

Une histoire de GIT

Alexandre Badez

<alexandre.badez@gmail.com>

Une histoire de GIT

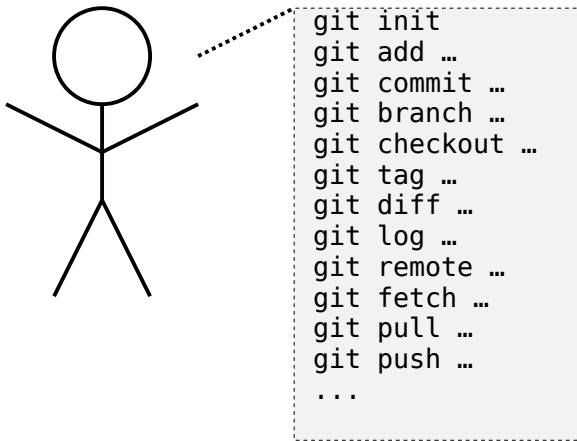
- Copié de Johan Herland
https://github.com/jherland/git_parable
- ...lui même copié de Tom Preston-Werner
<http://tom.preston-werner.com/2009/05/19/the-git-parable.html>
- Un peu de paresse
- J'aime les histoires...
- C'est une bonne histoire.
- Et la meilleure pour comprendre Git.

Une histoire de GIT

- Git - simple et puissant

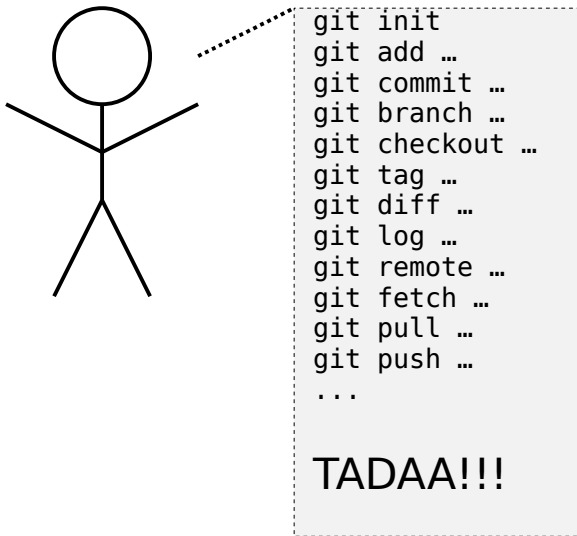
Une histoire de GIT

- Git - simple et puissant



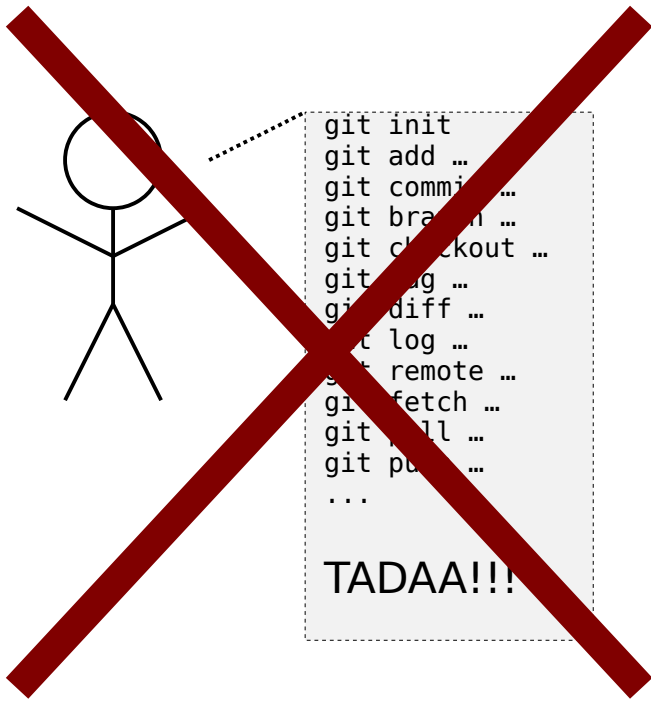
Une histoire de GIT

- Git - simple et puissant



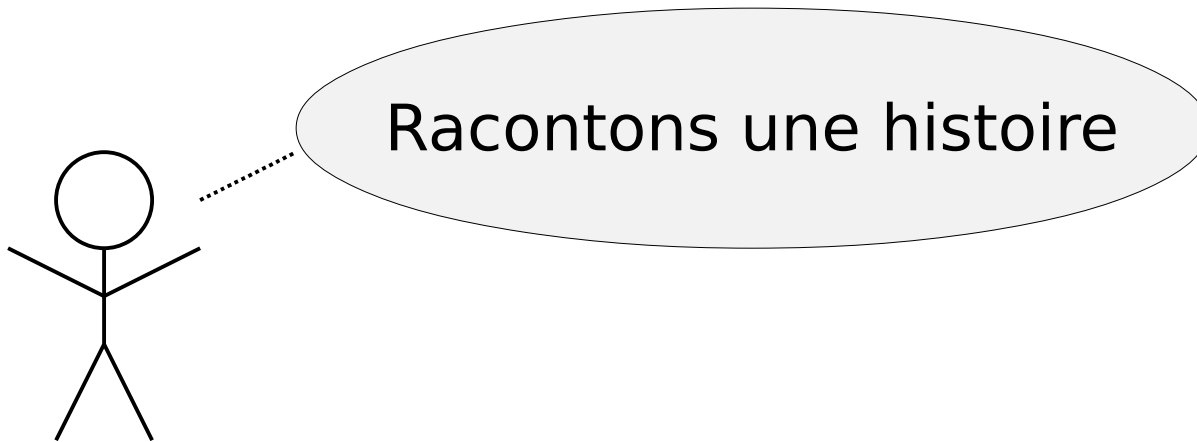
Une histoire de GIT

- Git - simple et puissant



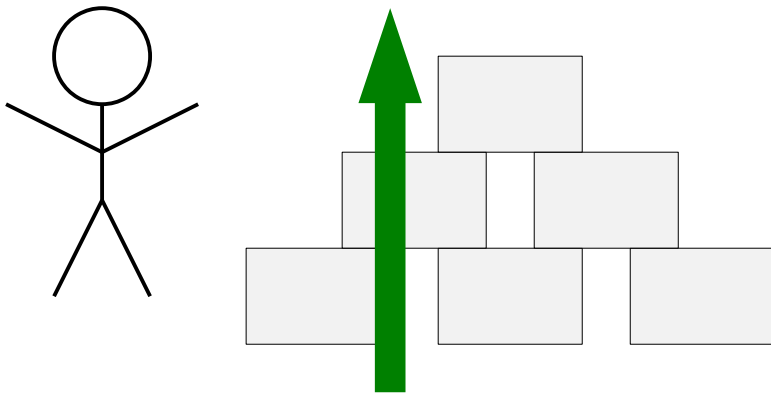
Une histoire de GIT

- Git - simple et puissant



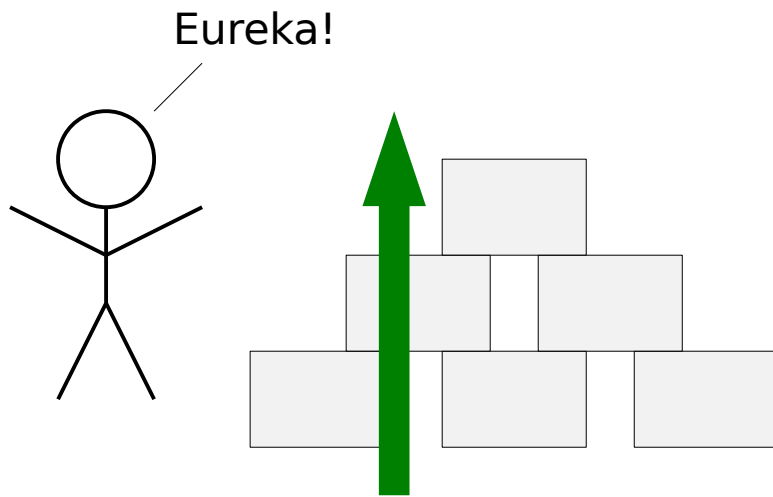
Une histoire de GIT

- Git - simple et puissant



Une histoire de GIT

- Git - simple et puissant



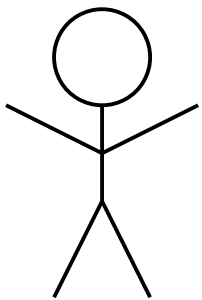
L'Histoire

- Un simple ordinateur
 - Un simple éditeur de texte.
 - Un système de fichier simple.



L'Histoire

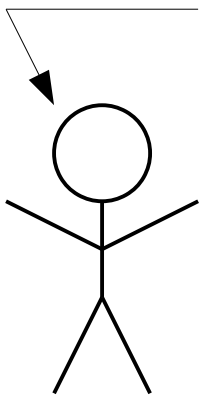
- Ecrire un logiciel complexe



L'Histoire

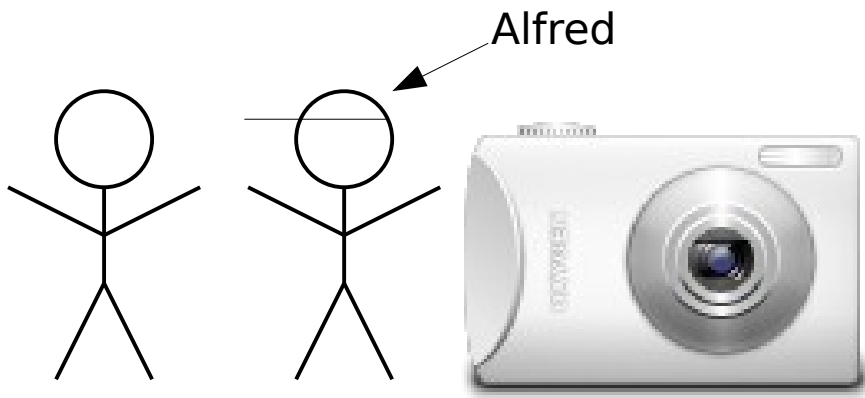
- Ecrire un logiciel complexe
- Inventer une méthode pour garder une trace des différentes versions.
 - récupérer du code modifié et/ou effacé

Alice



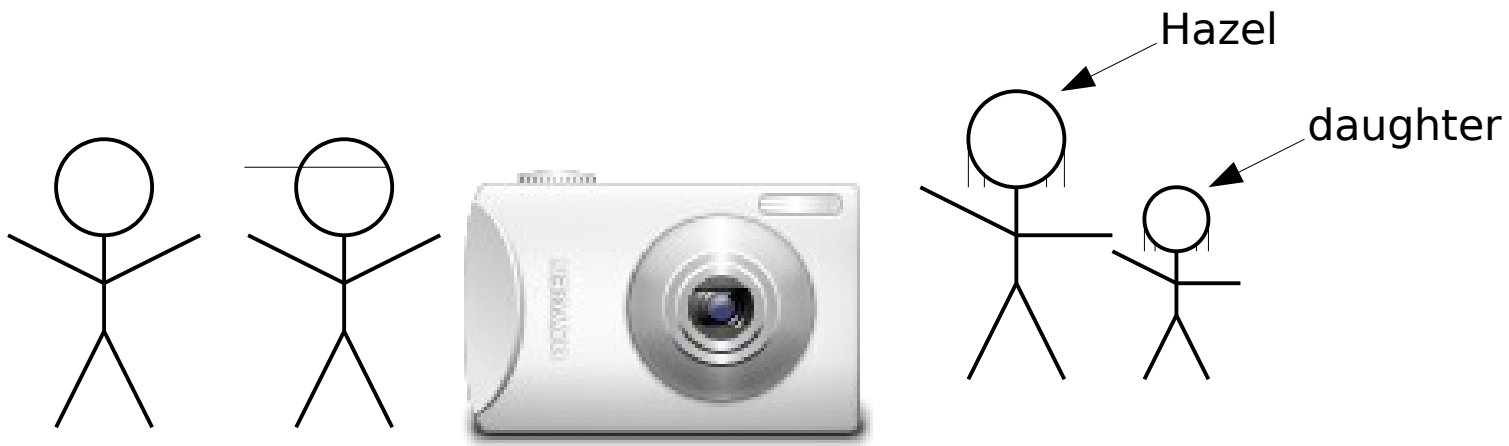
Snapshots

- Alfred, le photographe



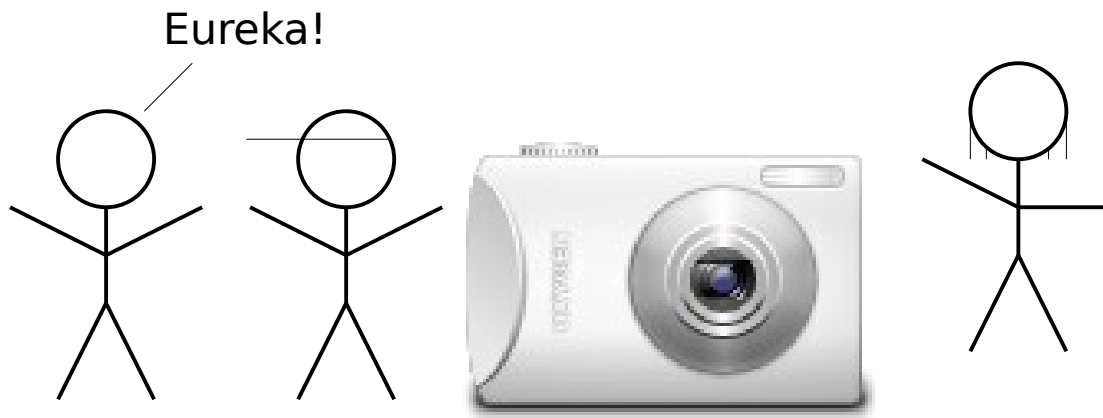
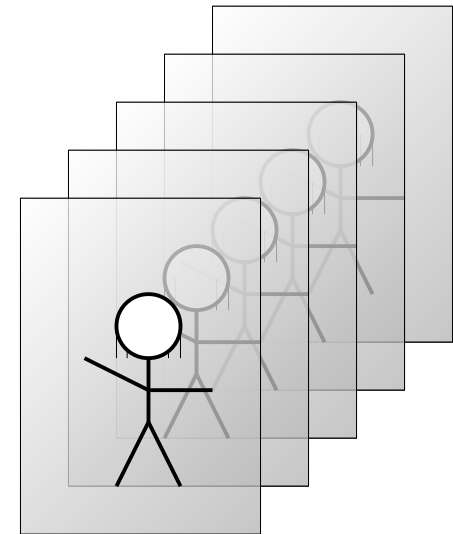
Snapshots

- Alfred, le photographe
- Hazel et sa fille



Snapshots

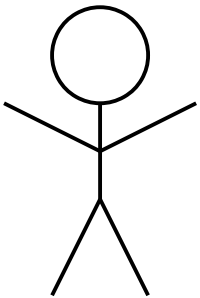
- Alfred, le photographe
- Hazel et sa fille
 - Se souvenir de sa fille à ses différents âges



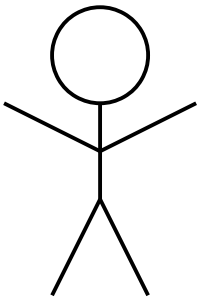
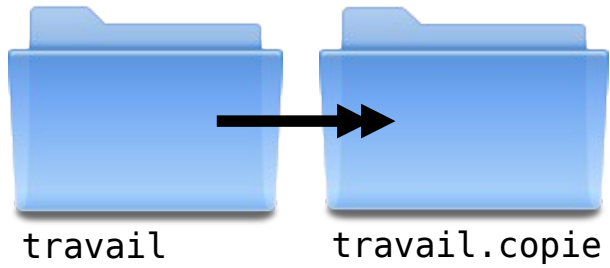
Snapshots



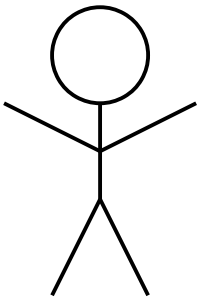
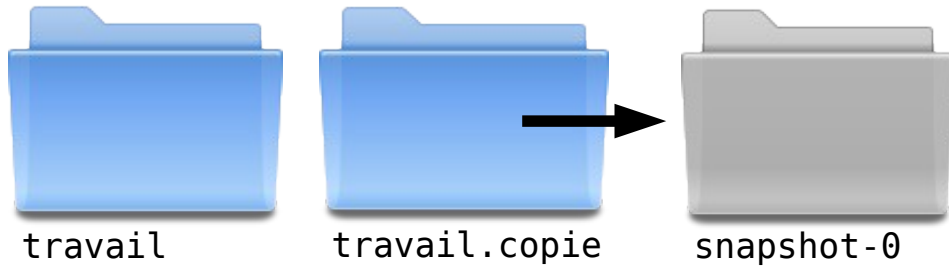
travail



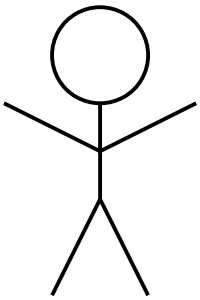
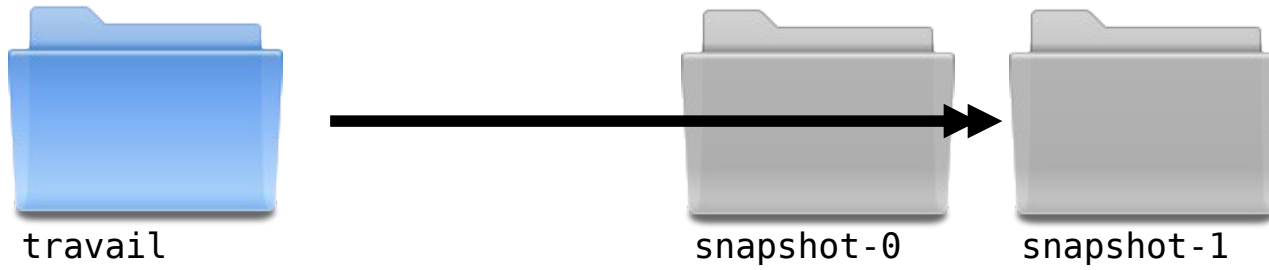
Snapshots



Snapshots



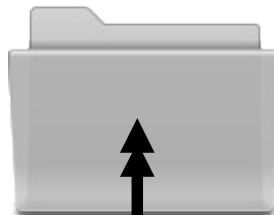
Snapshots



Snapshots



travail



snapshot-0



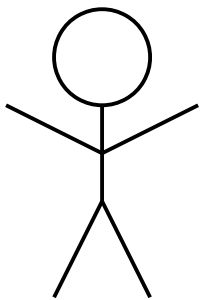
snapshot-1



message



message



2009-05-20 12:34:56

Initial version

2009-05-21 23:45:01

Introduced a new foo,
and reset the bar to
xyzy.

Branches



travail



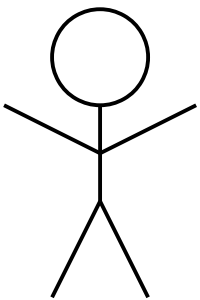
snapshot-0



snapshot-1



snapshot-99



Branches



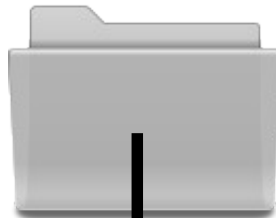
travail



snapshot-0



snapshot-1

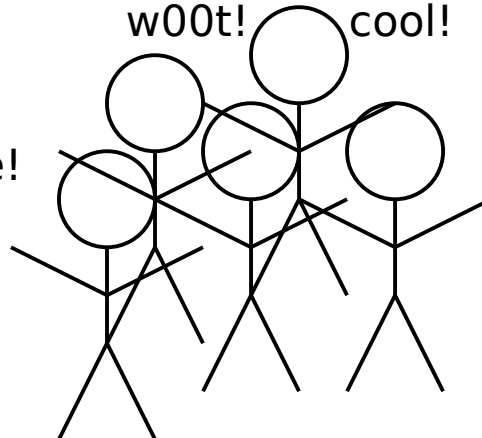
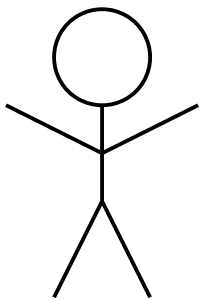


snapshot-99



w00t! cool!

nice!



Branches



travail



snapshot-0



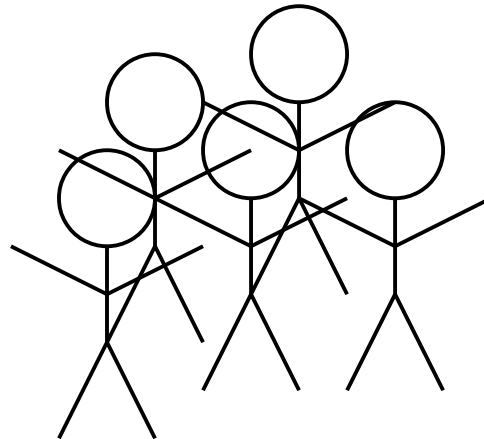
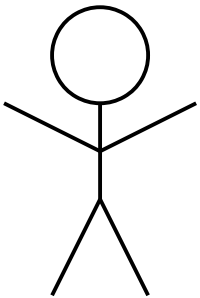
snapshot-1



snapshot-99



snapshot-109



Branches



travail



snapshot-0



snapshot-1

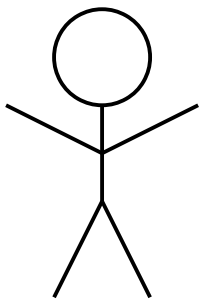


snapshot-99

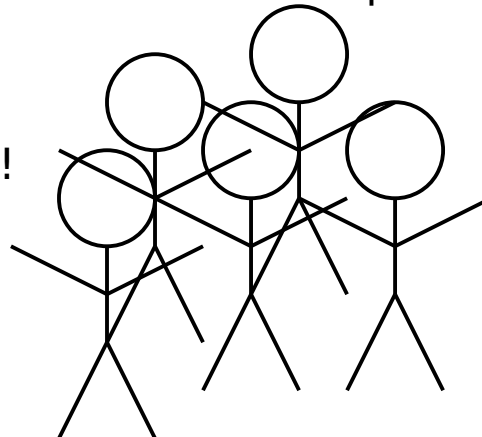


snapshot-109

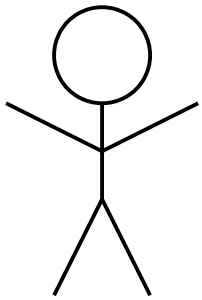
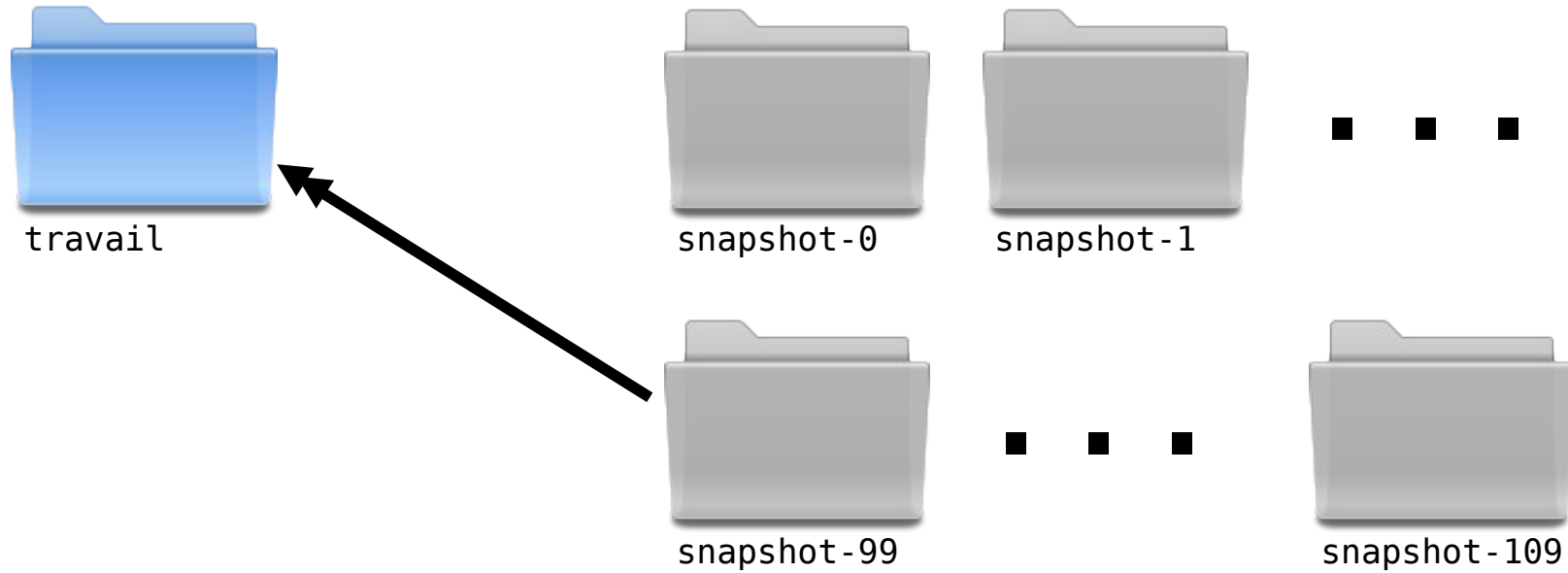
Ca marche pas..



