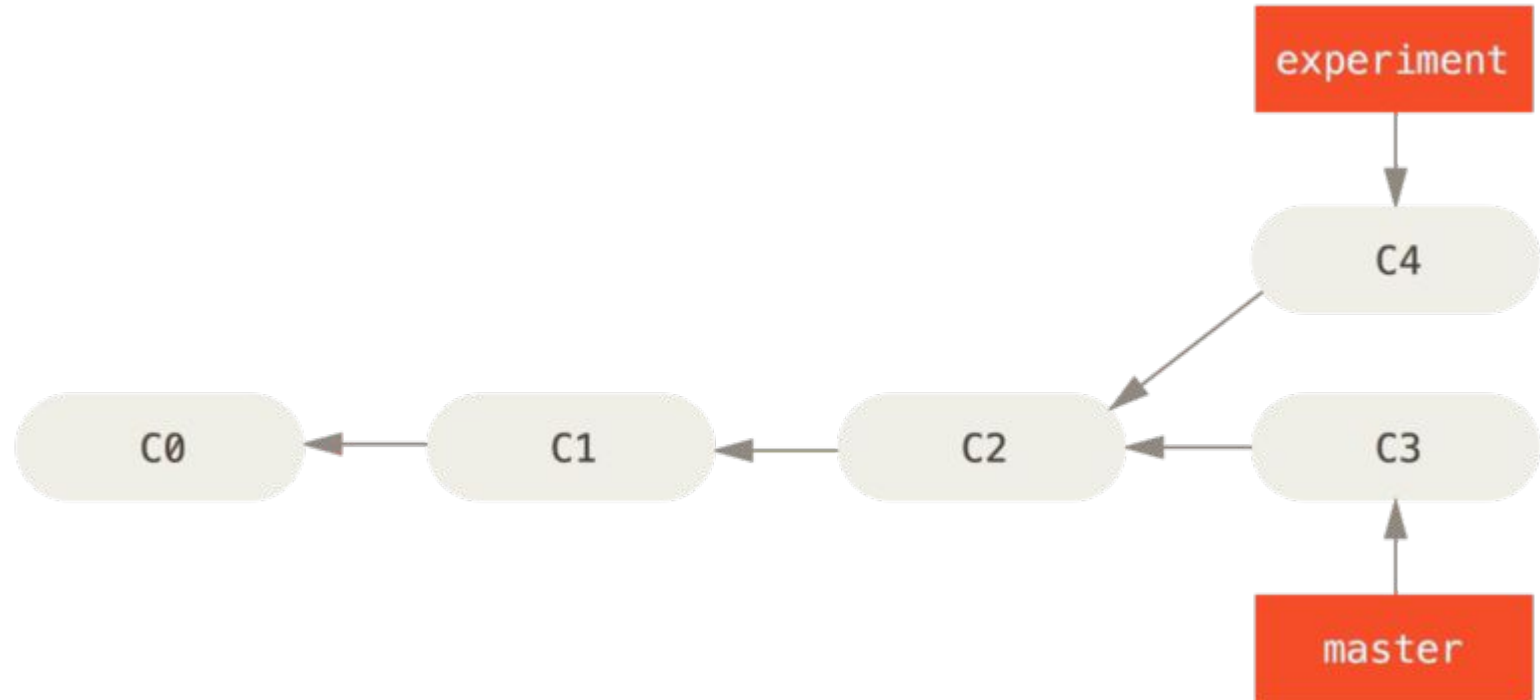
    fix: Adicionada uma nova linha de comentário para ajudar na compressão da arquitetura

* commit 37a9a64ce0858b674a2b74394472dcbdfd3b9cc7
  Author: awdren.fontao <awdren.fontao@ufms.br>
  Date: Mon May 22 09:59:16 2023 -0400

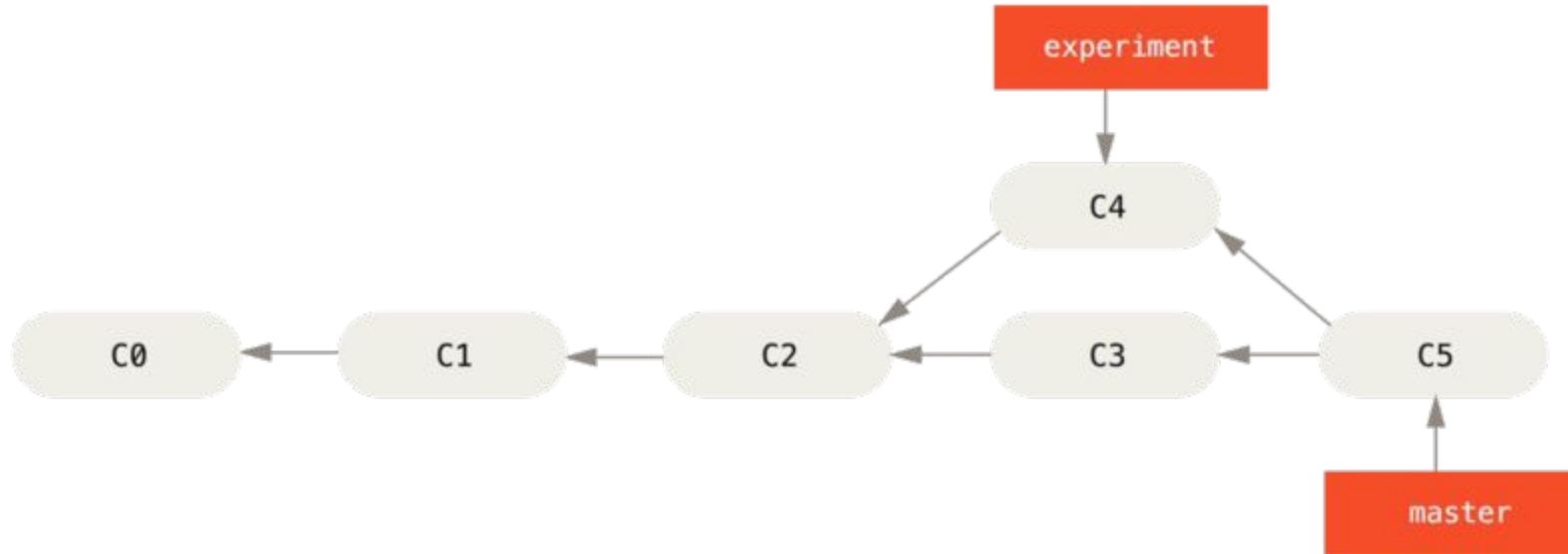
    fix: Atualizando mensagem de comentário para estar aderente ao contexto do exercício