Boo!



Branches



Branches



travail



snapshot-0



snapshot-1

...

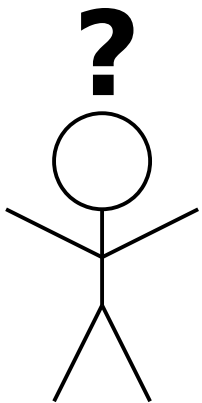


snapshot-99

...



snapshot-109

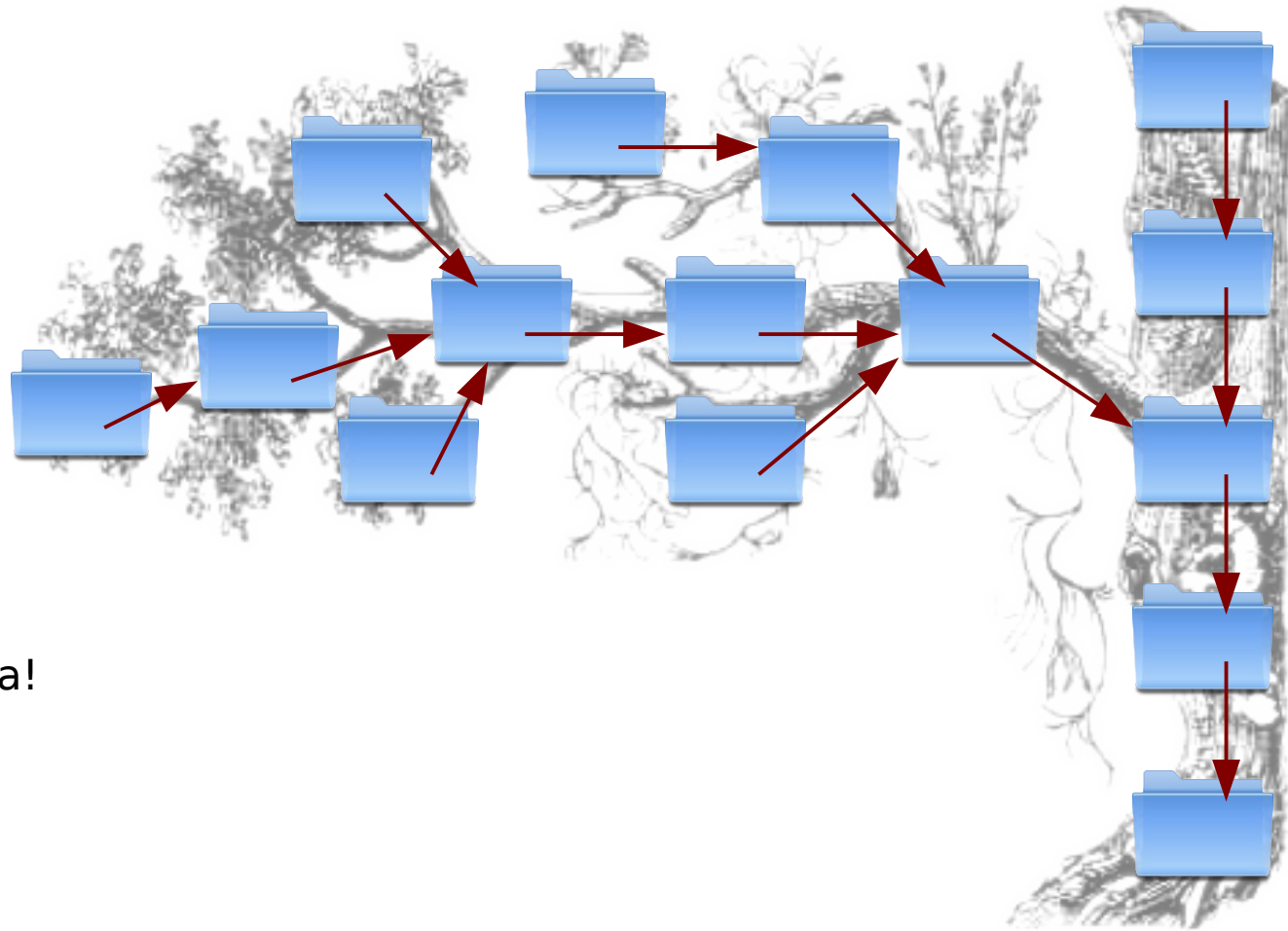


snapshot-110

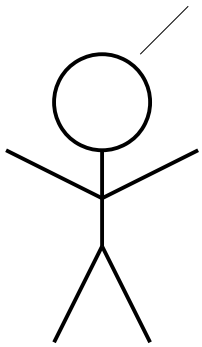
Branches



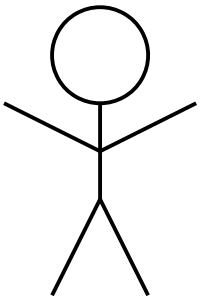
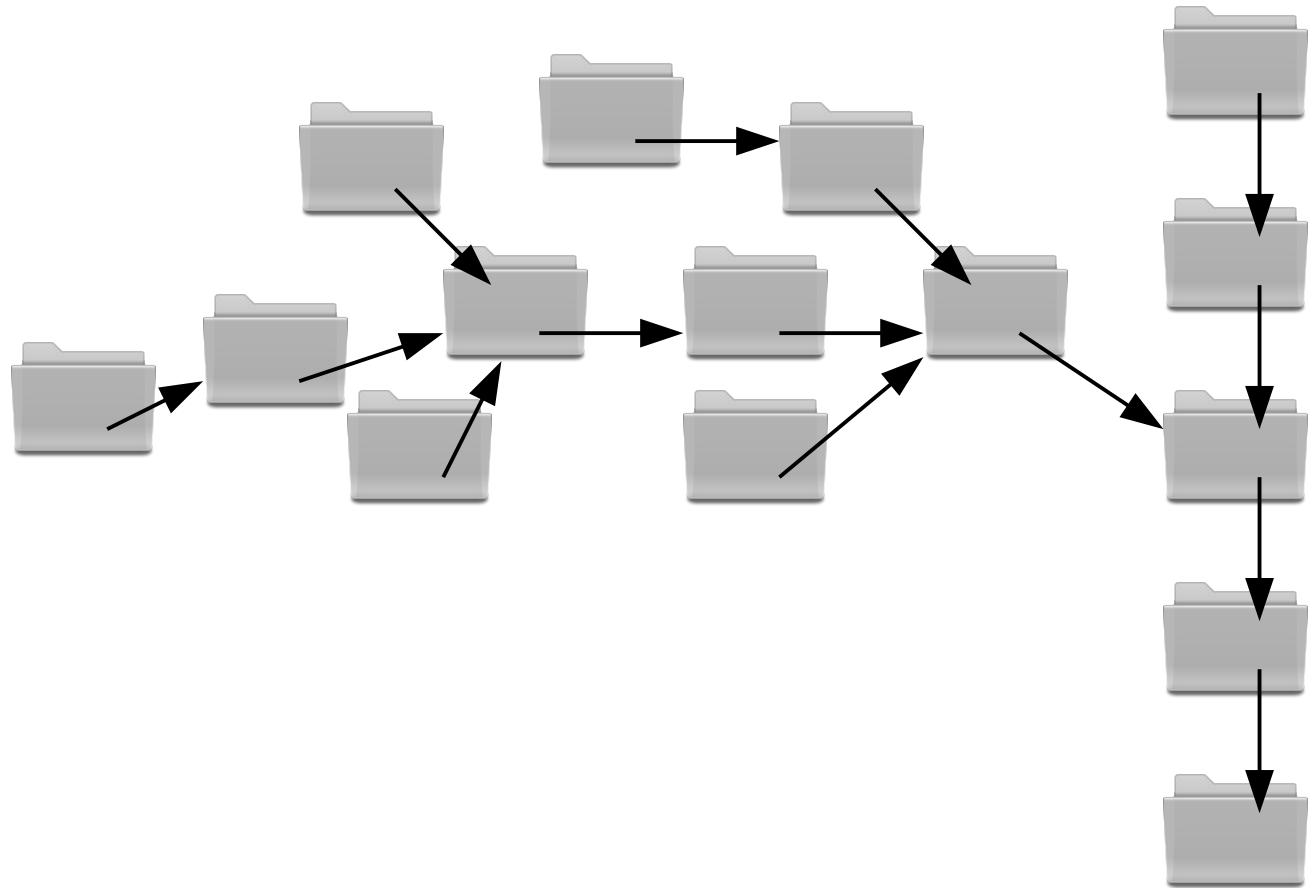
Branches



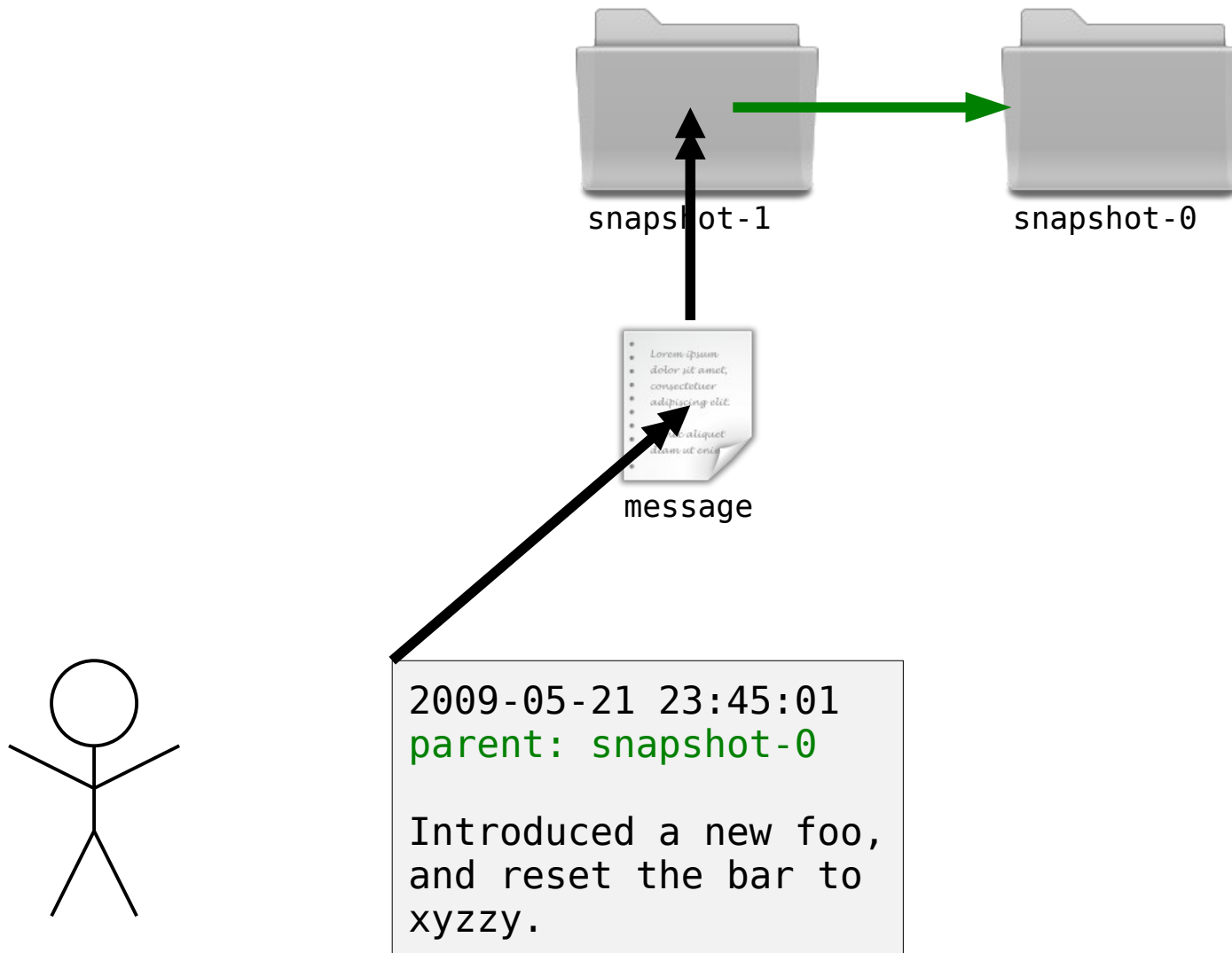
Eureka!



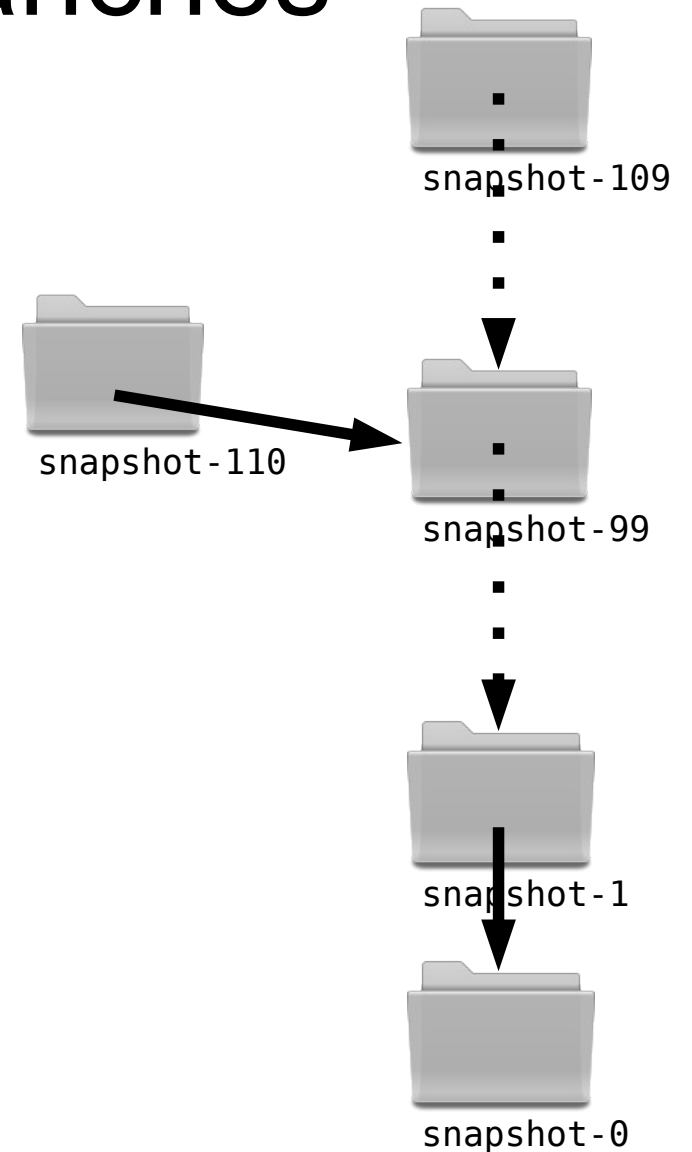
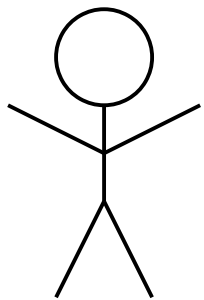
Branches



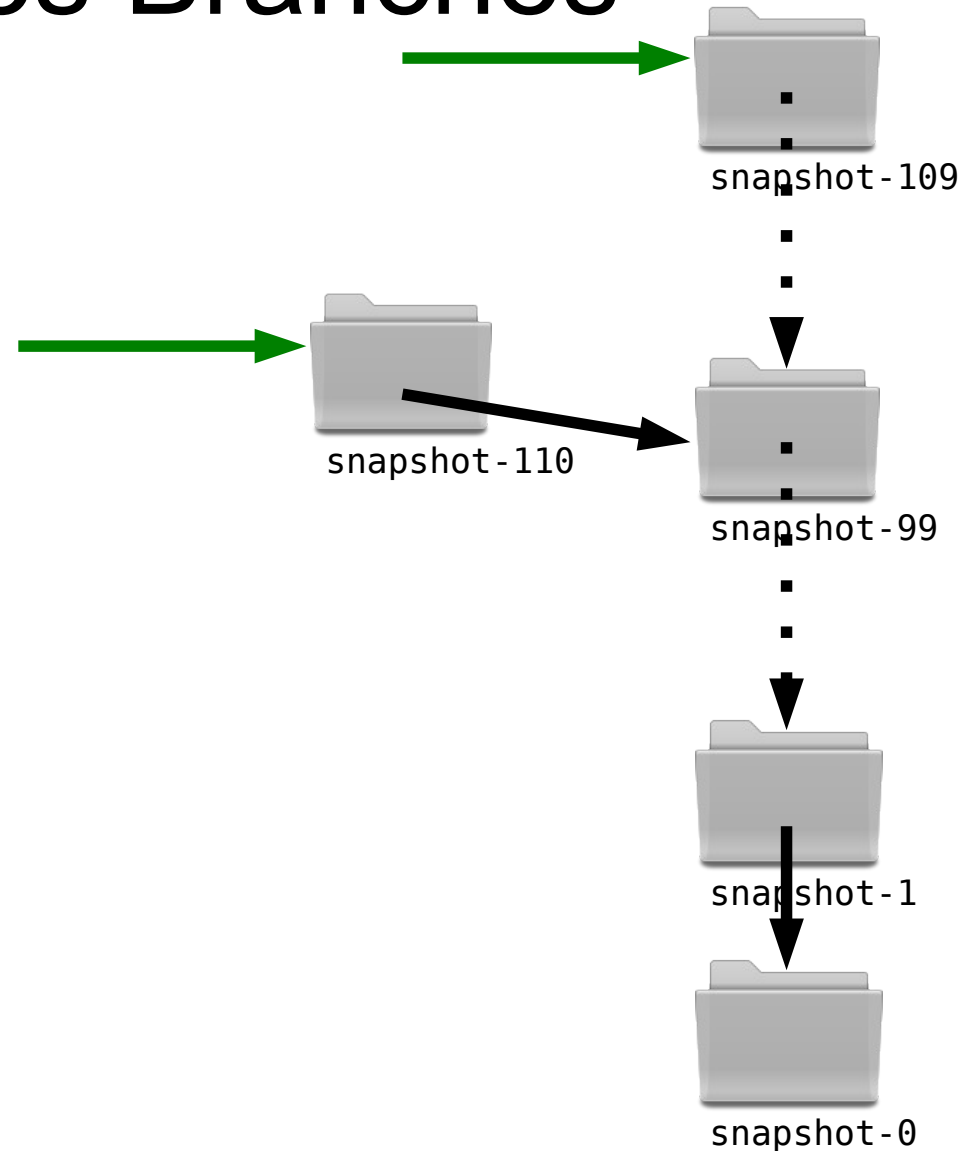
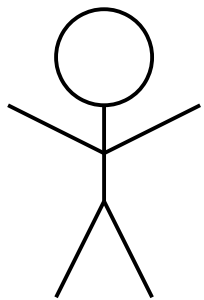
Branches



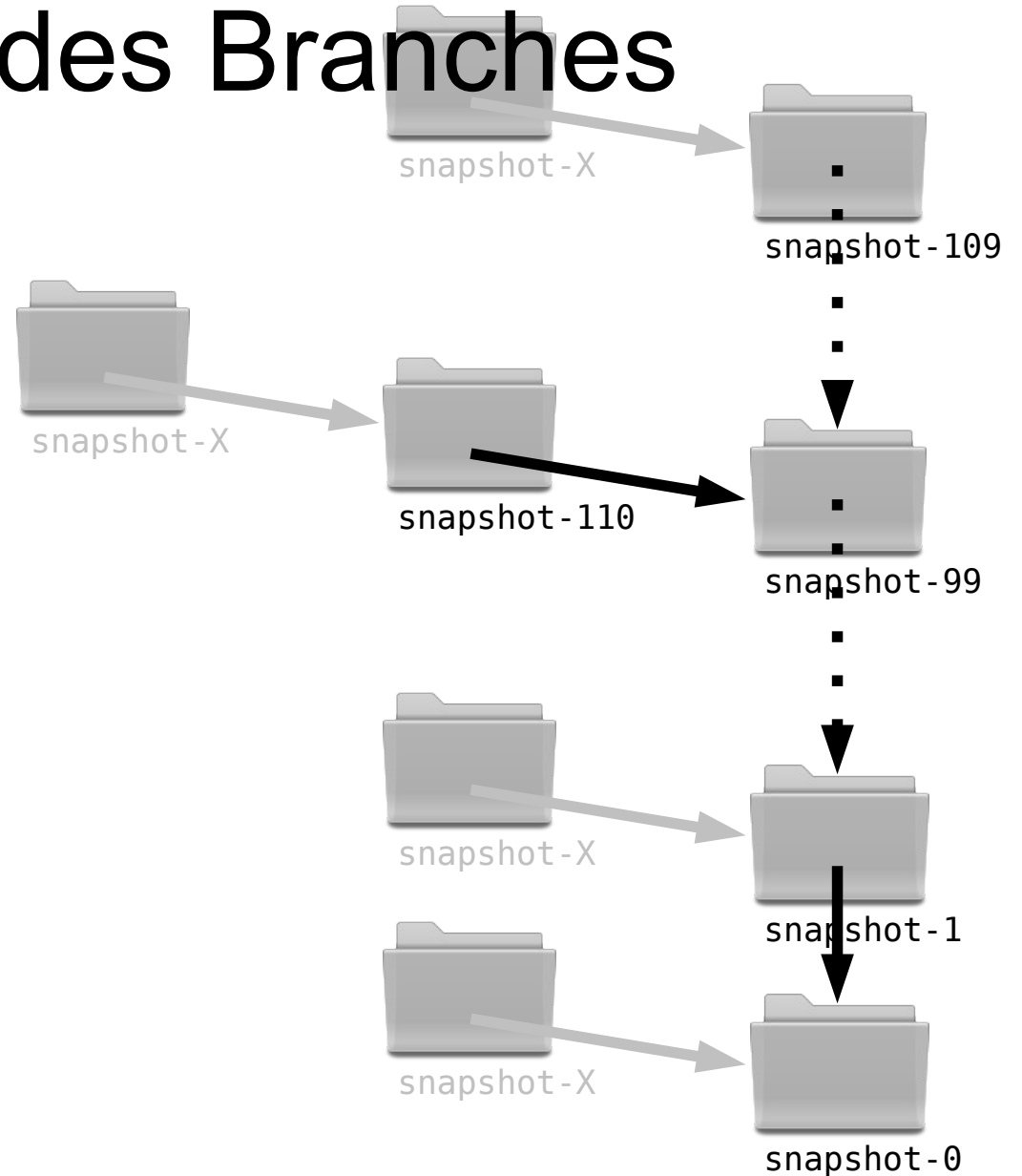
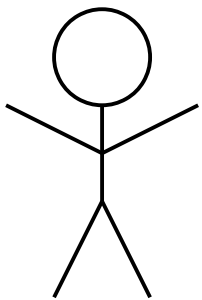
Le nom des Branches



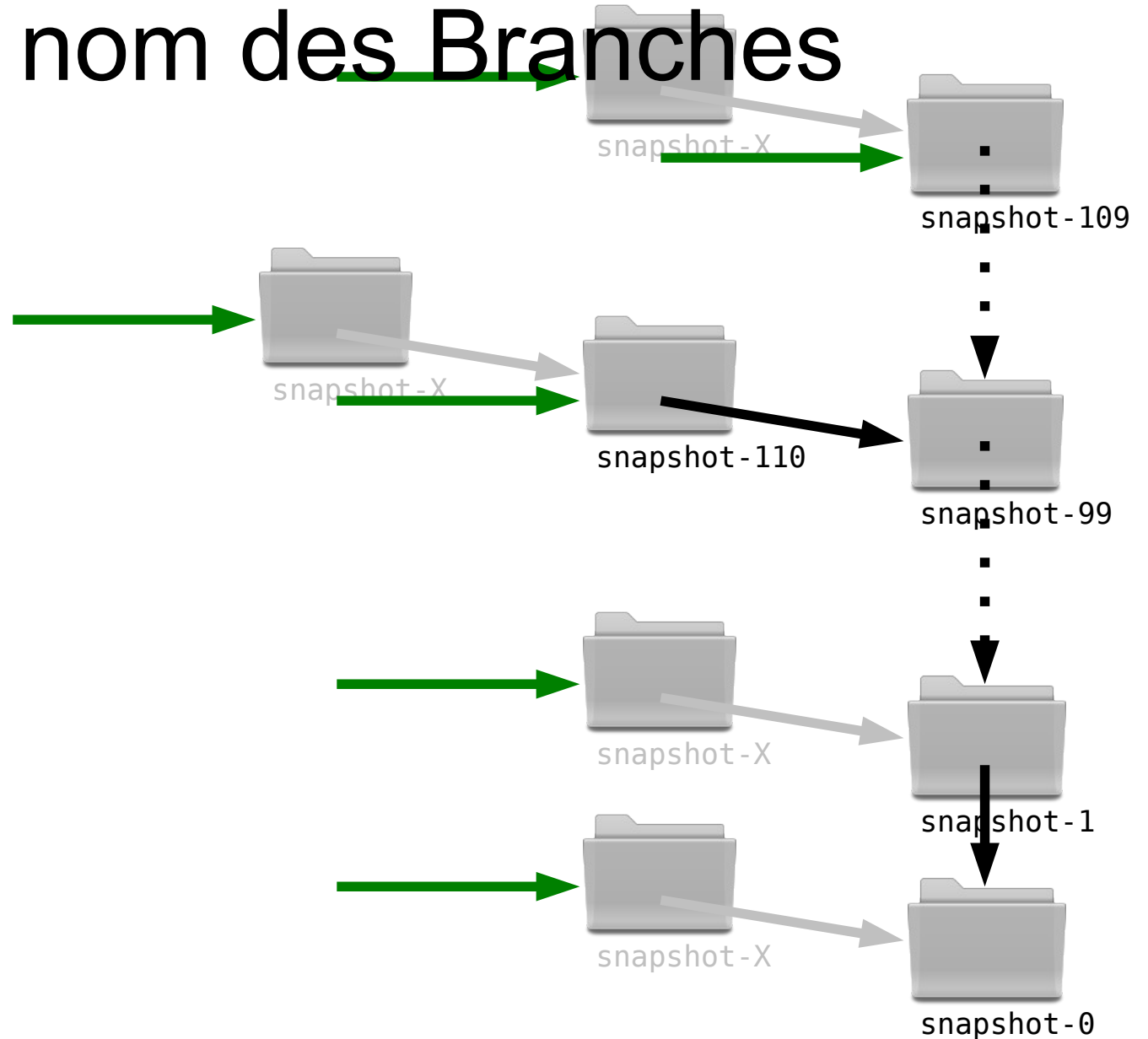
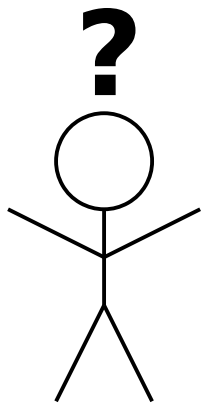
Le nom des Branches



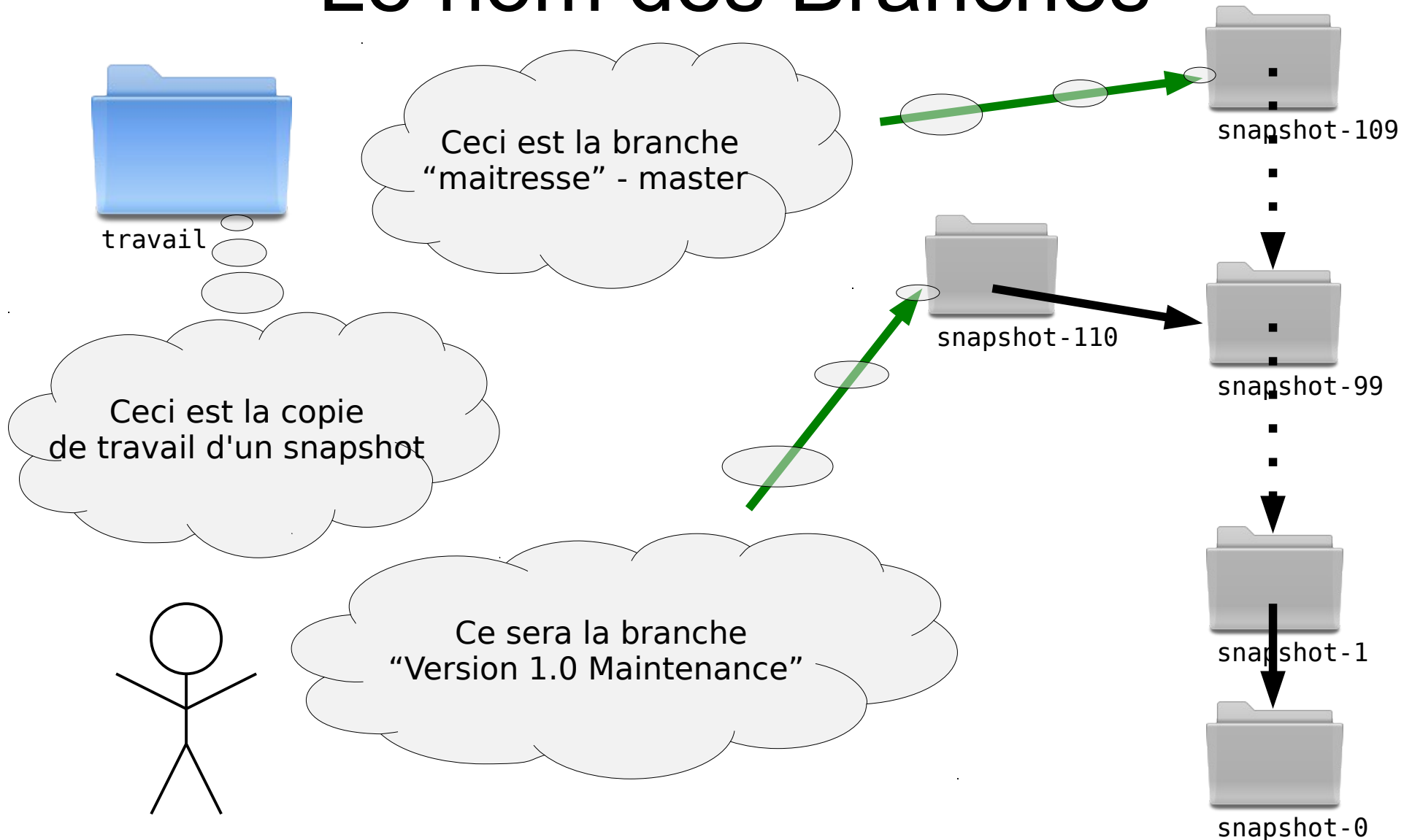
Le nom des Branches



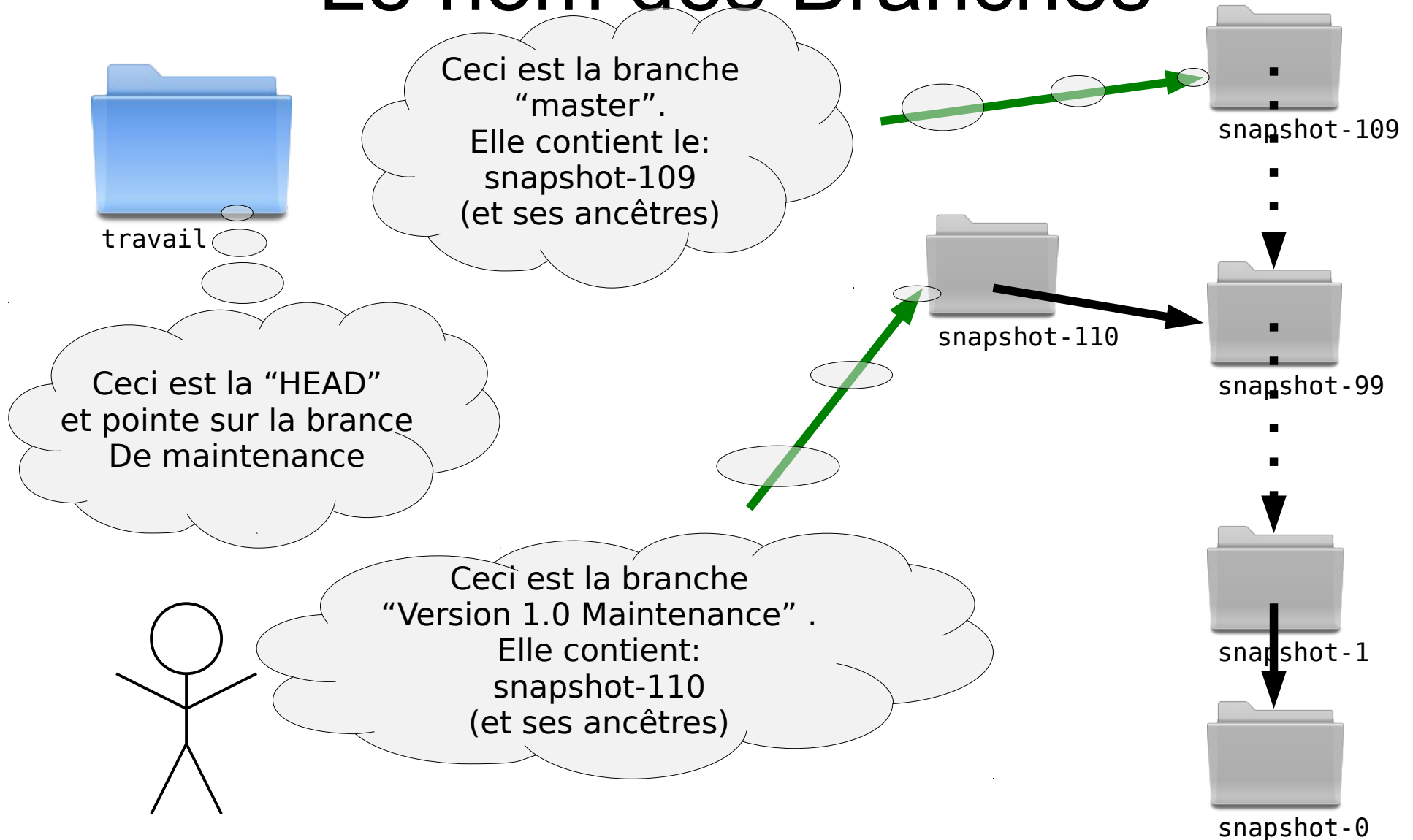
Le nom des Branches



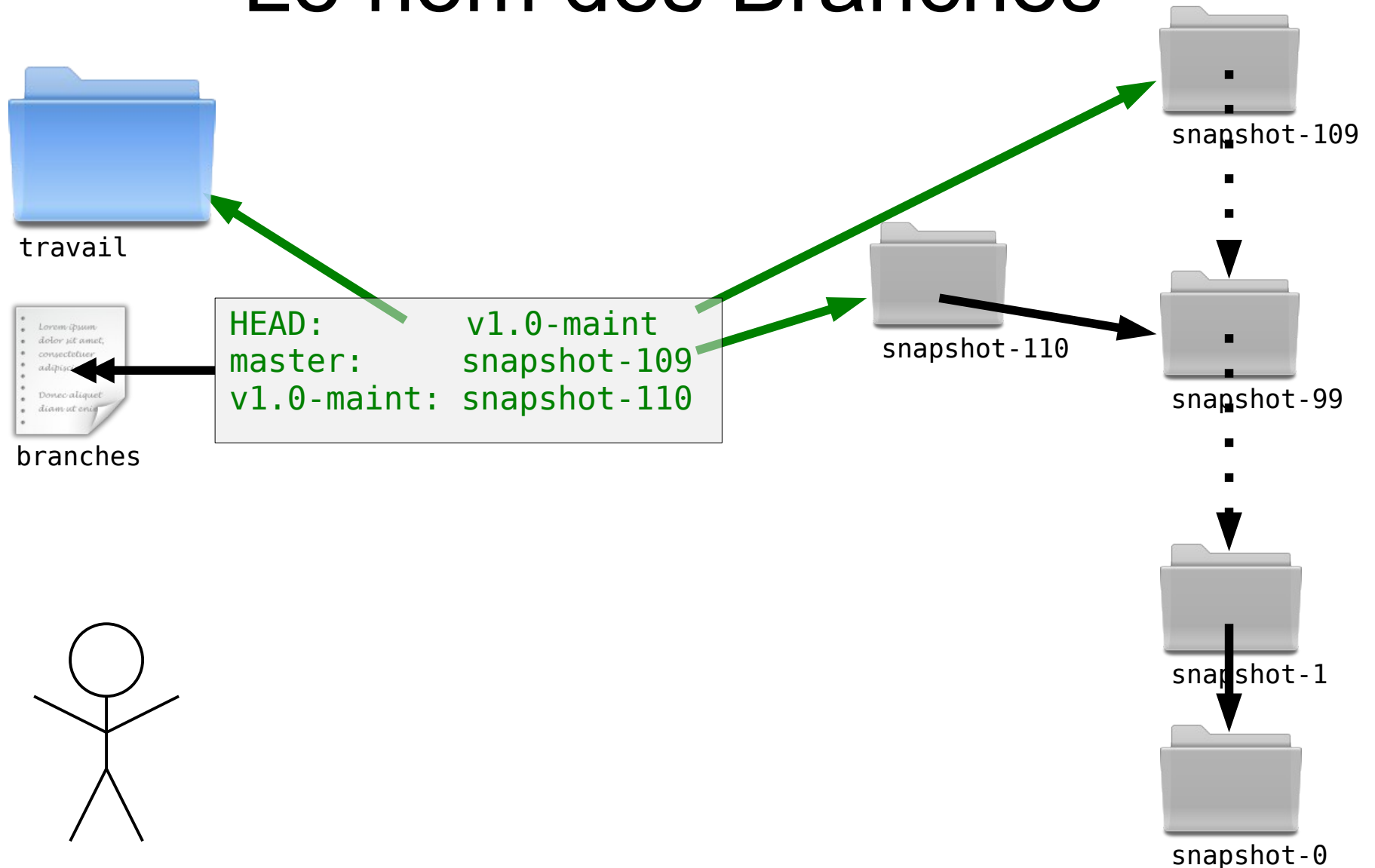
Le nom des Branches



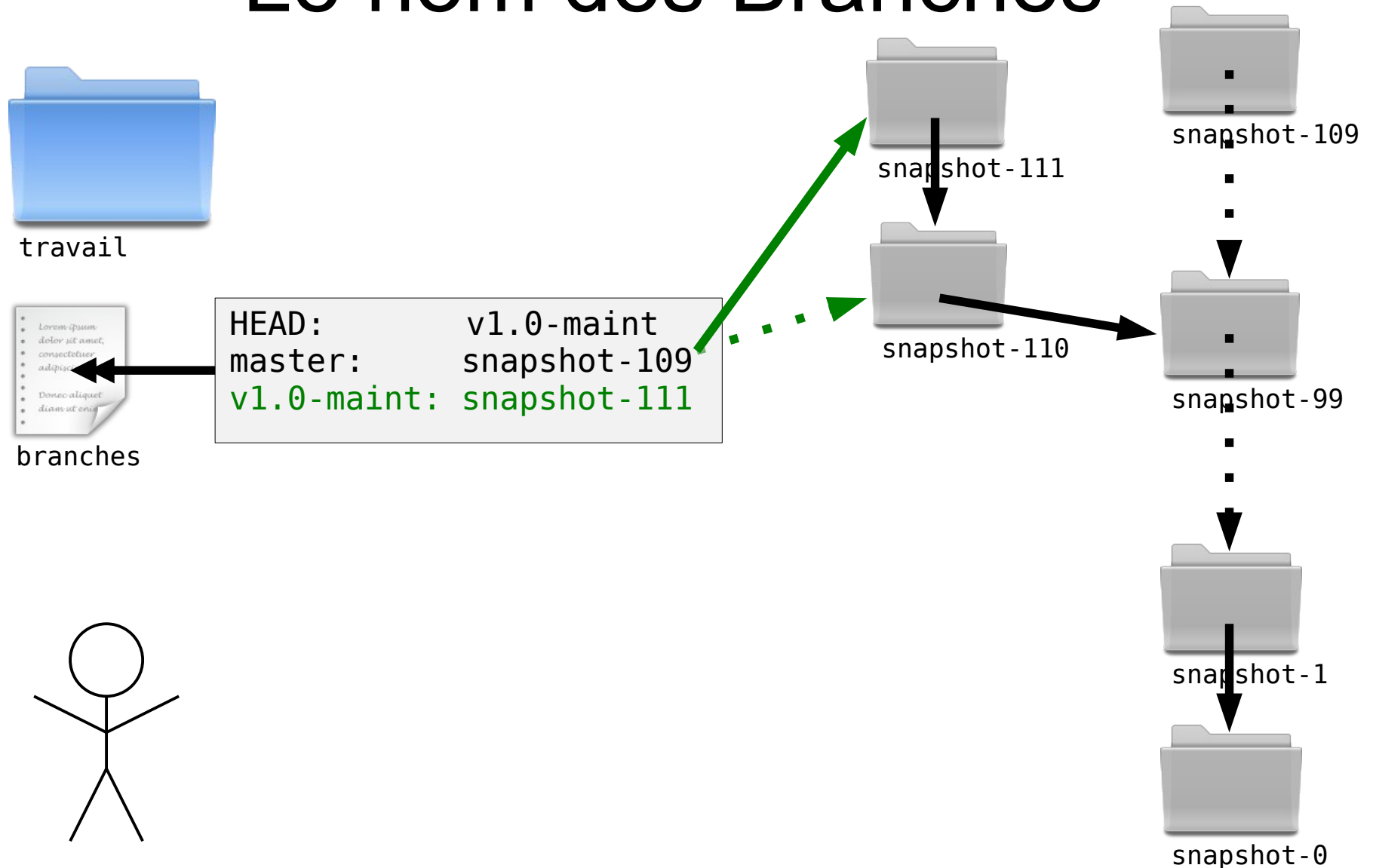
Le nom des Branches



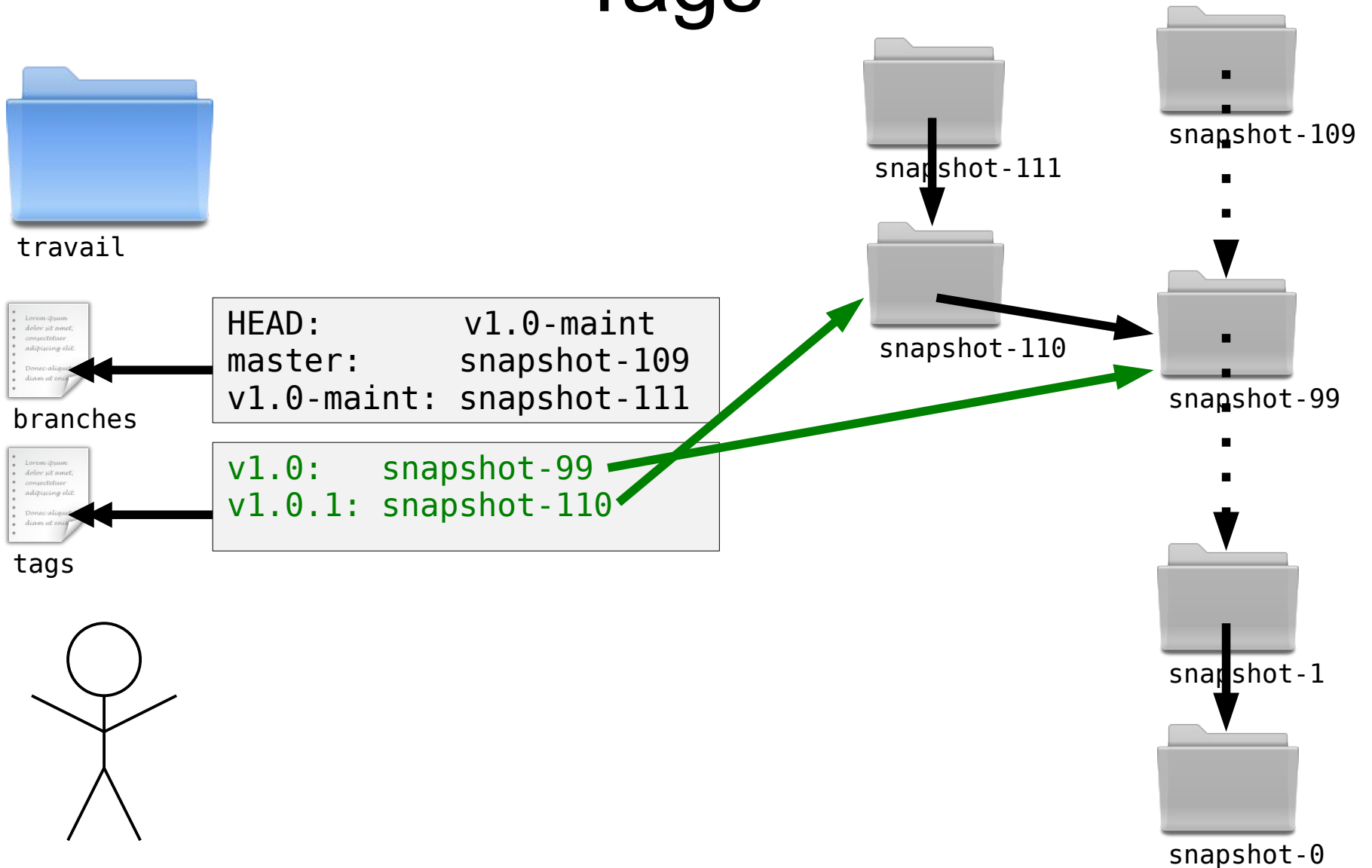
Le nom des Branches



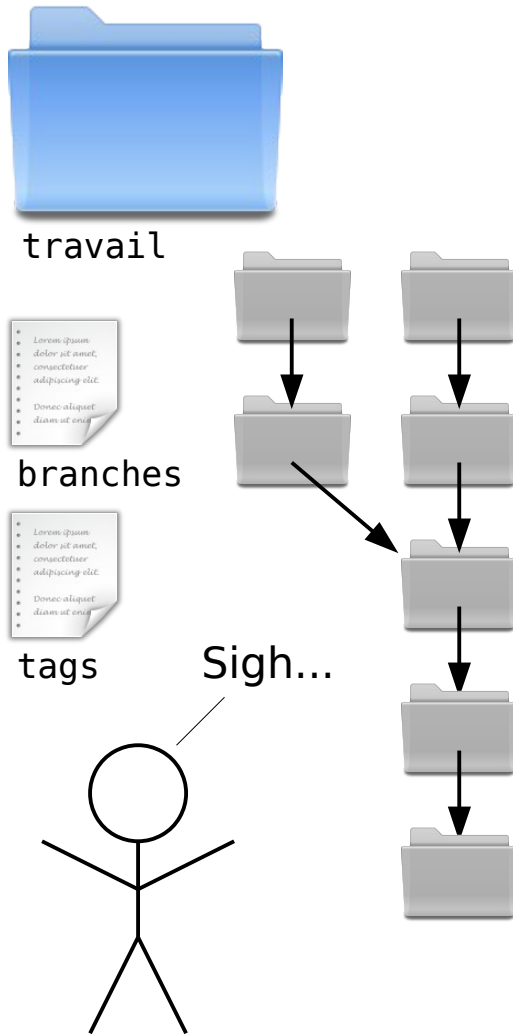
Le nom des Branches



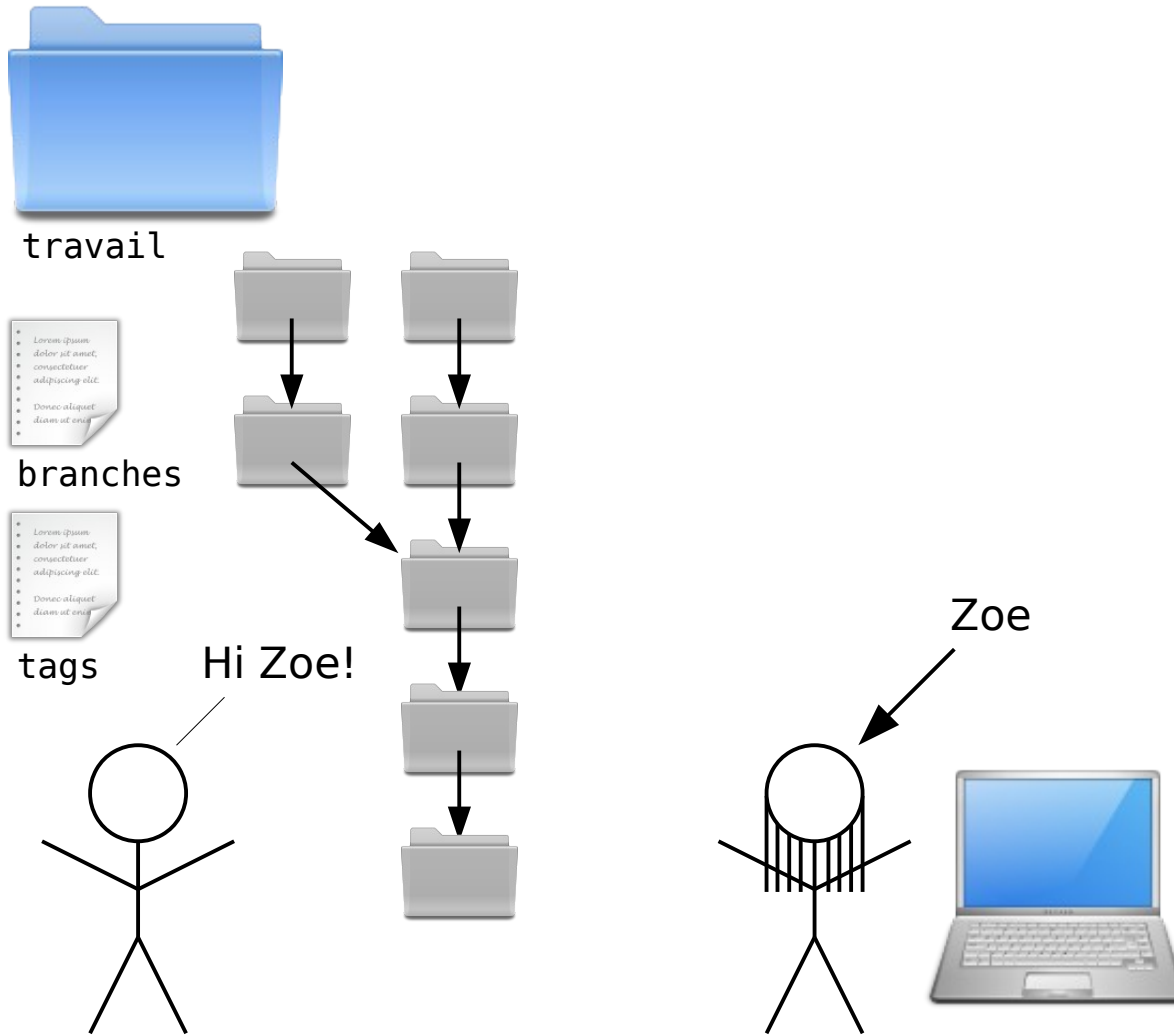
Tags



Distribué



Distribué



Distribué



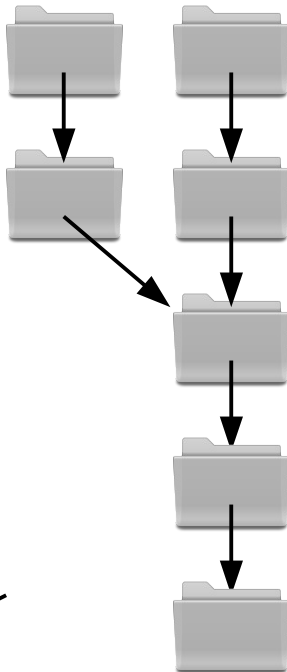
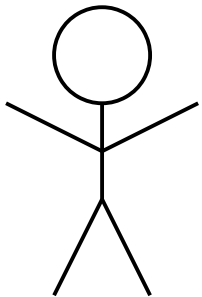
travail