* commit a541795d9467deed4e388430670ec34e53e8c448
  Author: awdren.fontao <awdren.fontao@ufms.br>
  Date: Mon May 22 09:55:24 2023 -0400
```

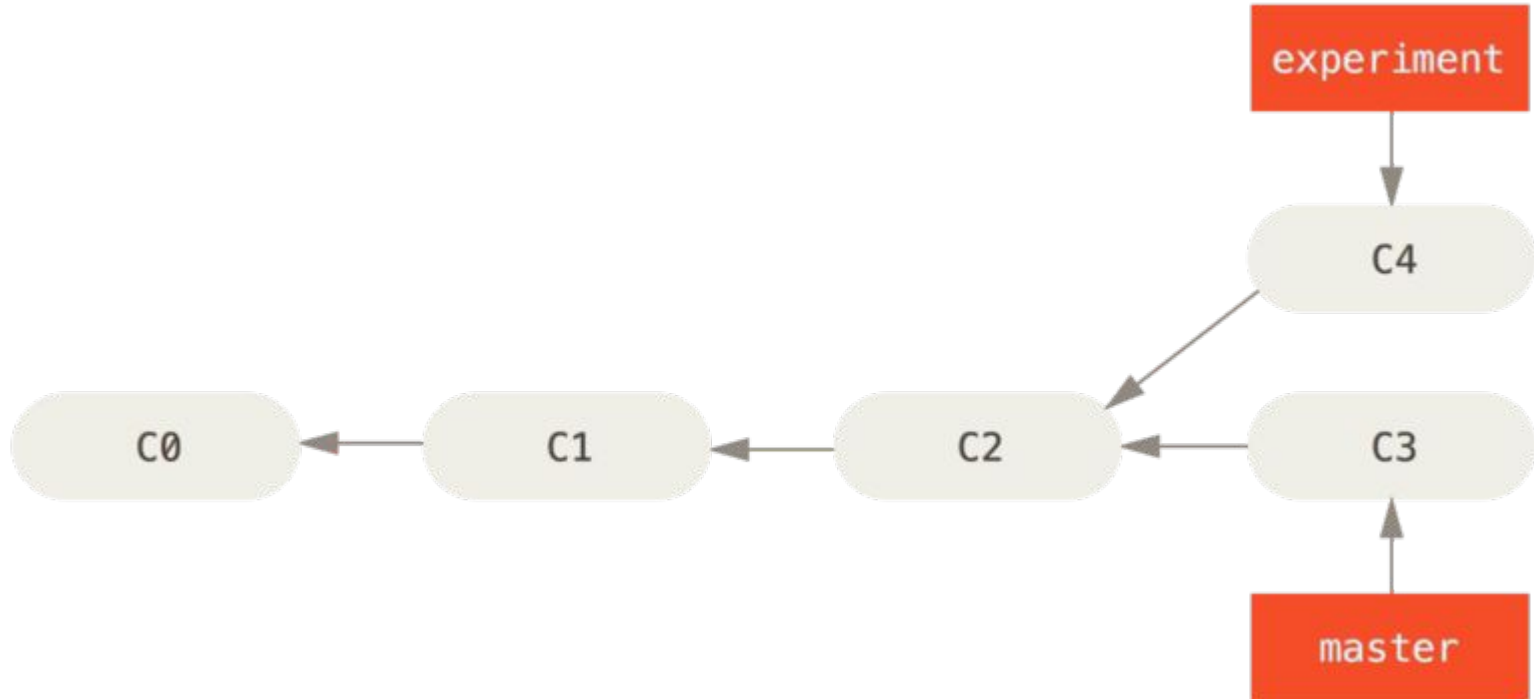
# Merge e Rebase



# Resultado do merge, com um commit adicional



E o rebase



```
$ git checkout experiment
```

```
$ git rebase master
```

*First, rewinding head to replay your work on top of it...*

*Applying: added staged command*