branches



tags



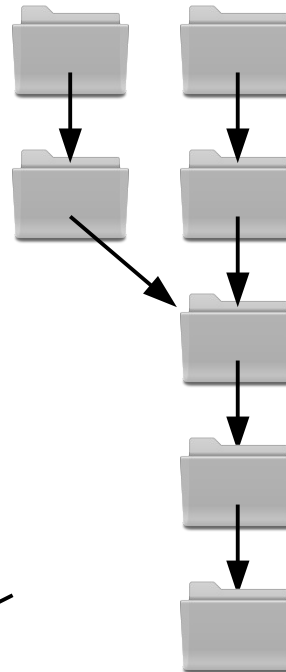
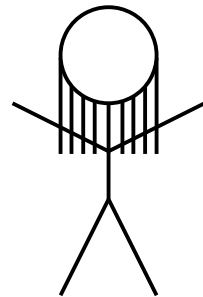
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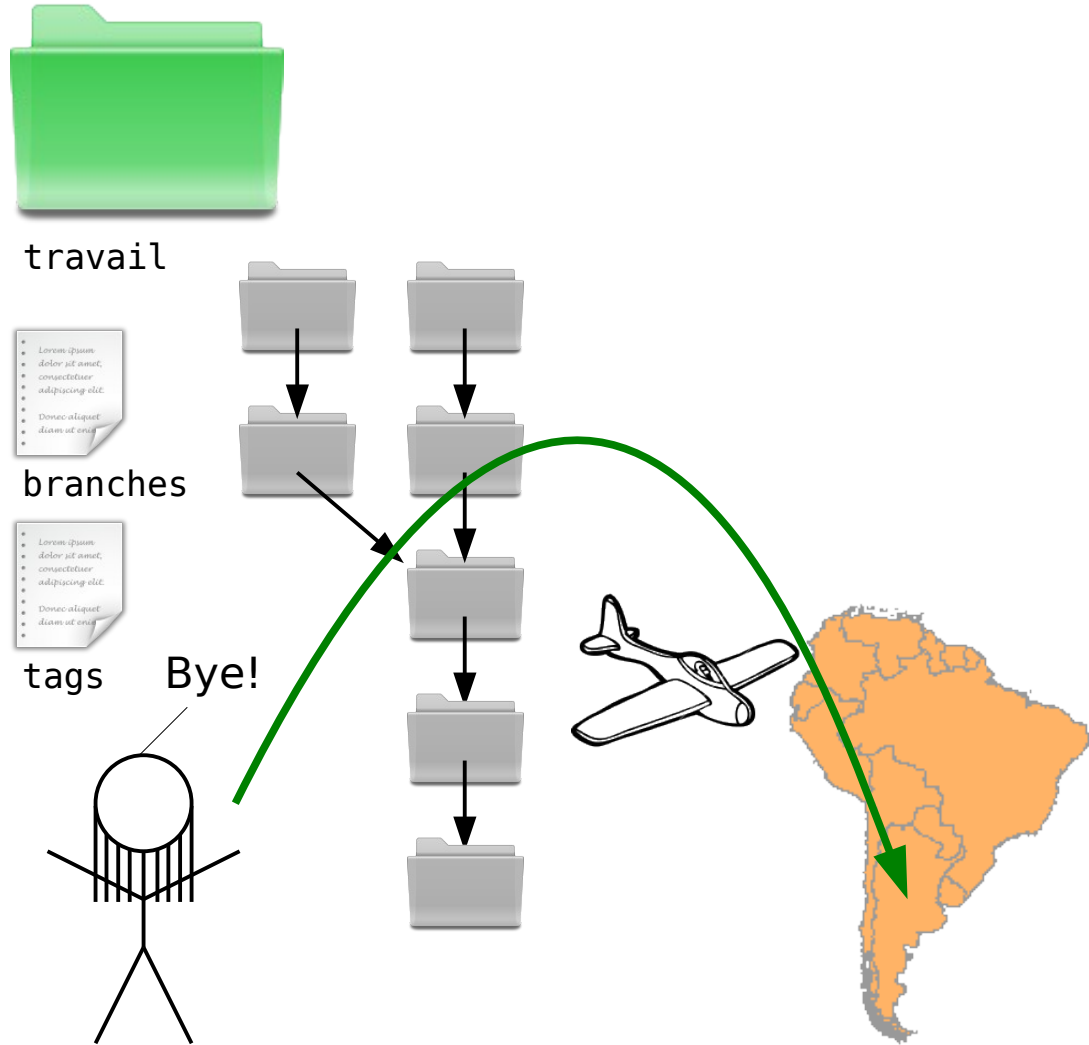
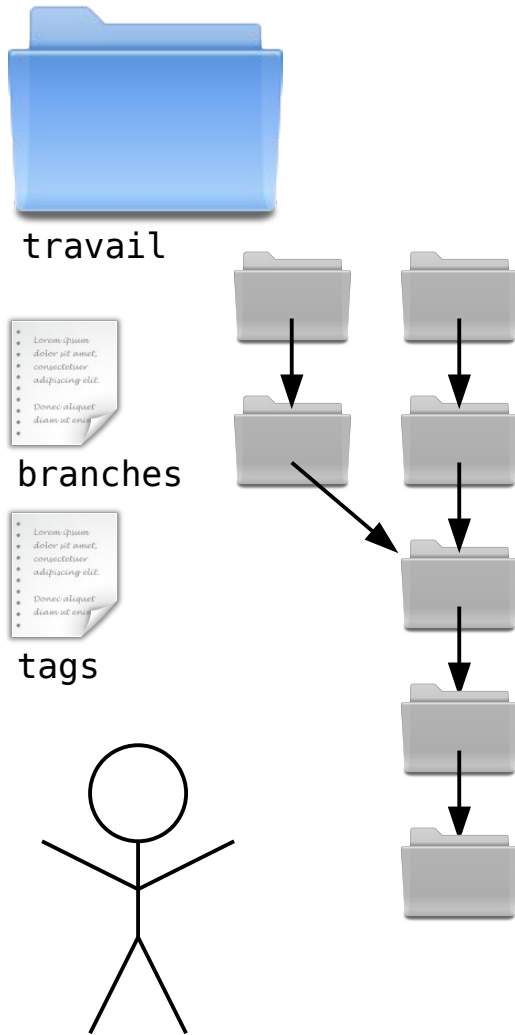
branches



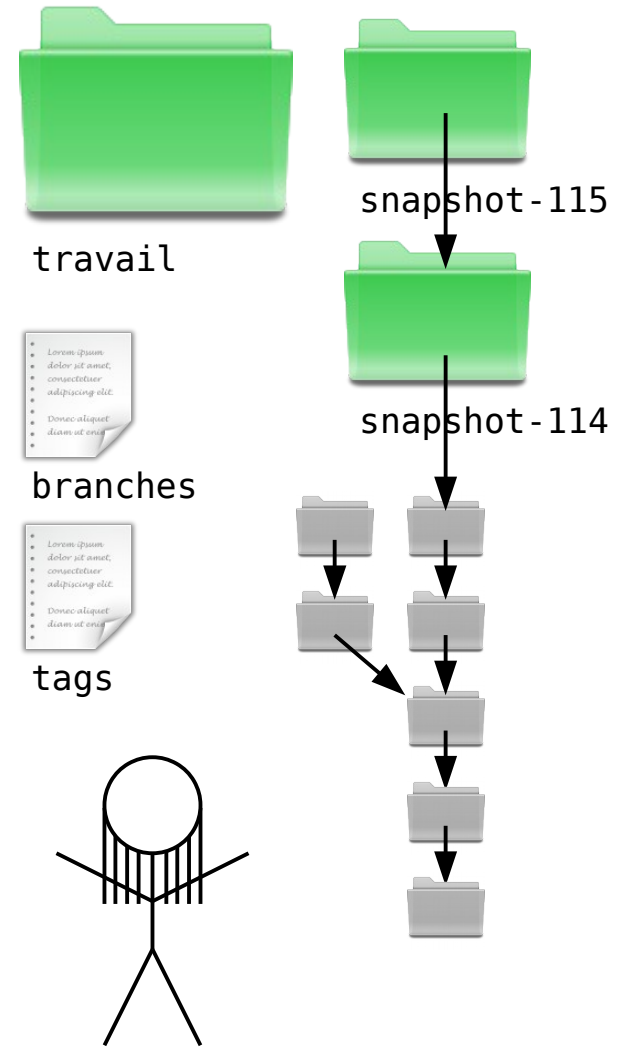
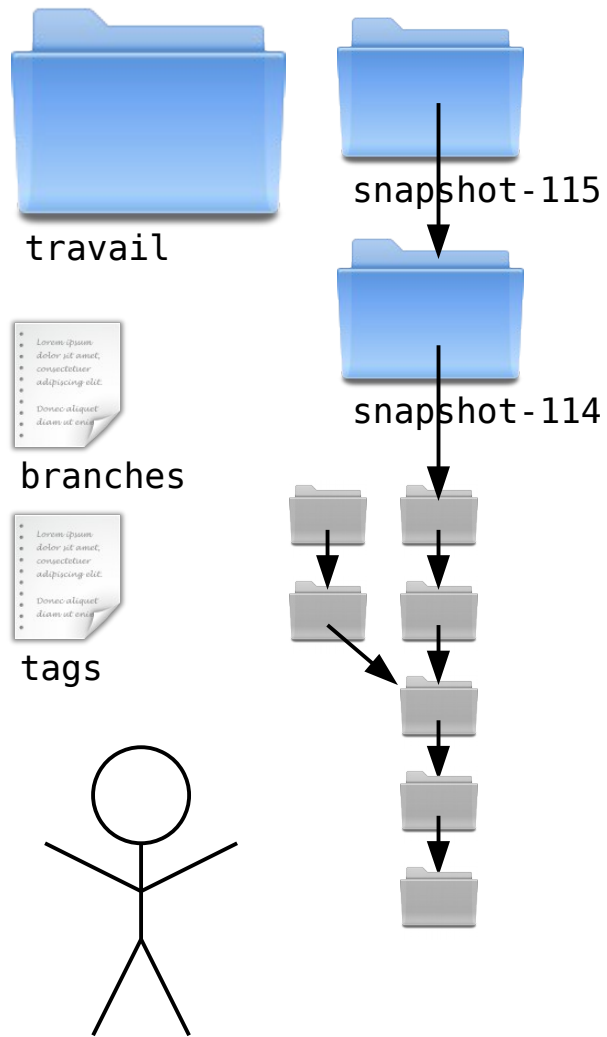
tags



Distribué



Distribué



Distribué



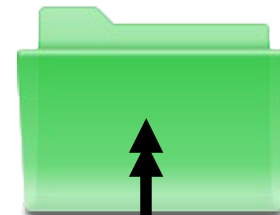
snapshot-114



message

```
2009-05-22 12:12:12
parent: snapshot-113
author: Alice <a@li.ce>
```

Blarfle, a cool new
feature; extends the
existing blog.



snapshot-114

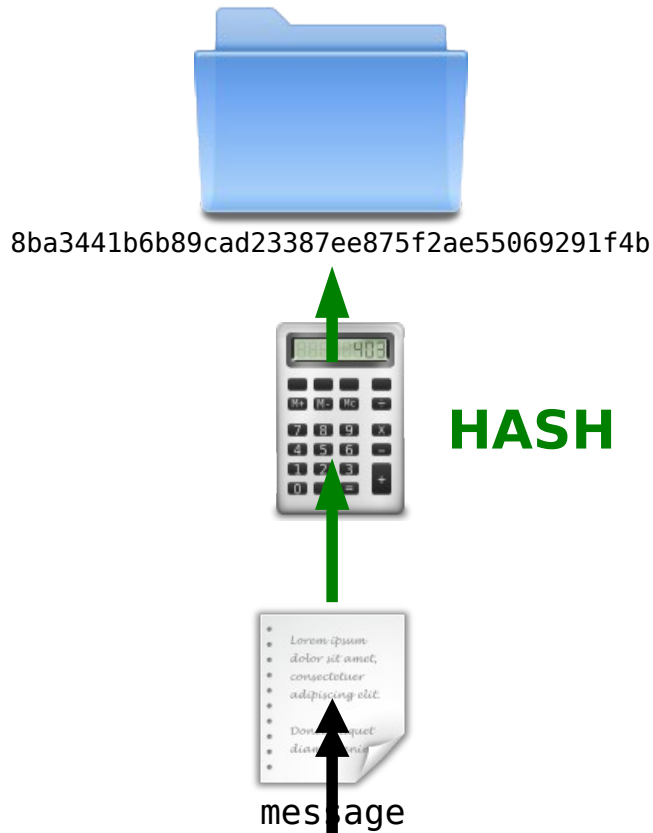


message

```
2009-05-21 23:45:01
parent: snapshot-113
author: Zoe <zoe@z.oe>
```

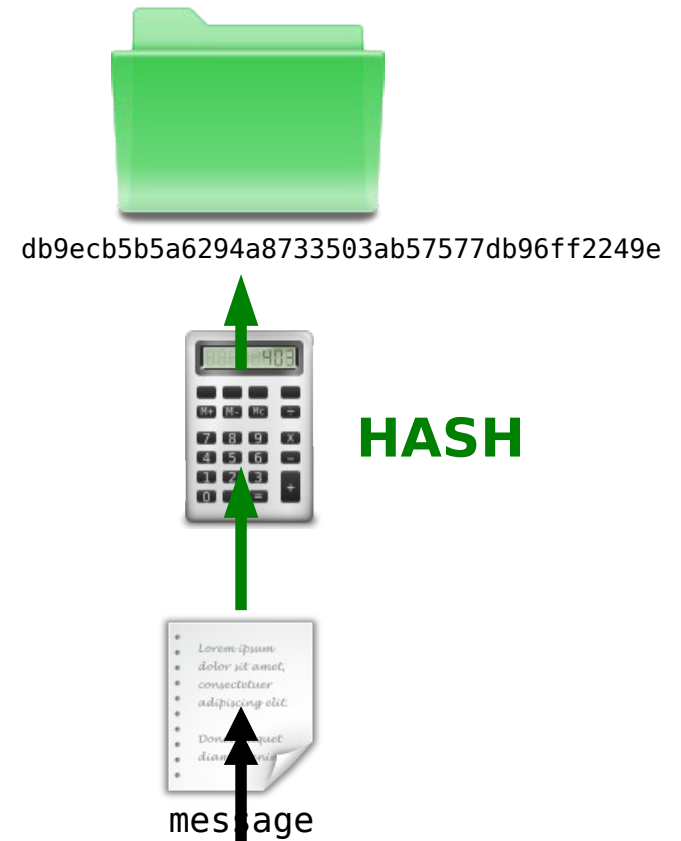
Introduced a new foo,
and reset the bar to
xyzy.

Distribu  



```
2009-05-22 12:12:12
parent: snapshot-113
author: Alice <a@li.ce>
```

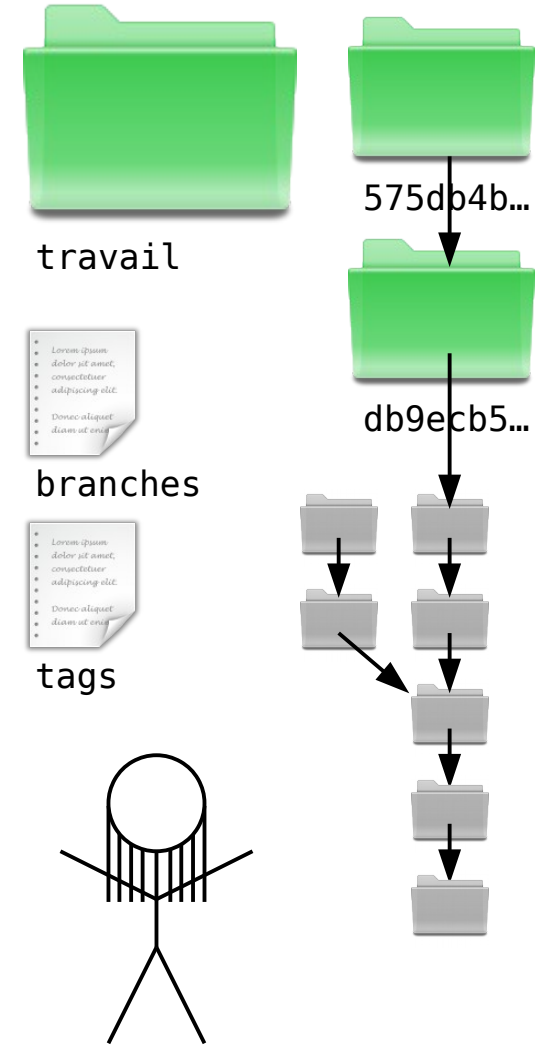
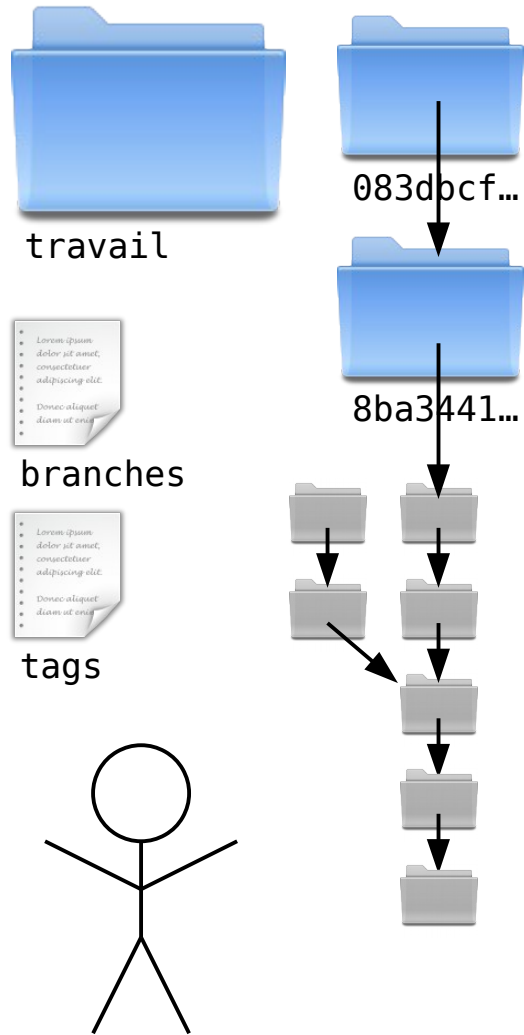
Blarfle, a cool new feature; extends the existing blorg.



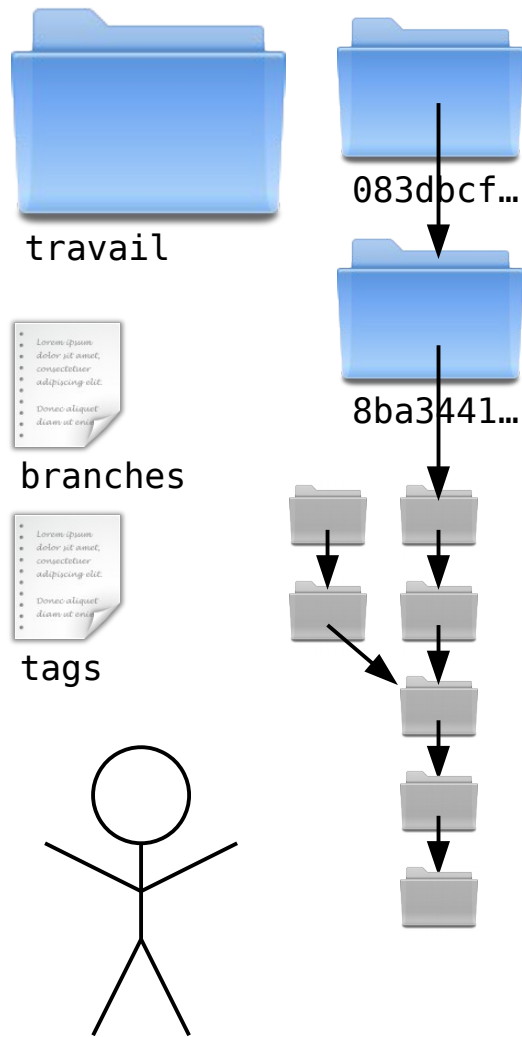
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2009-05-21 23:45:01
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Introduced a new foo, and reset the bar to xyzzy.

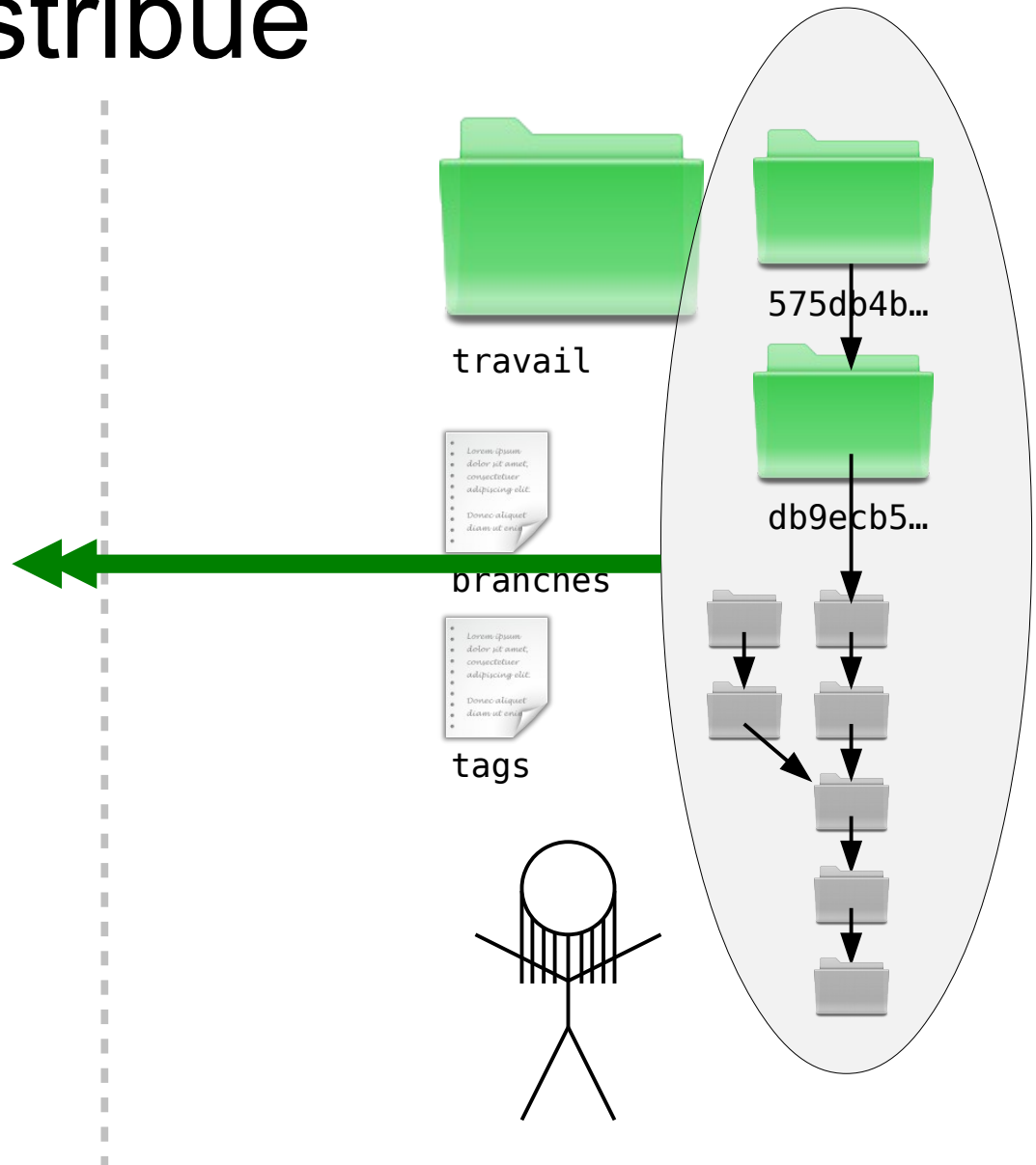
Distribué



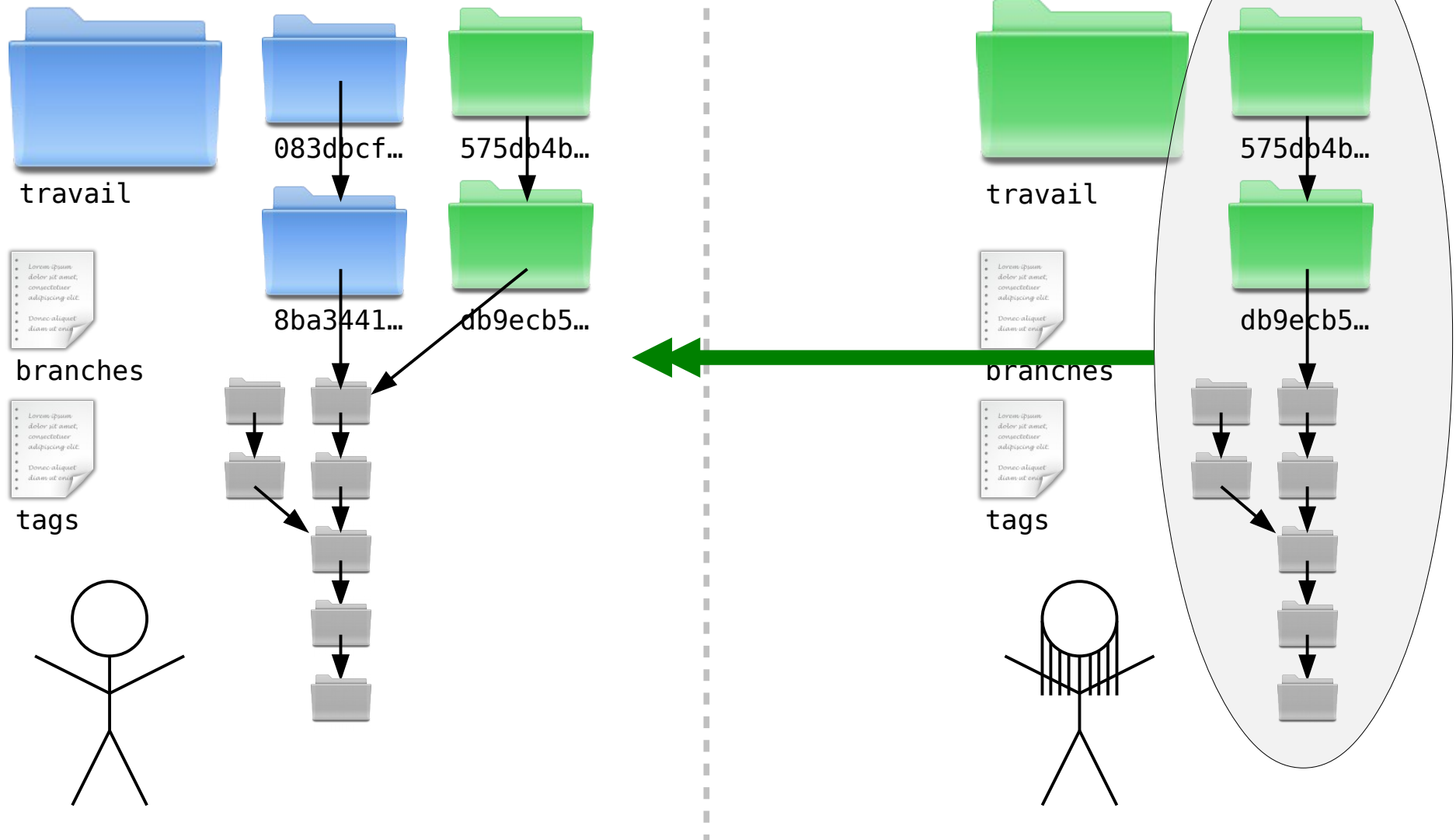
Distribué



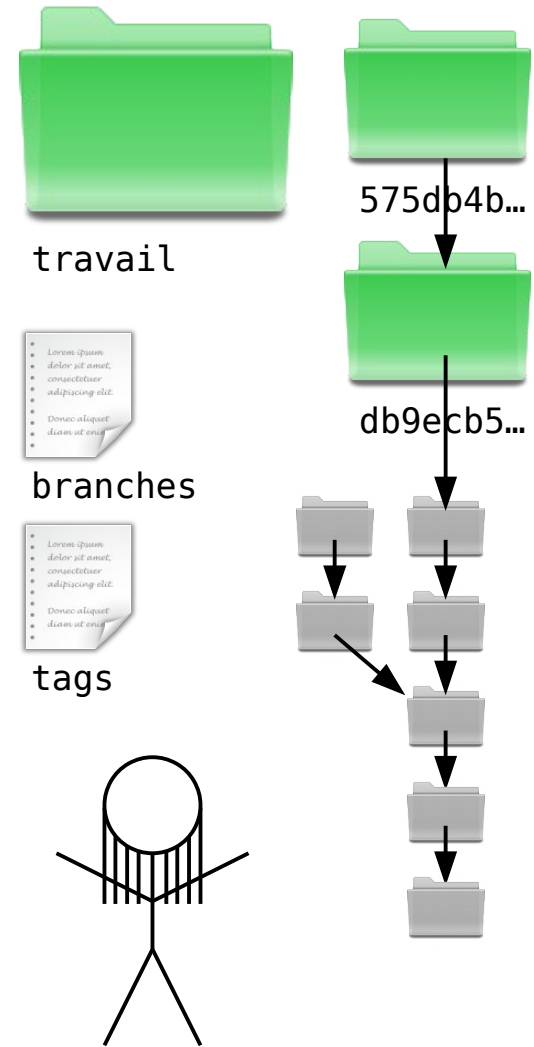
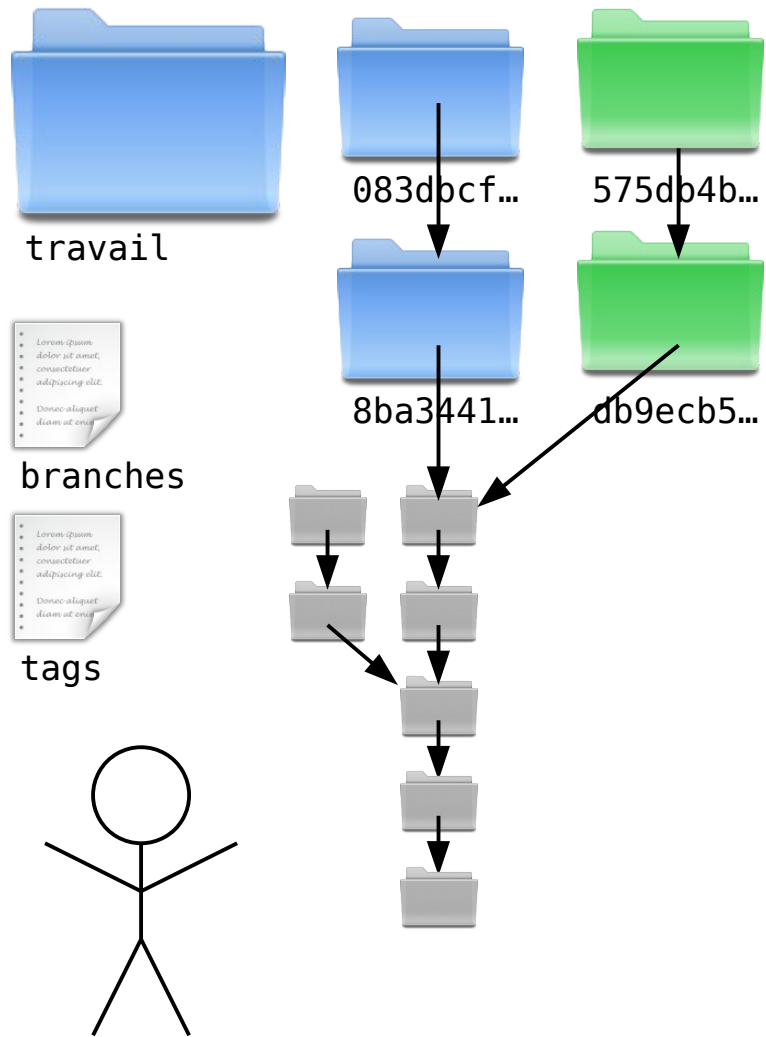
?



Distribué



Distribué



Déconnecté



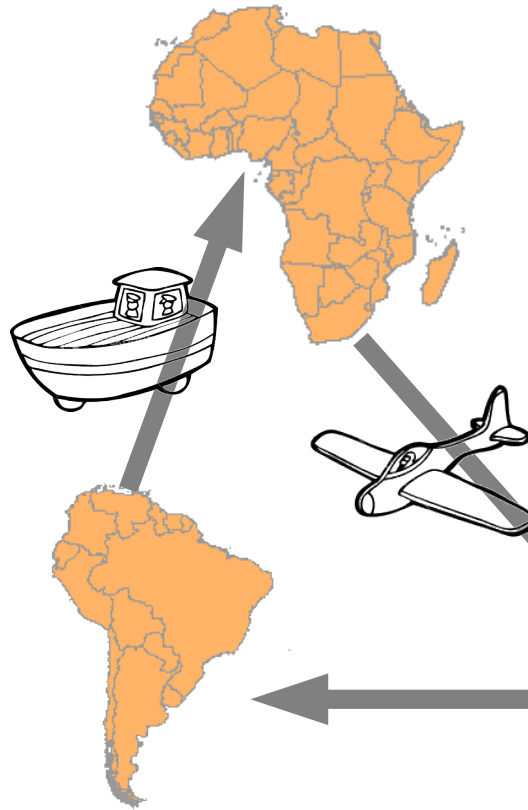
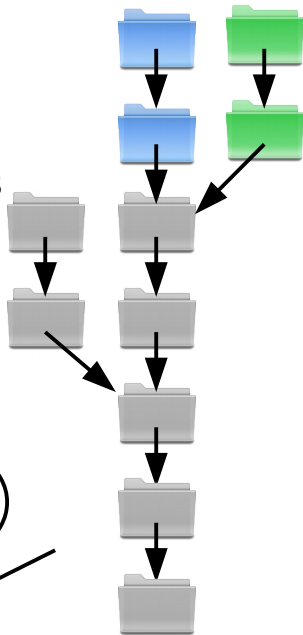
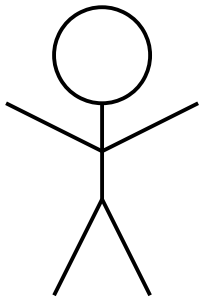
travail



branches



tags



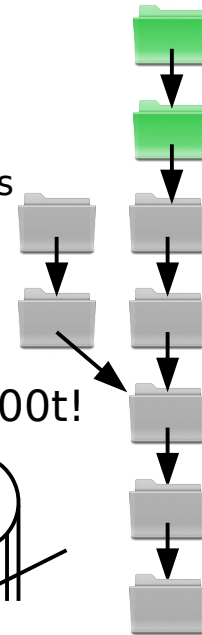
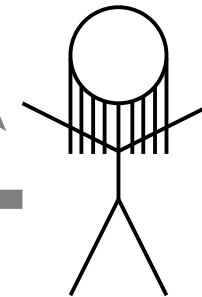
travail



branches



tags



Déconnecté



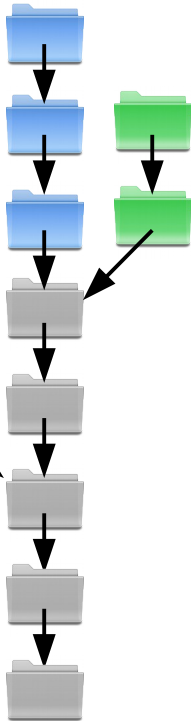
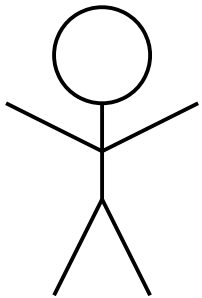
travail



branches



tags



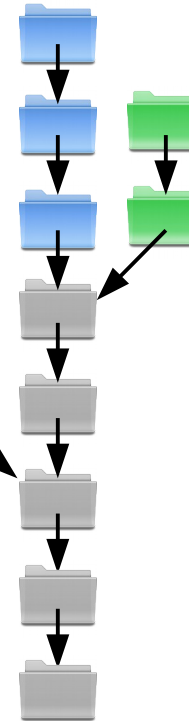
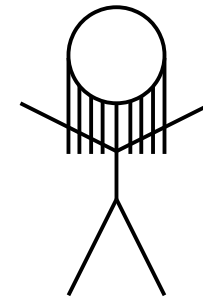
travail



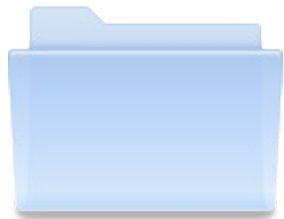
branches



tags



(simplifions la représentation)



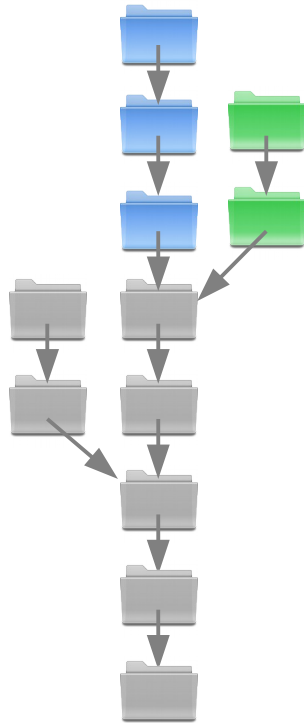
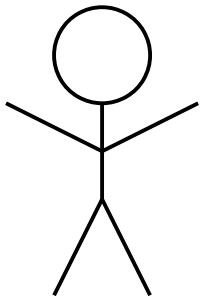
travail



branches



tags



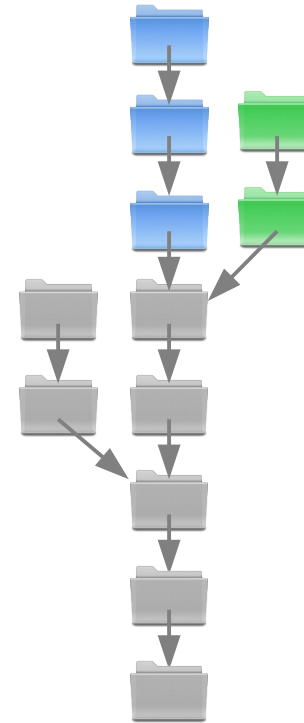
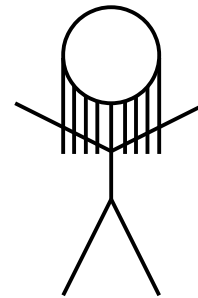
travail



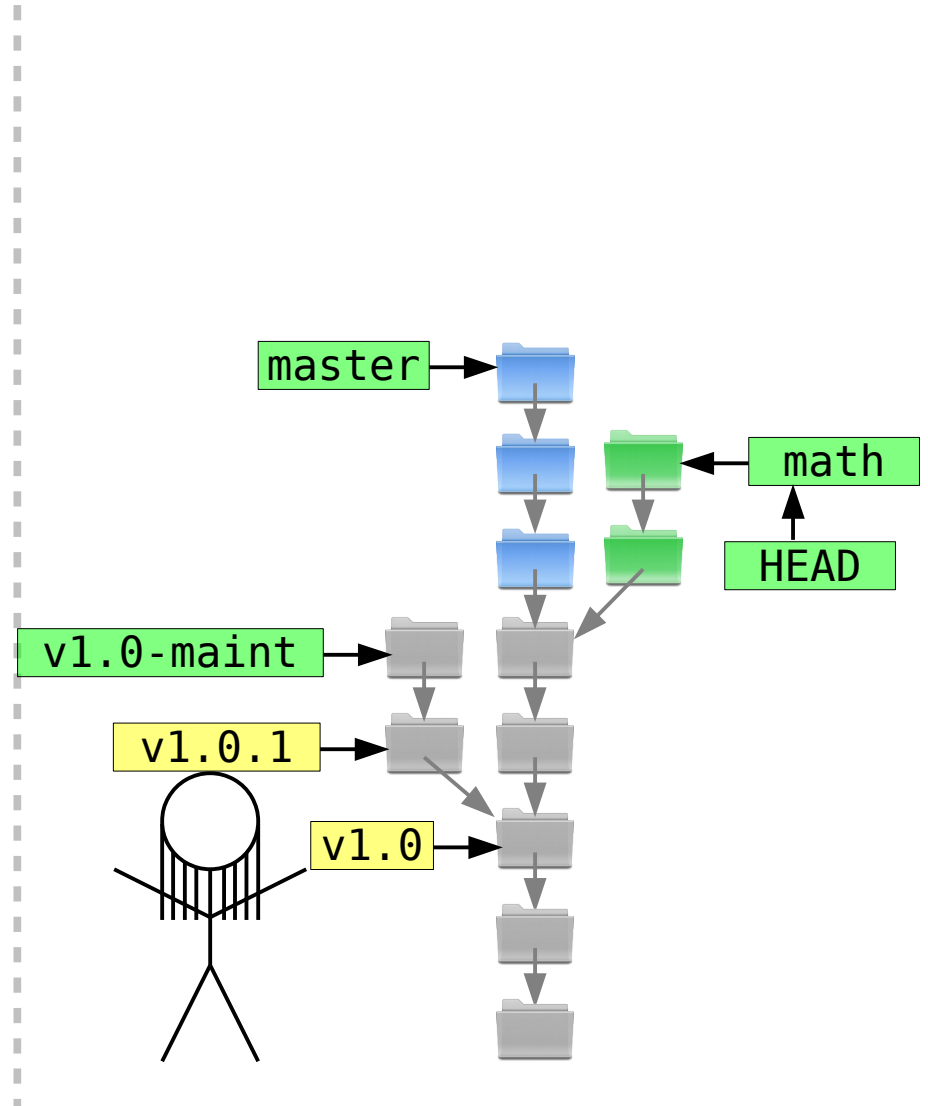
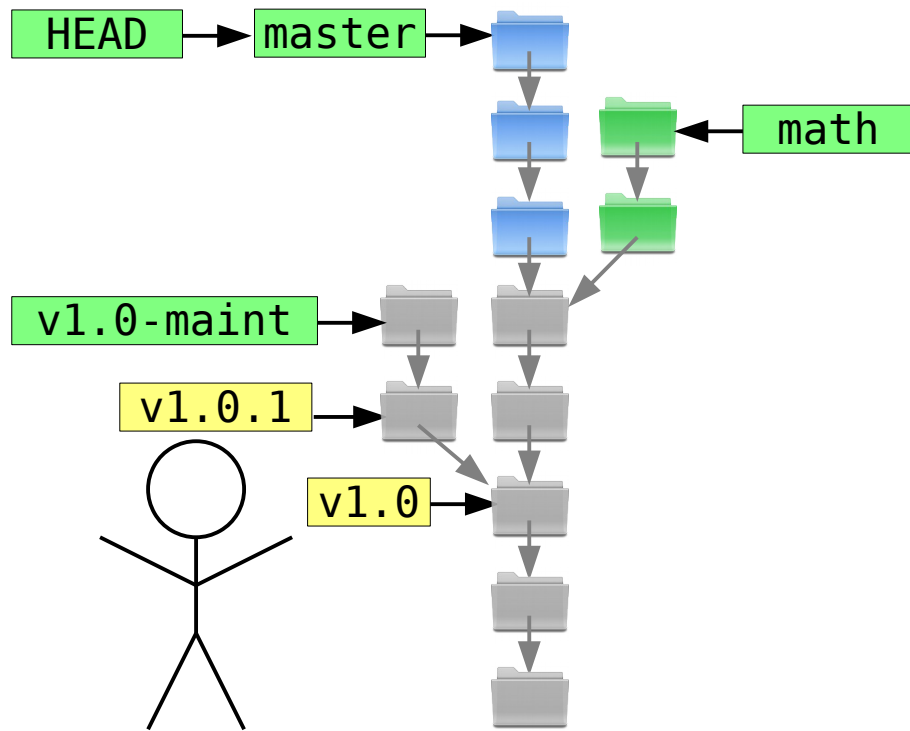
branches



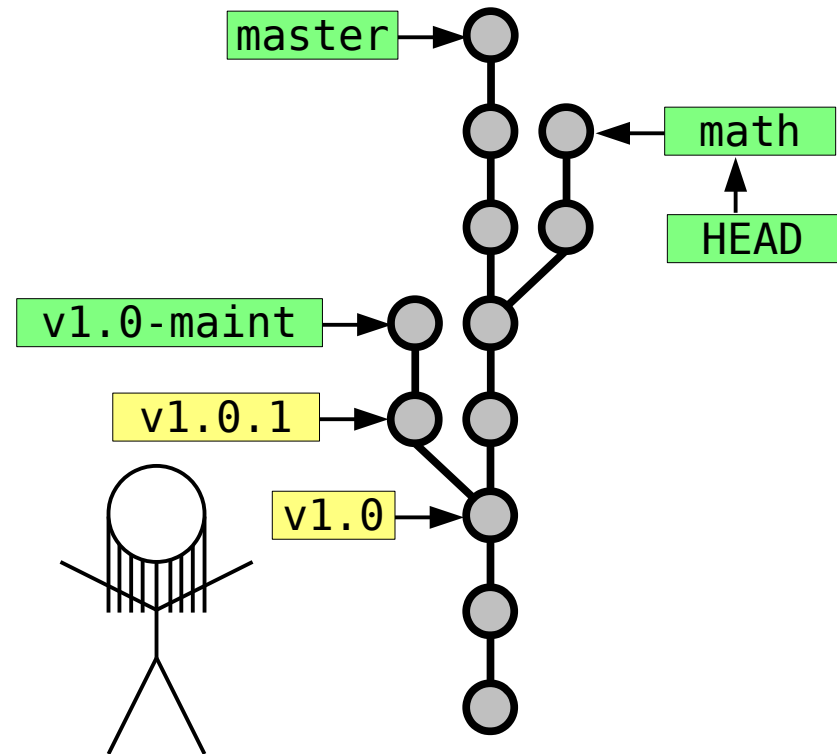
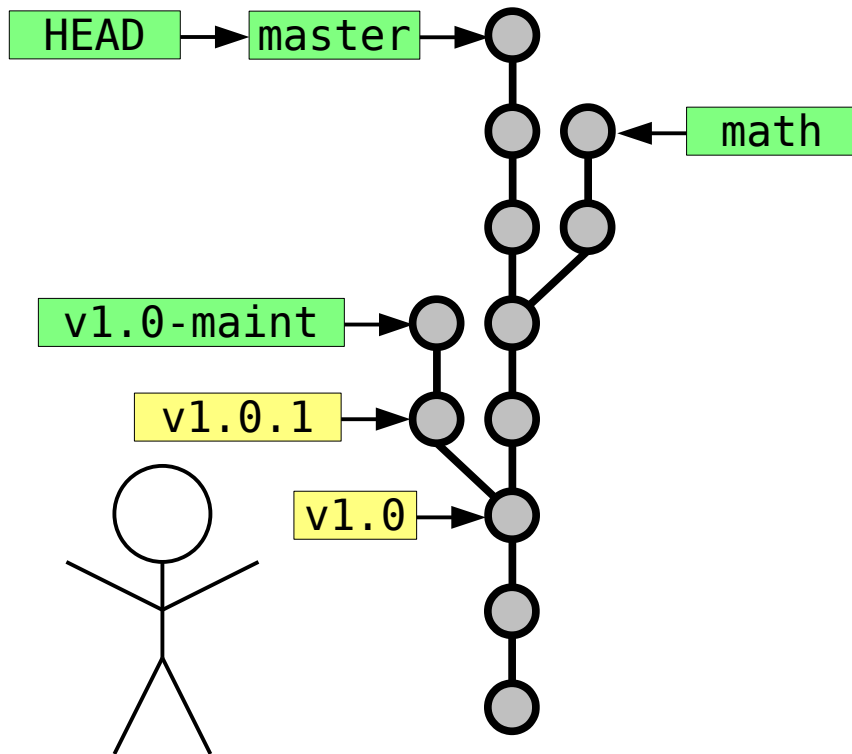
tags



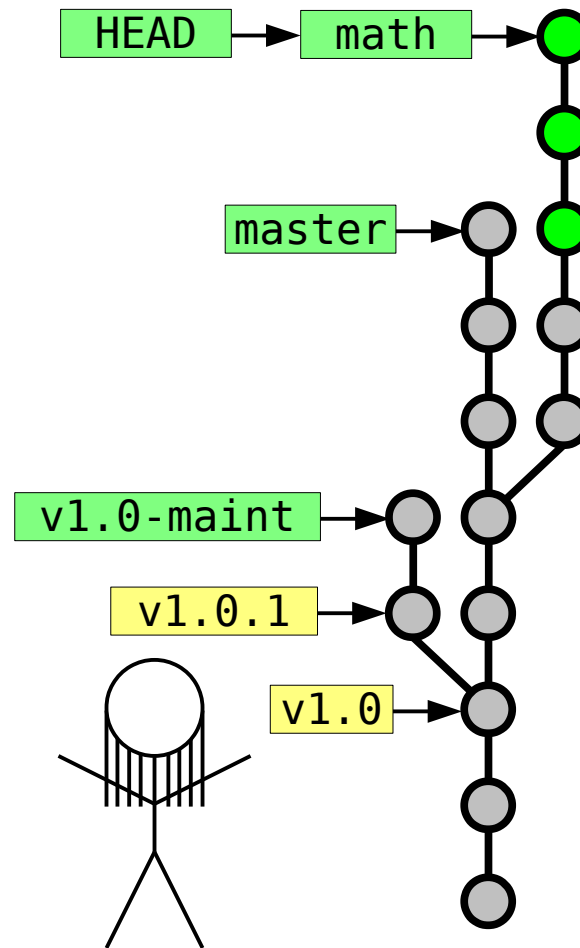
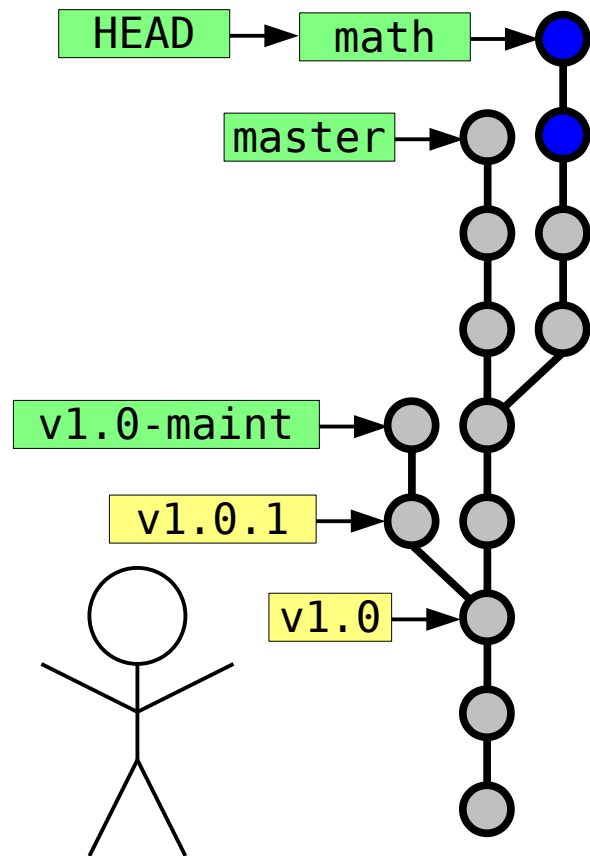
(simplifions la représentation)



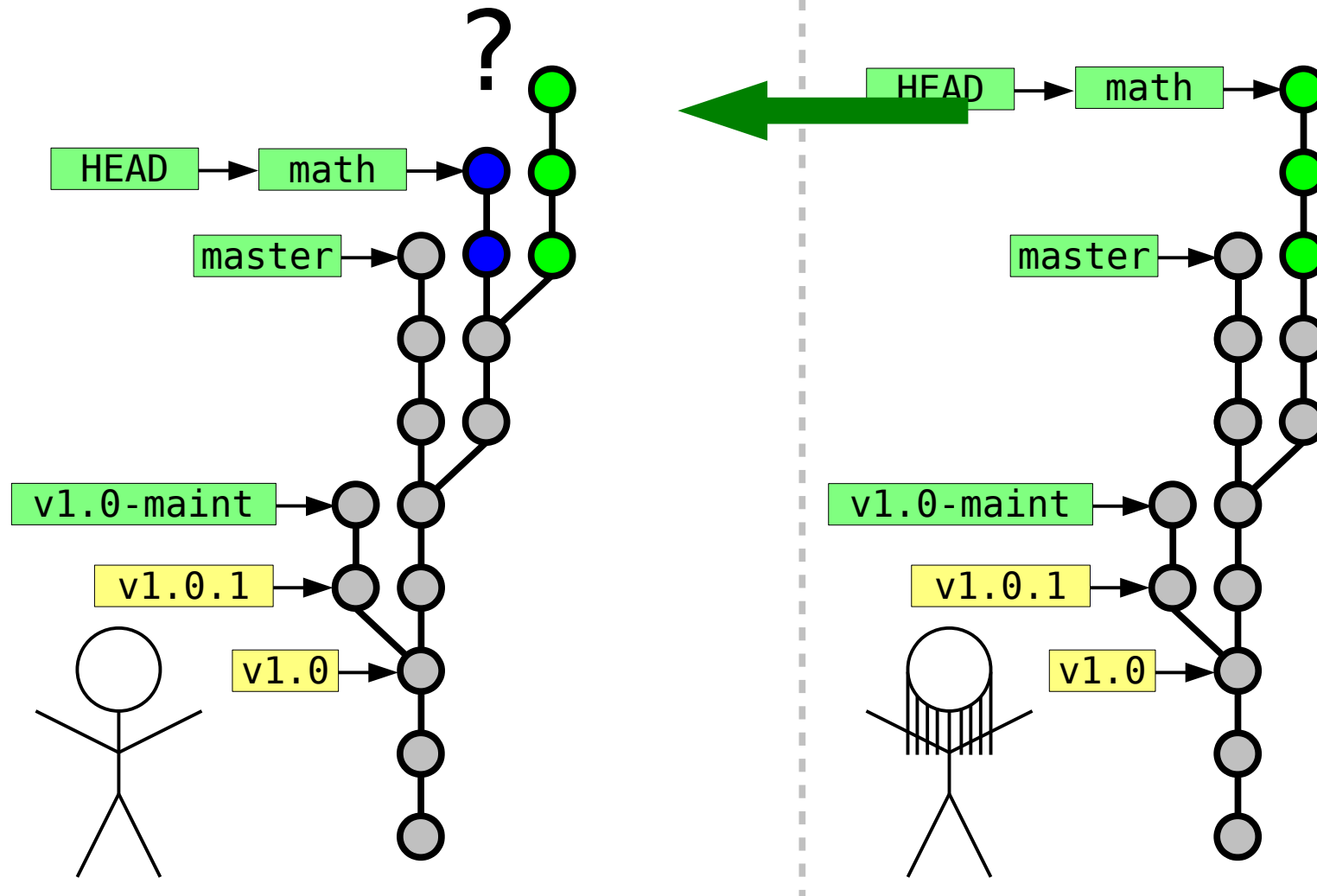
(simplifions la représentation)



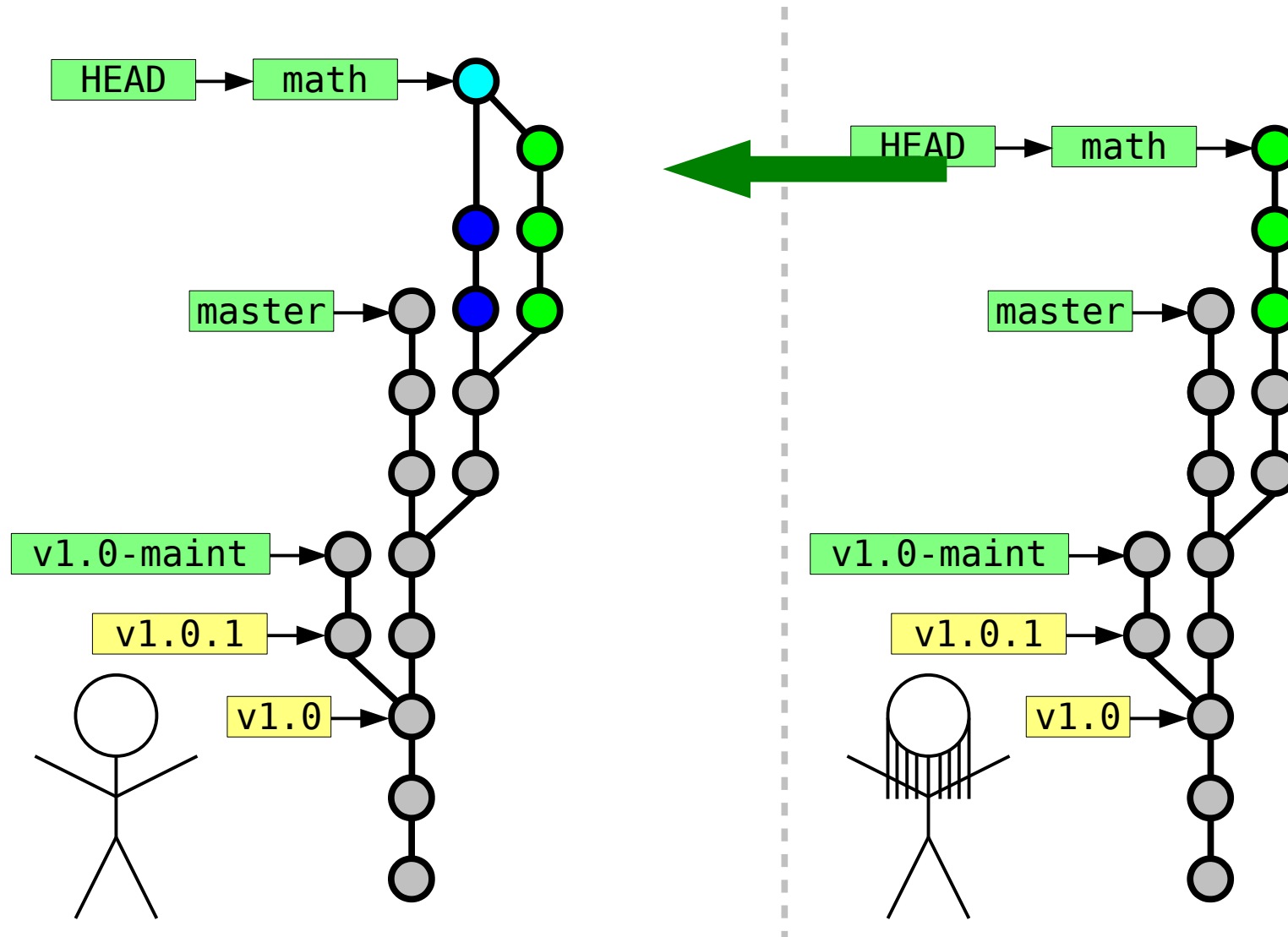
Merges



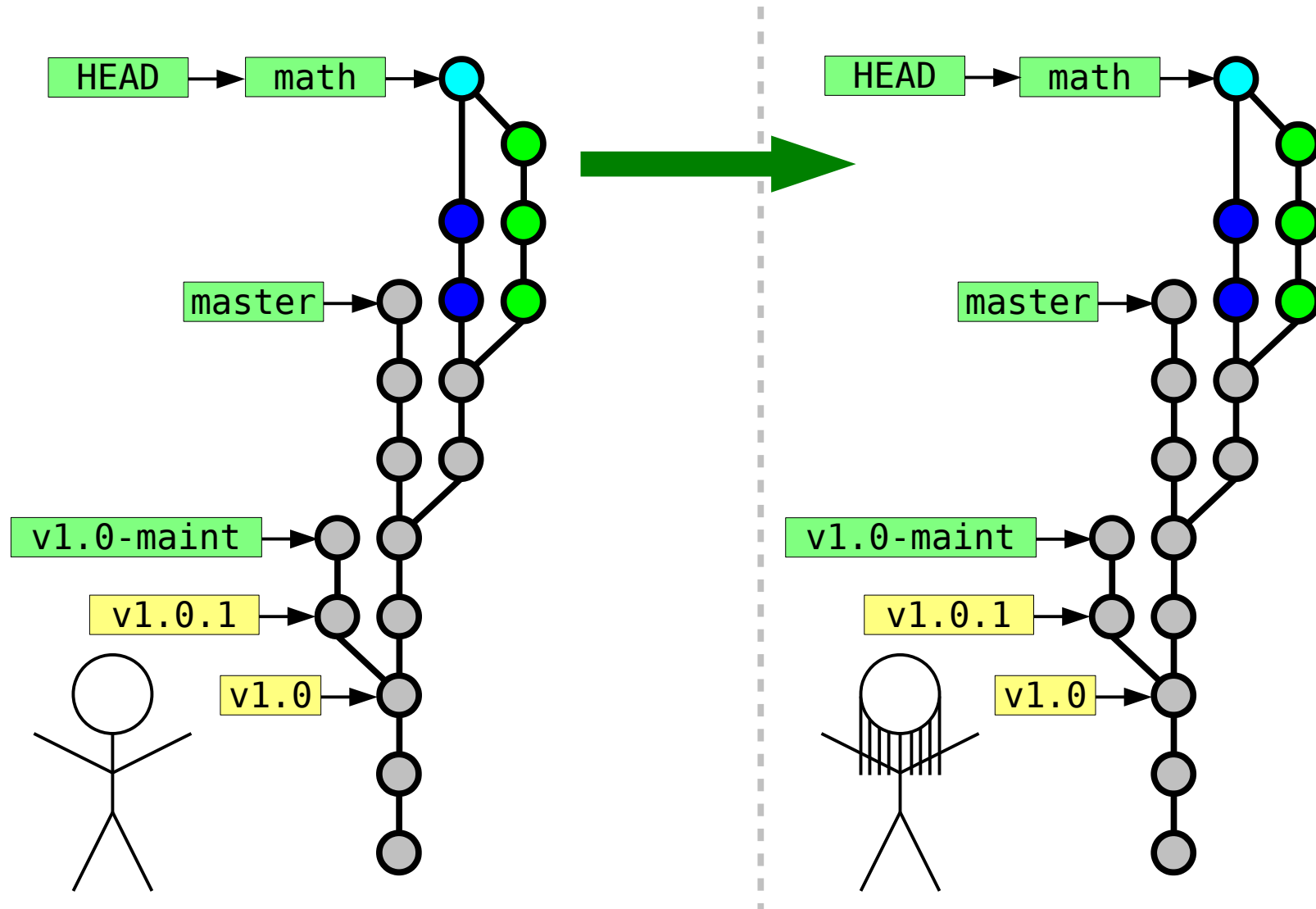
Merges



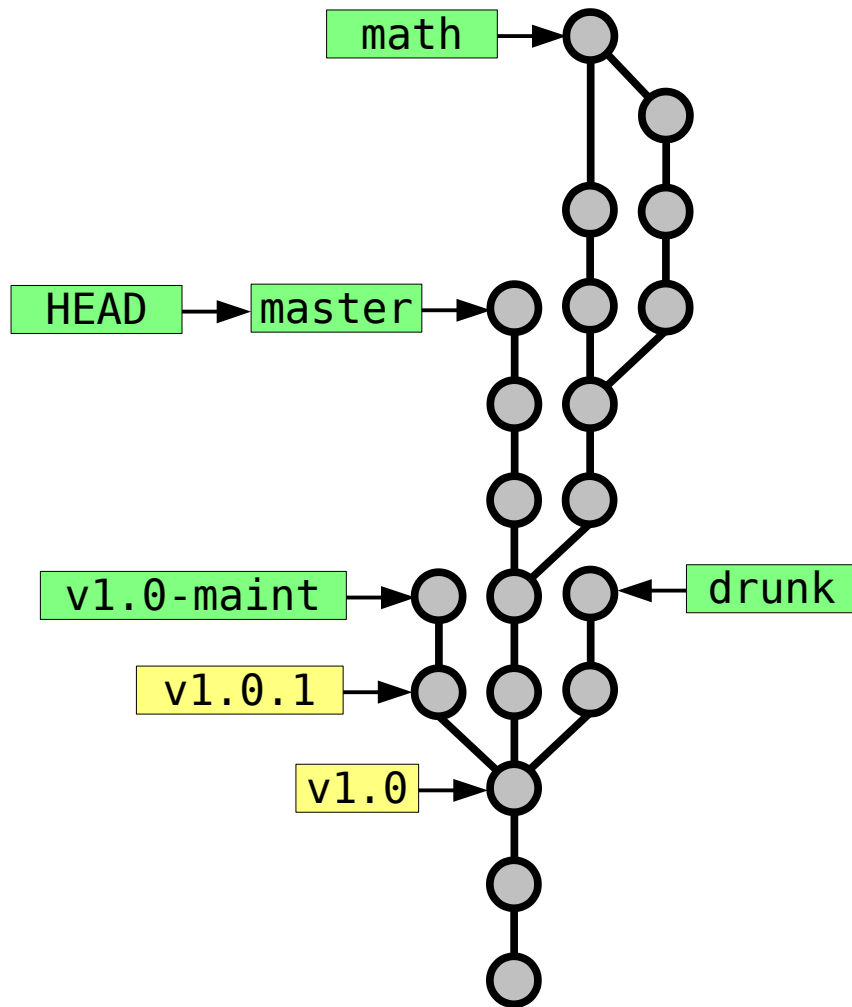
Merges



Merges



Staging Area

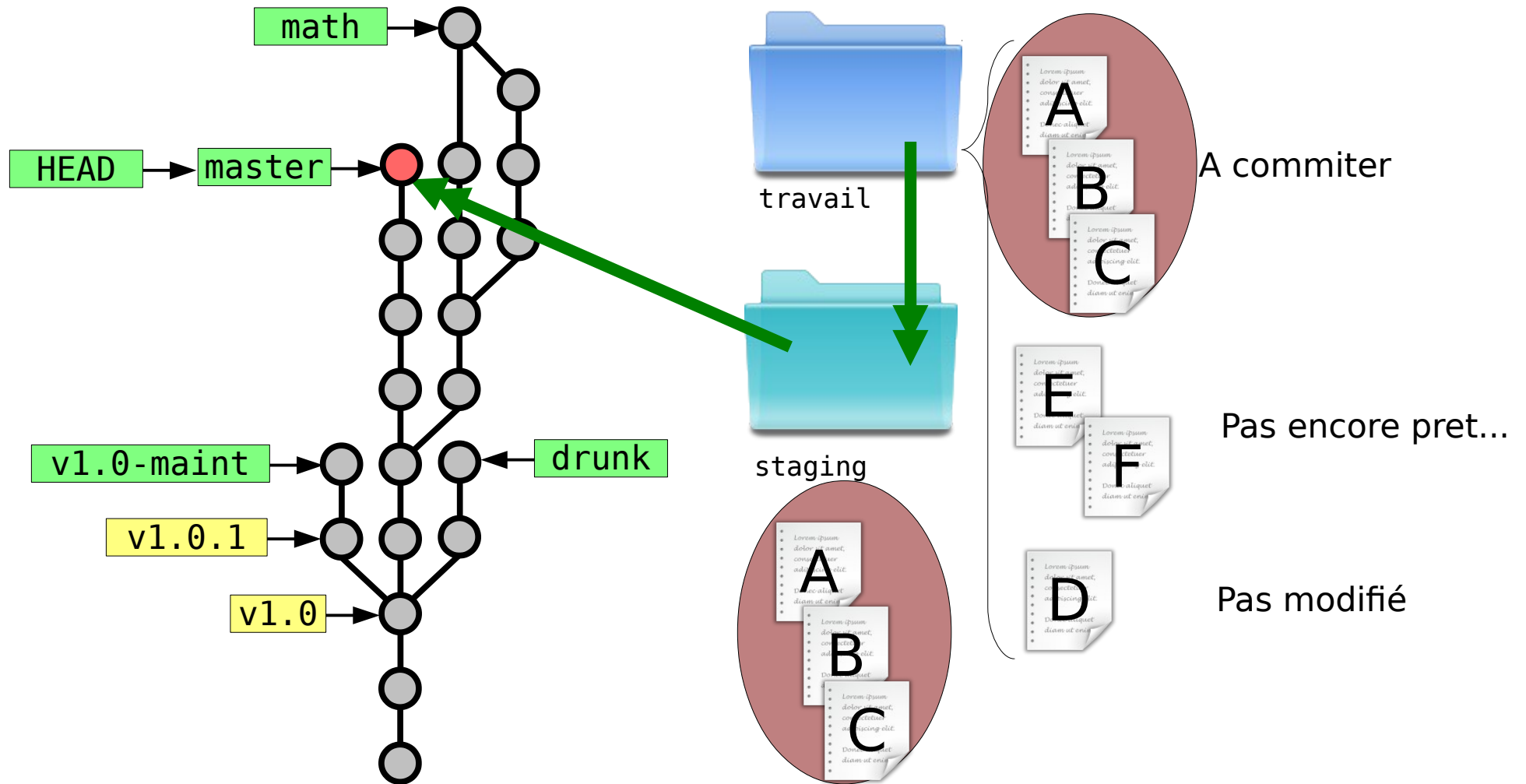


A commiter

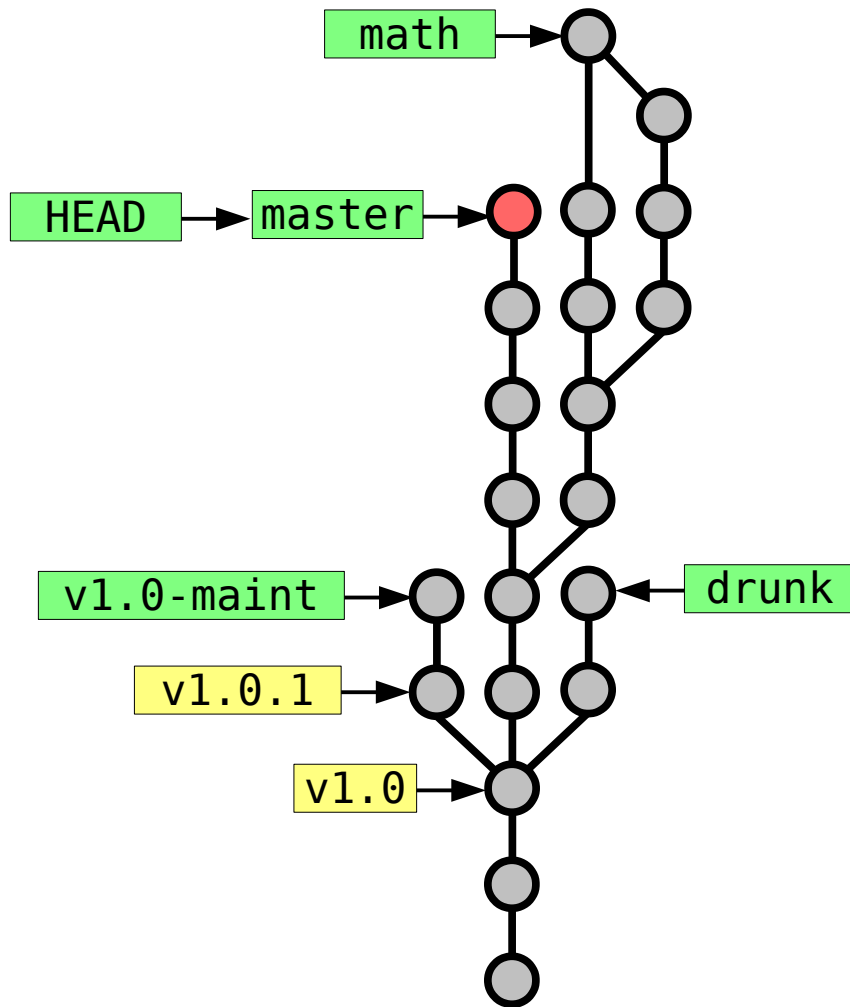
Pas encore pret...

Pas modifié

Staging Area



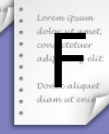
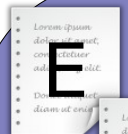
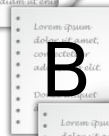
Staging Area



travail



staging

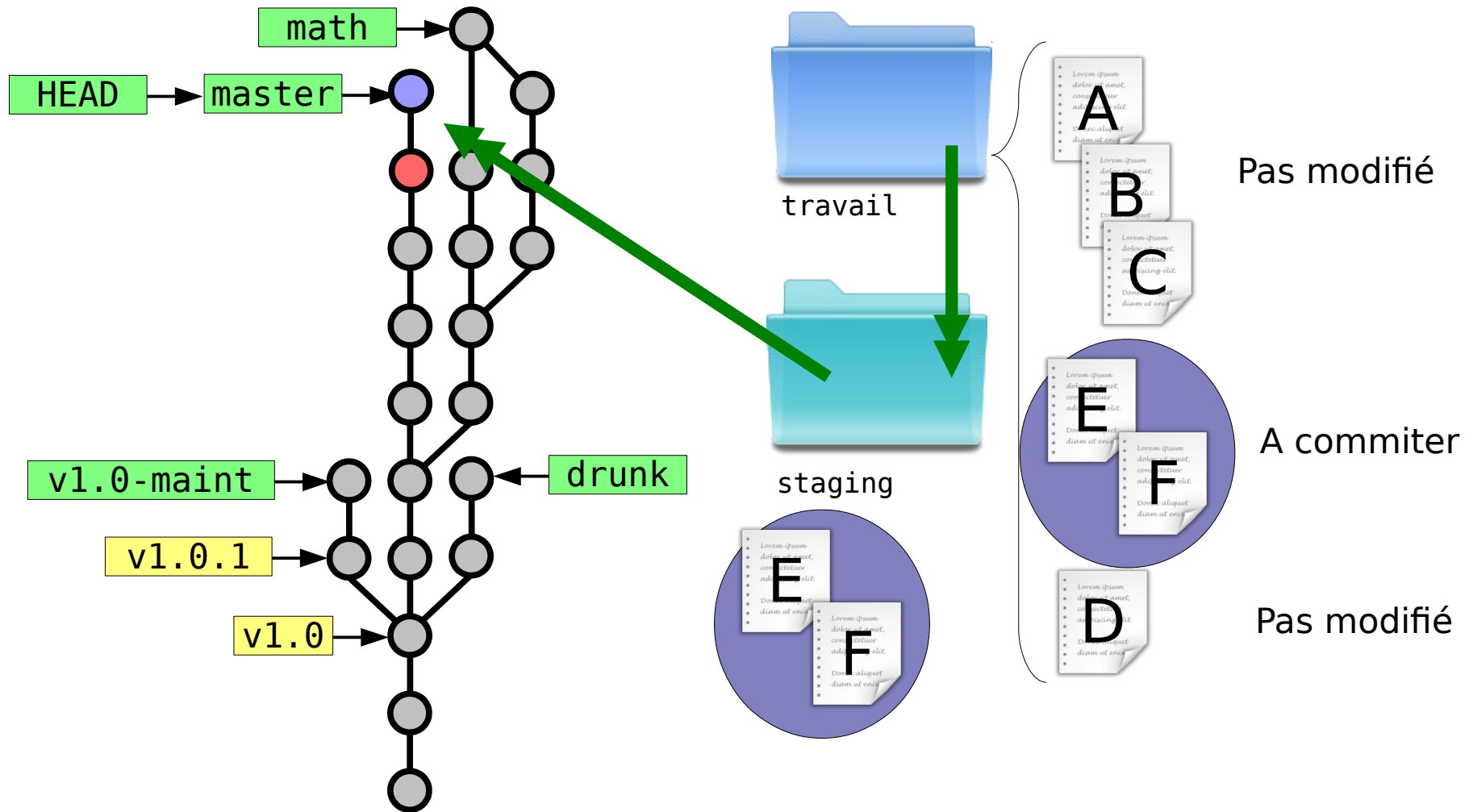


Pas modifié

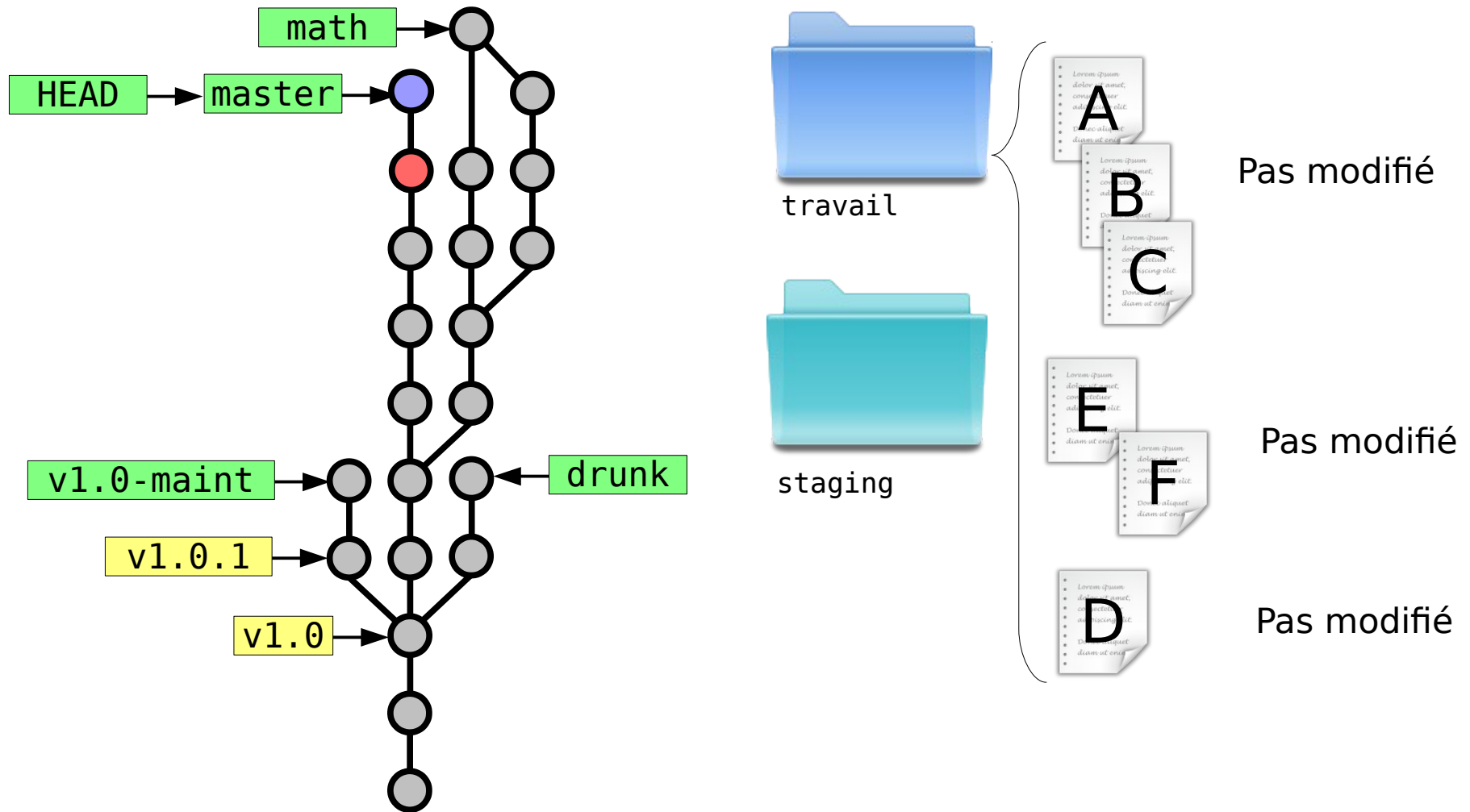
Pas encore prêt...

Pas modifié

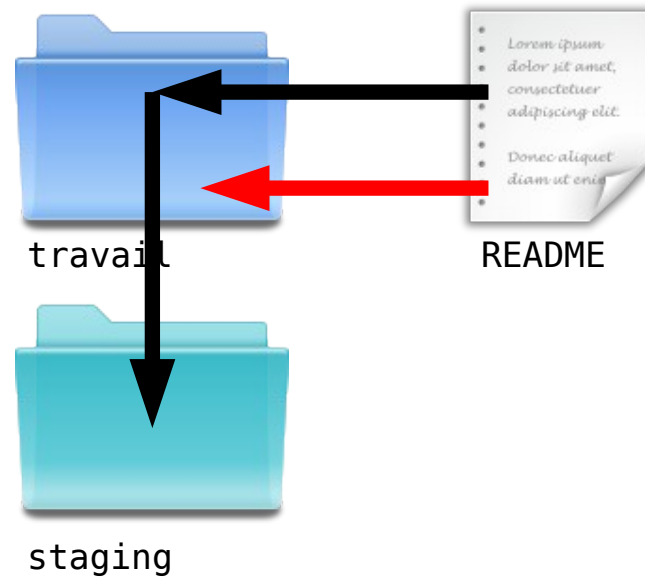
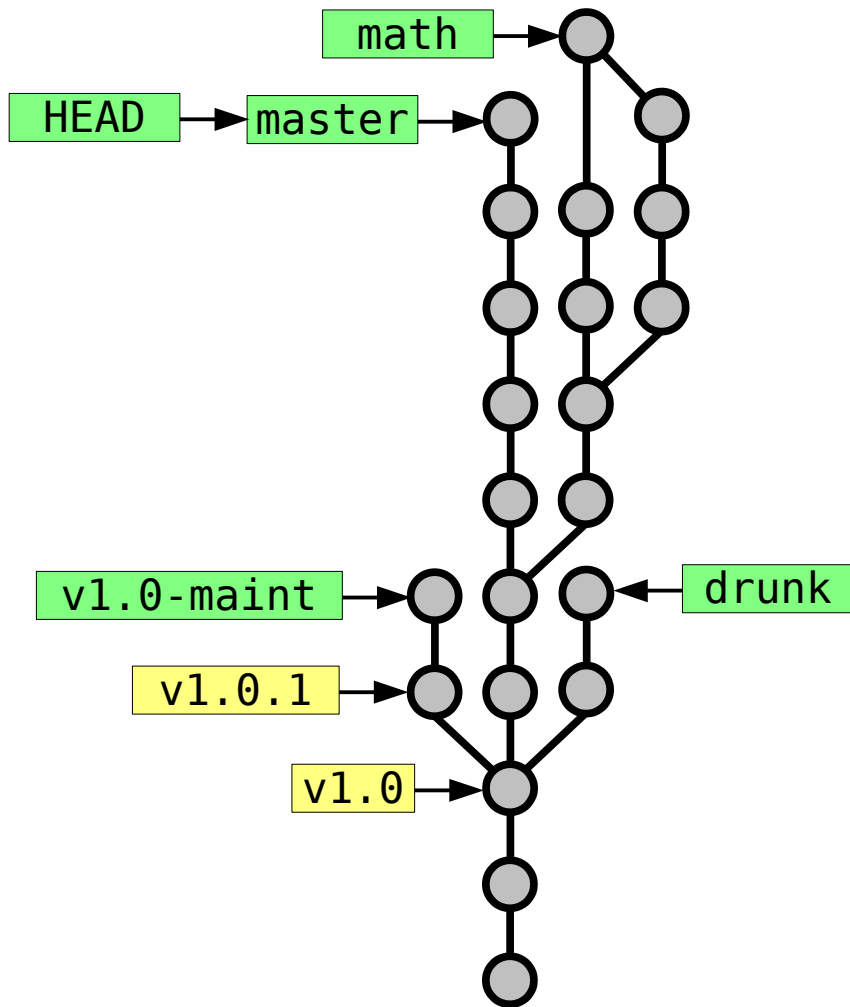
Staging Area



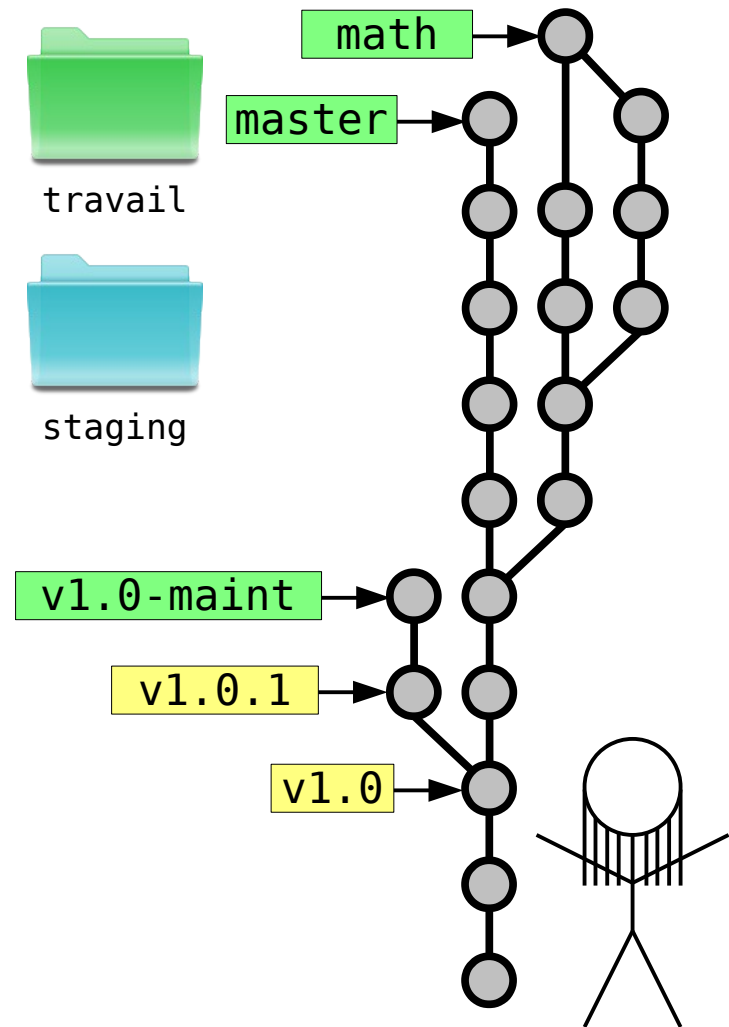
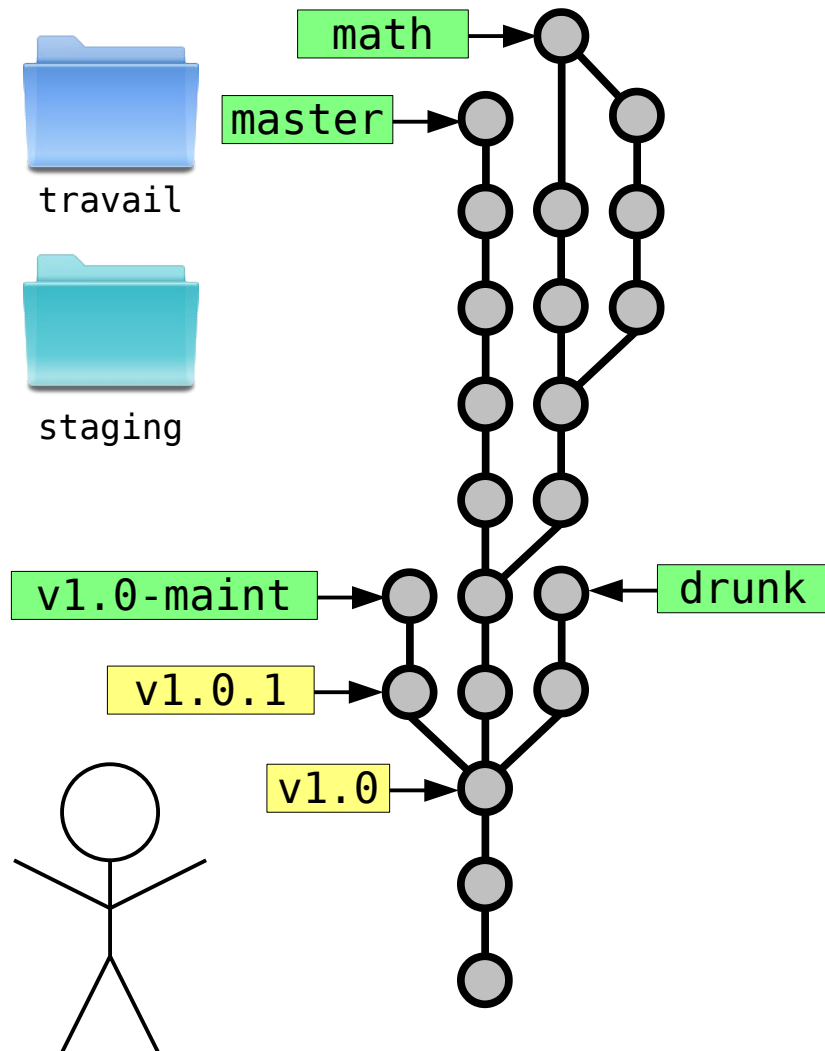
Staging Area



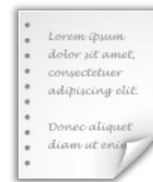
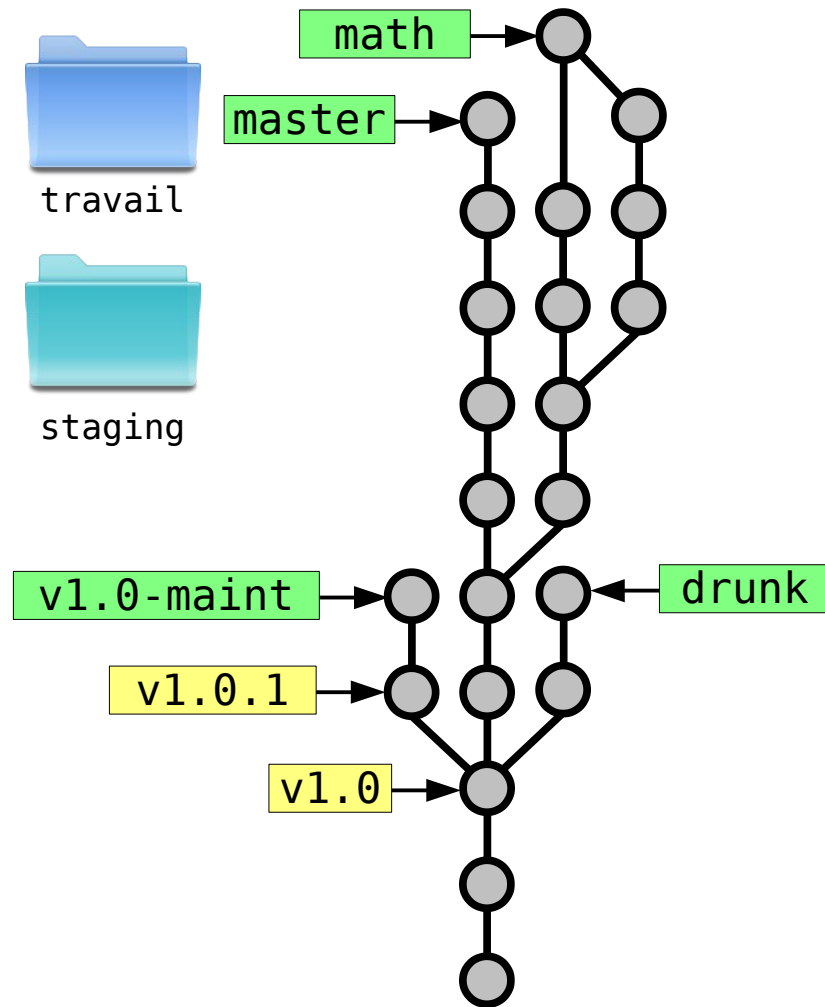
Staging



Supprimer les doublons



Supprimer les doublons



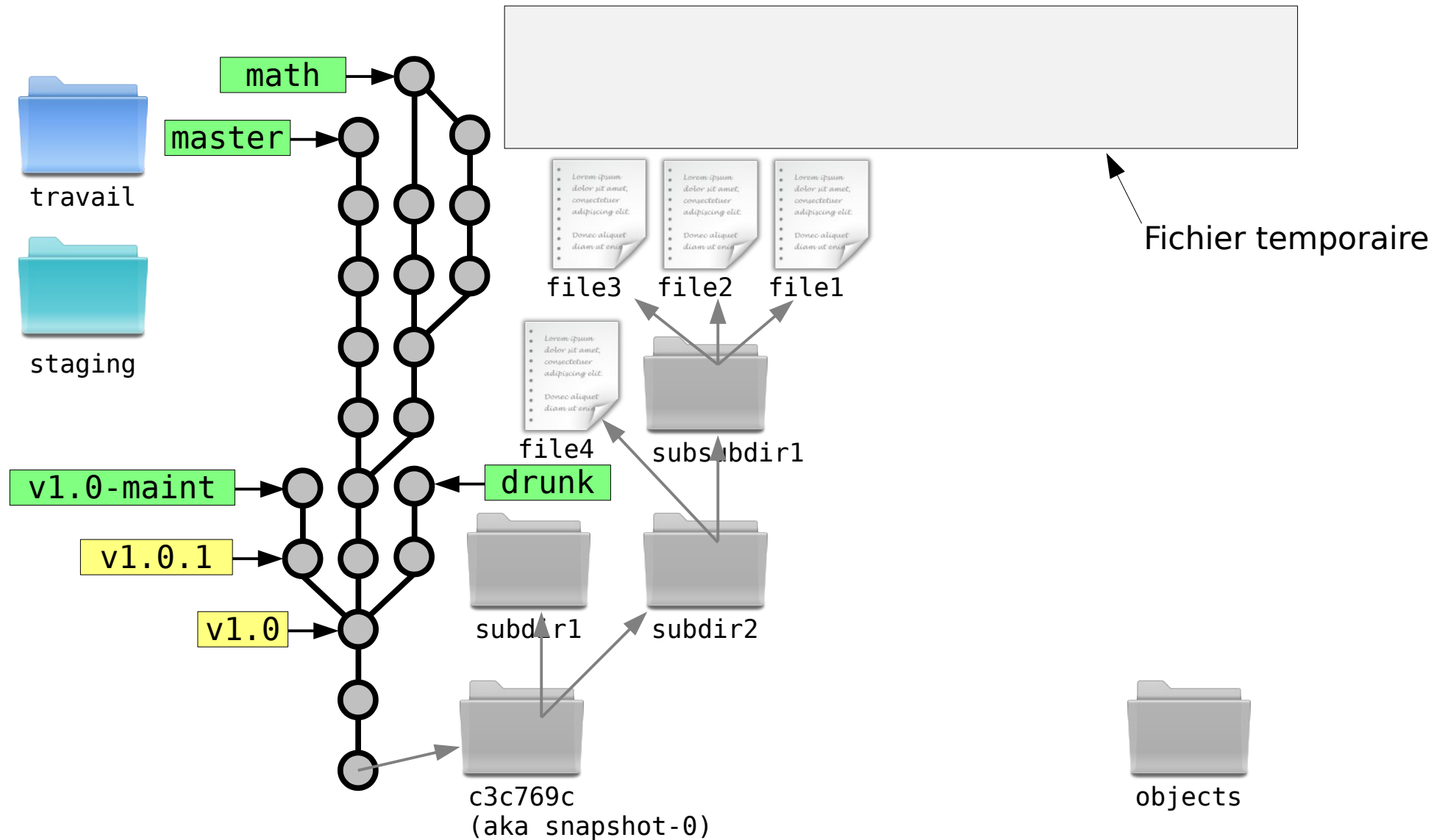
HASH

2804133755c3ed396d162028c7b30a1cbcfecded

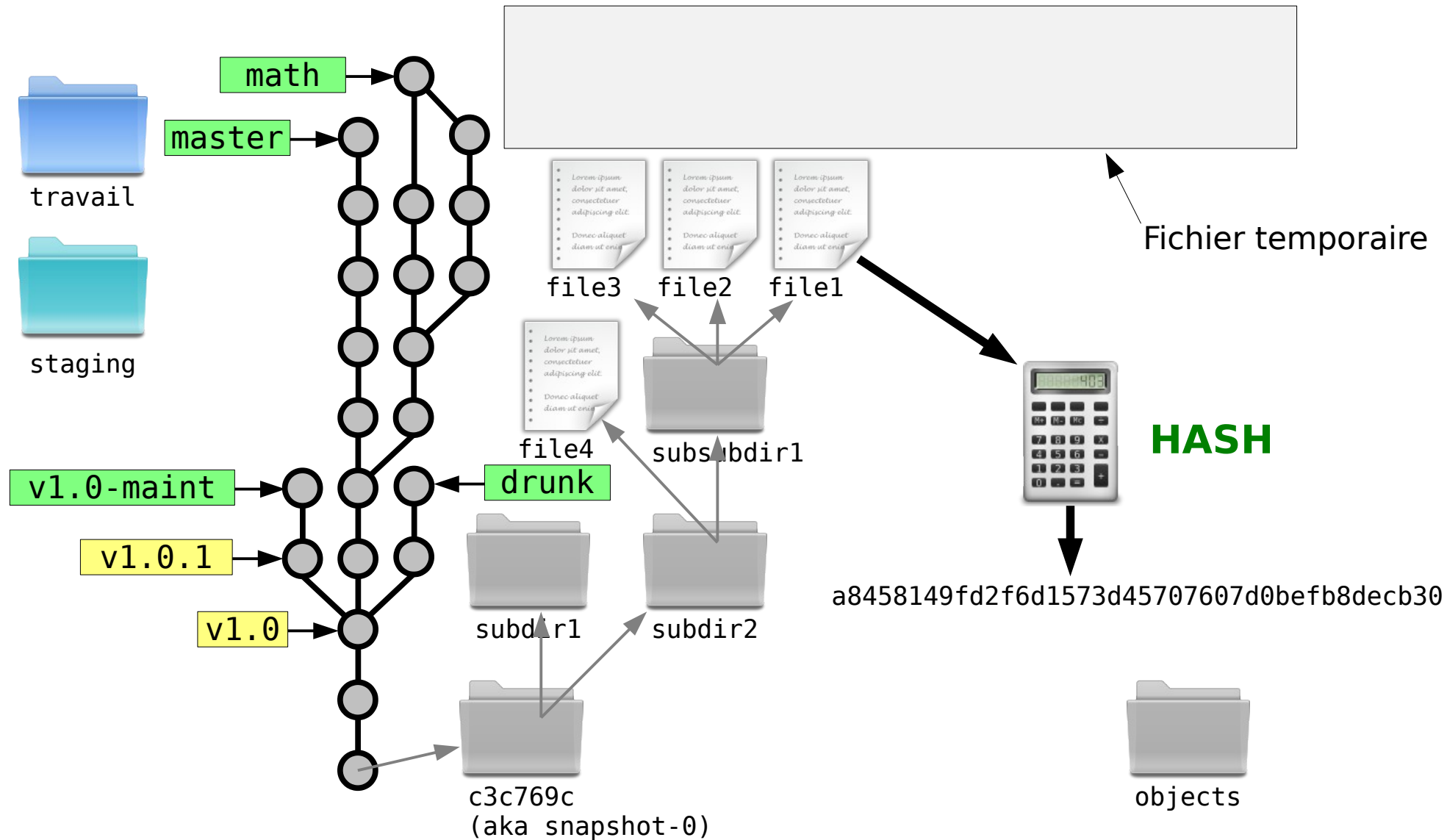


objects

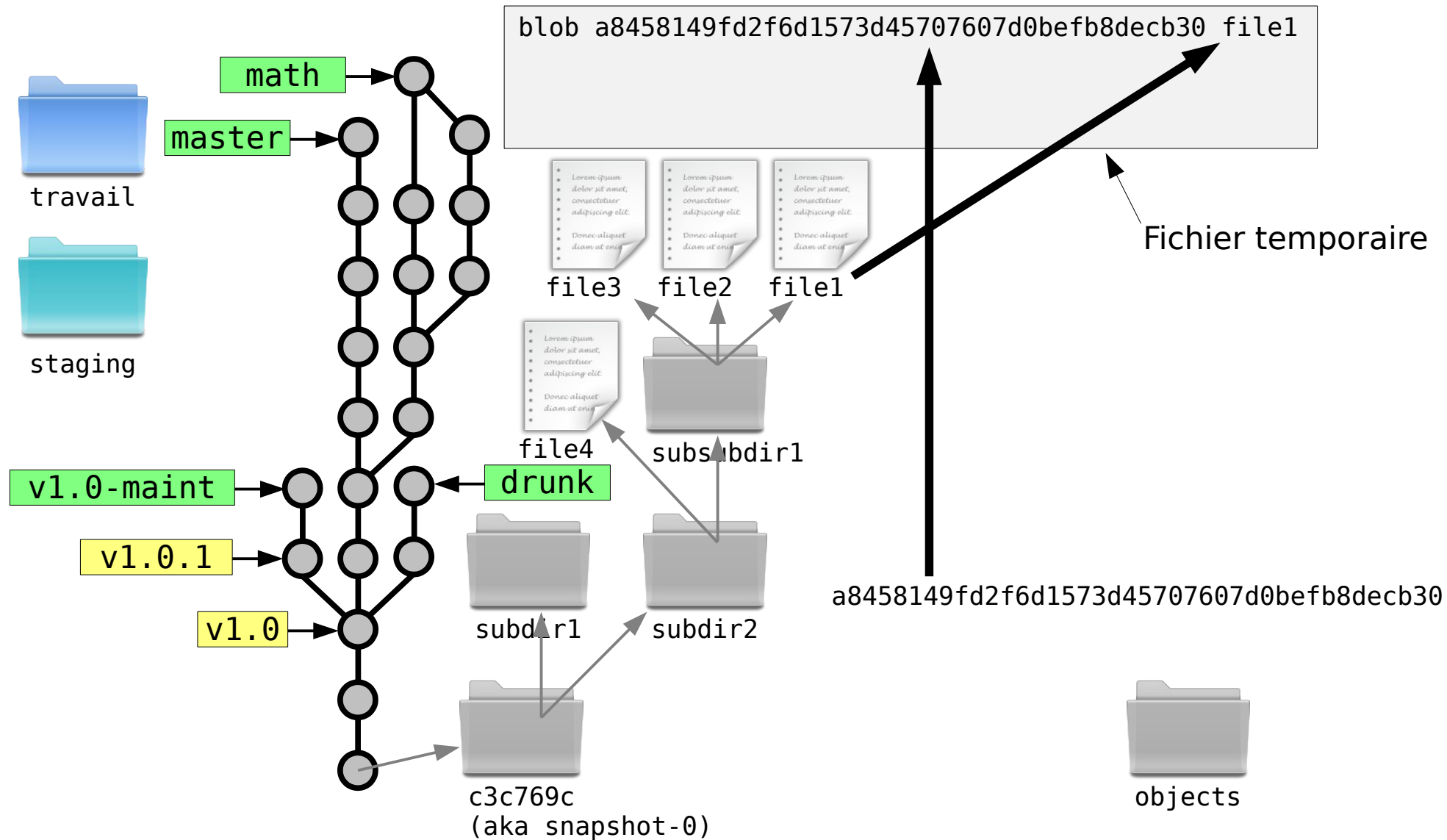
Supprimer les doublons



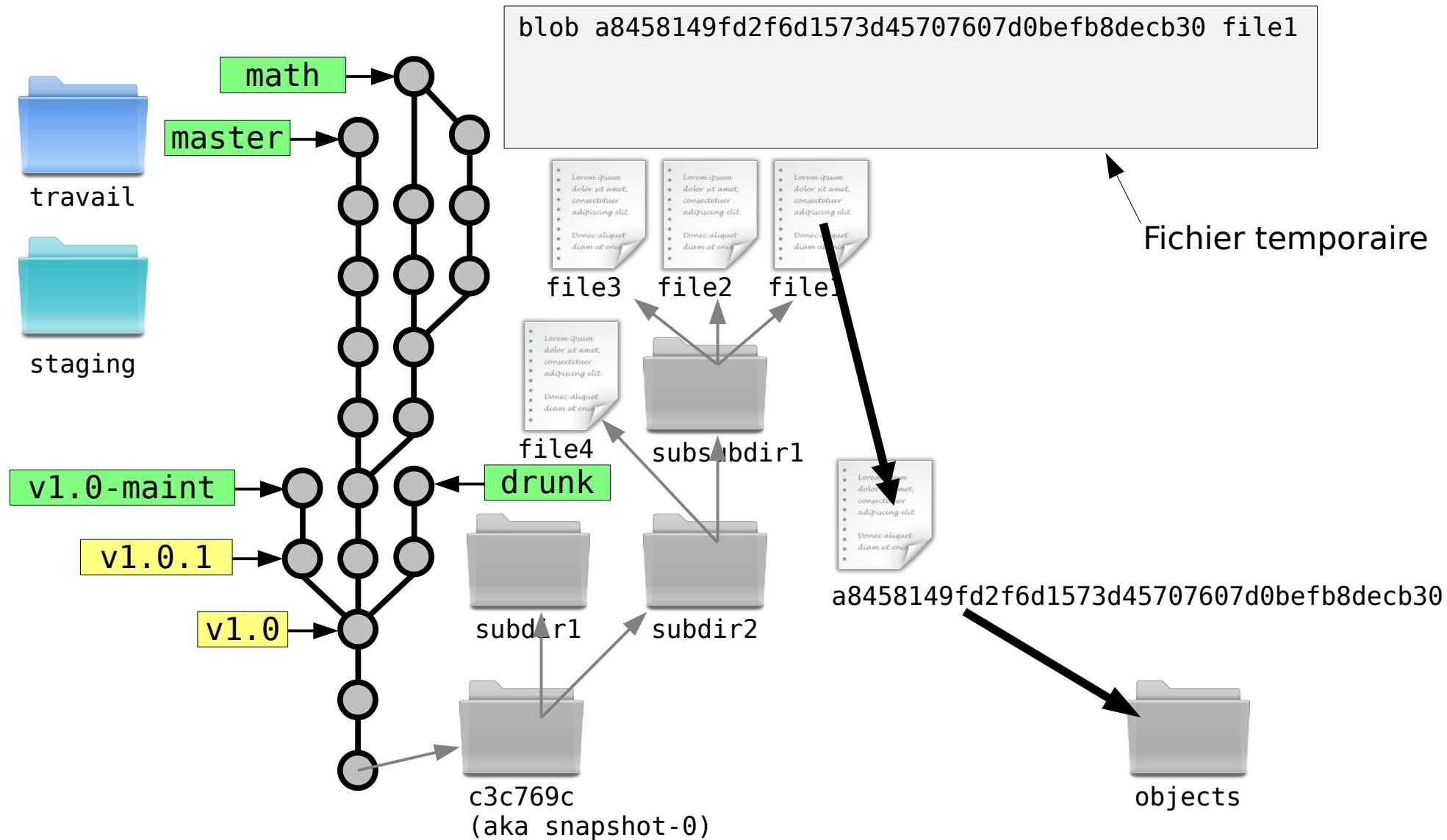
Supprimer les doublons



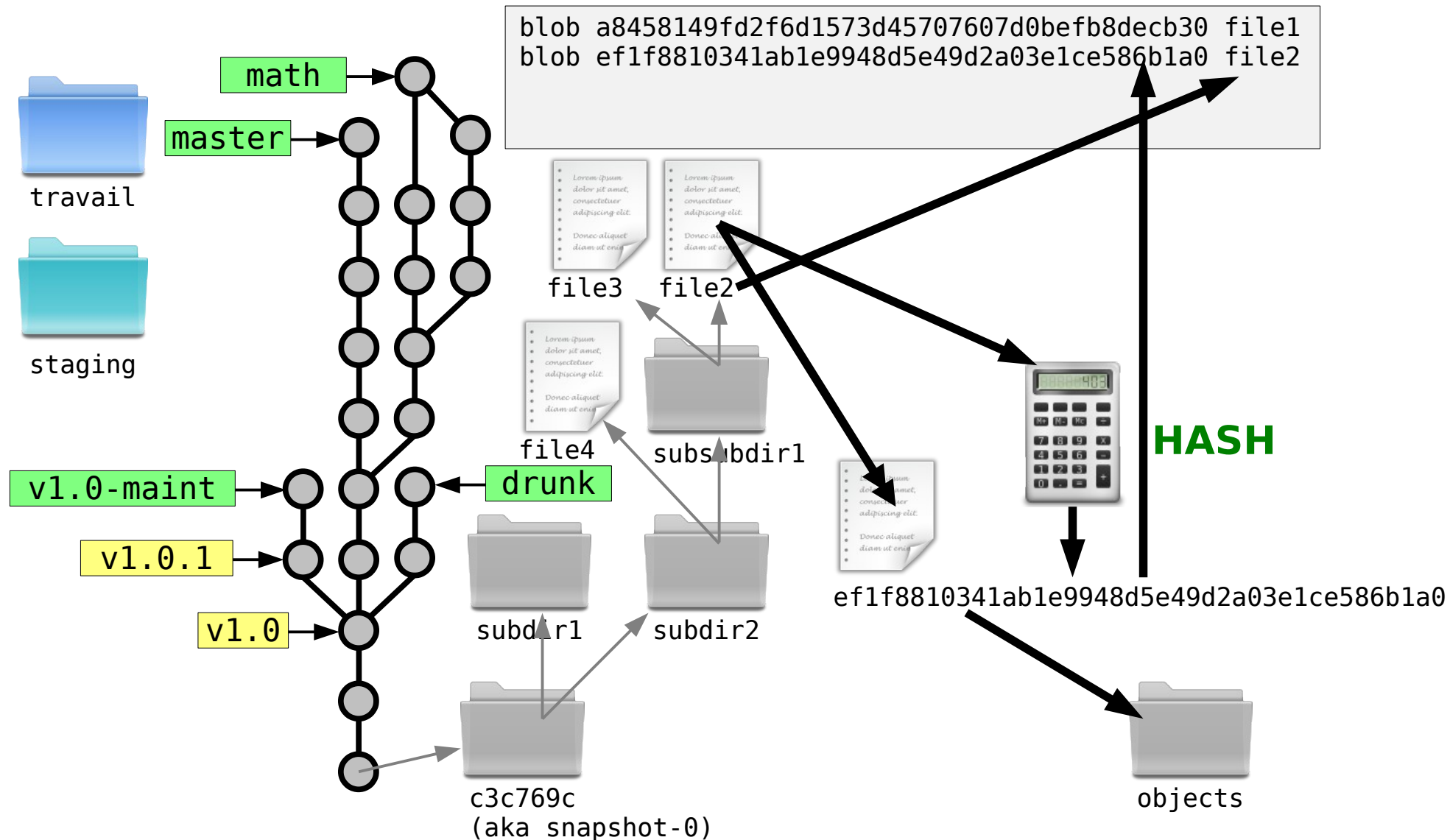
Supprimer les doublons



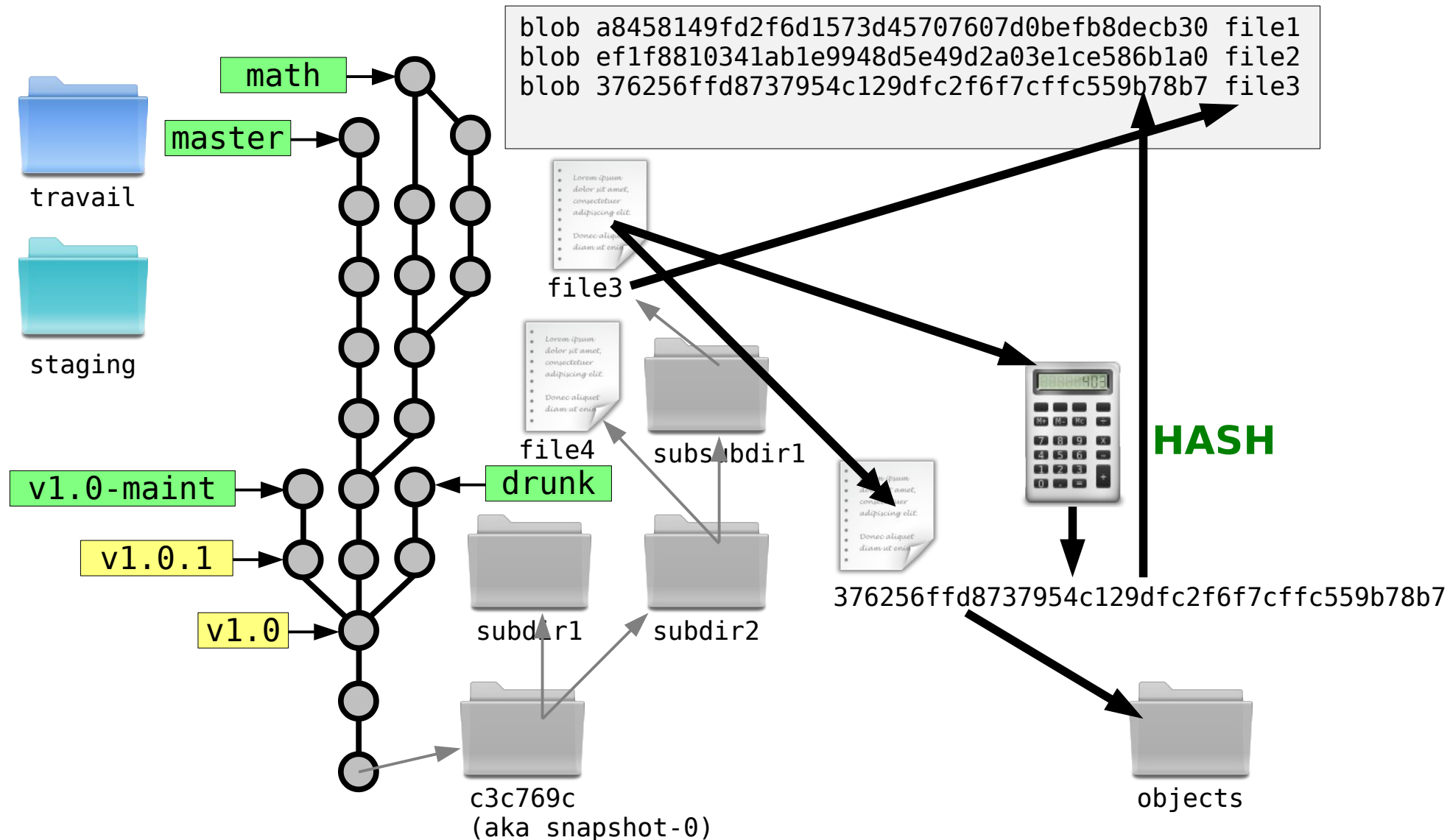
Supprimer les doublons



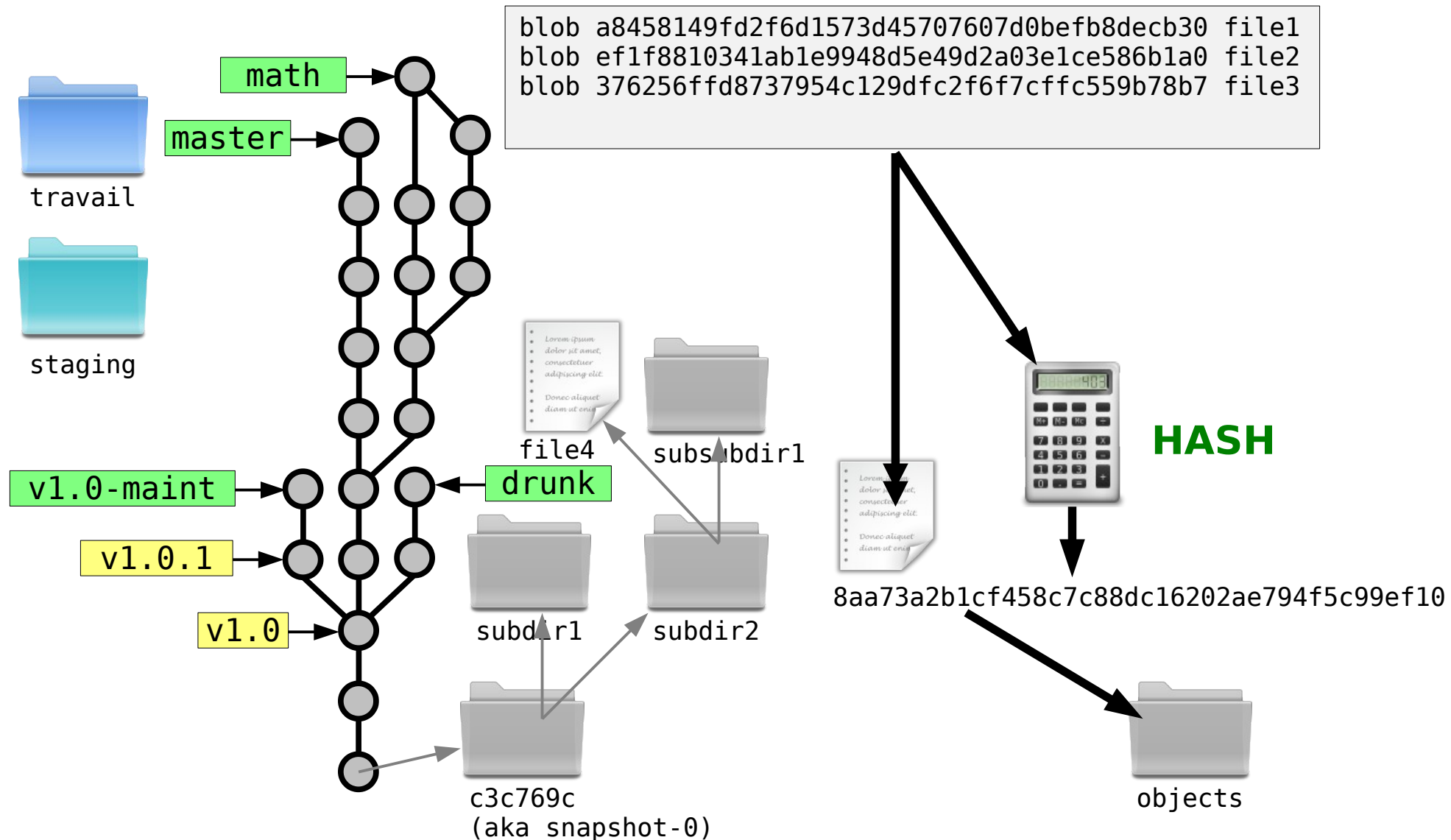
Supprimer les doublons



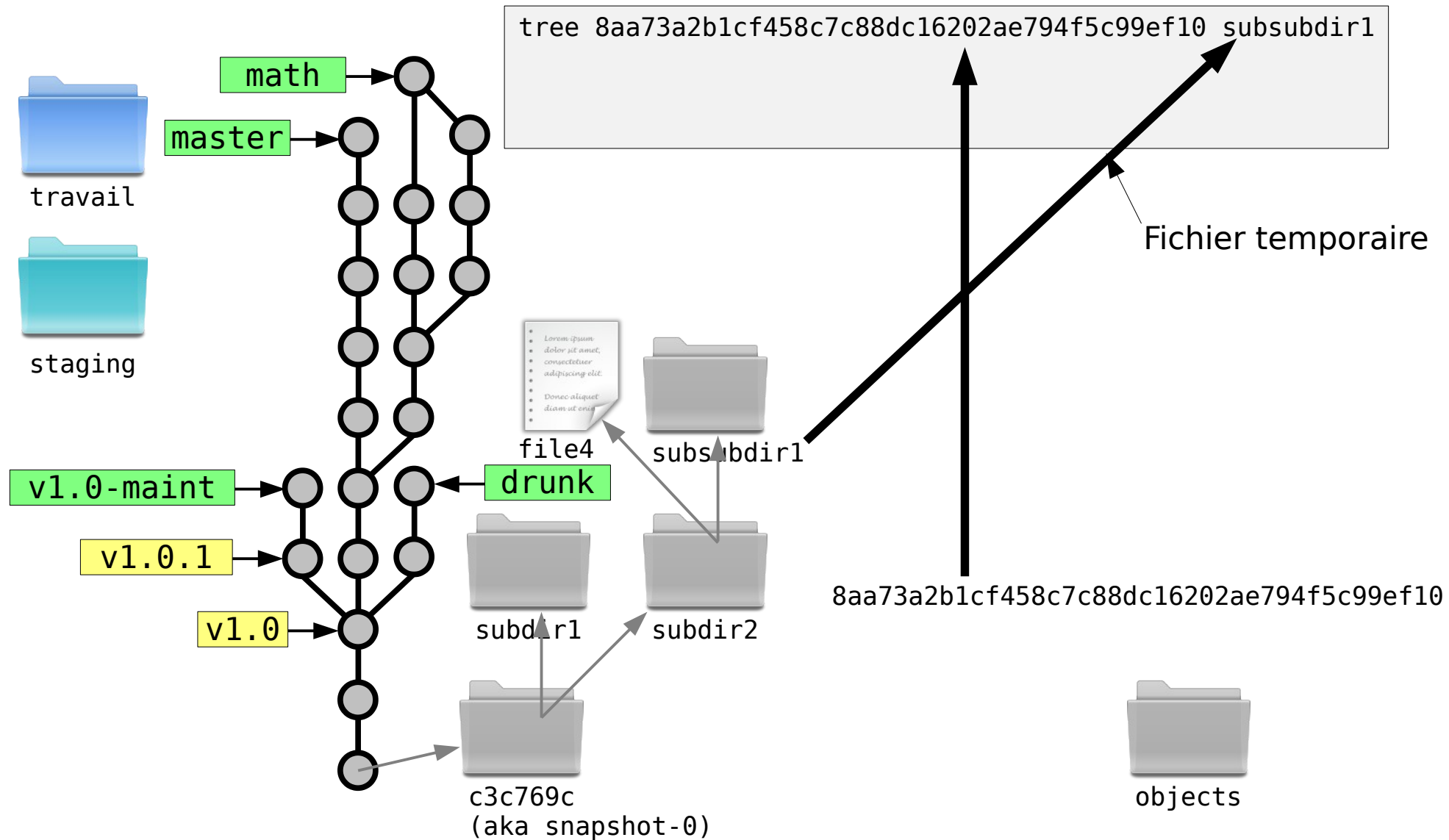
Supprimer les doublons



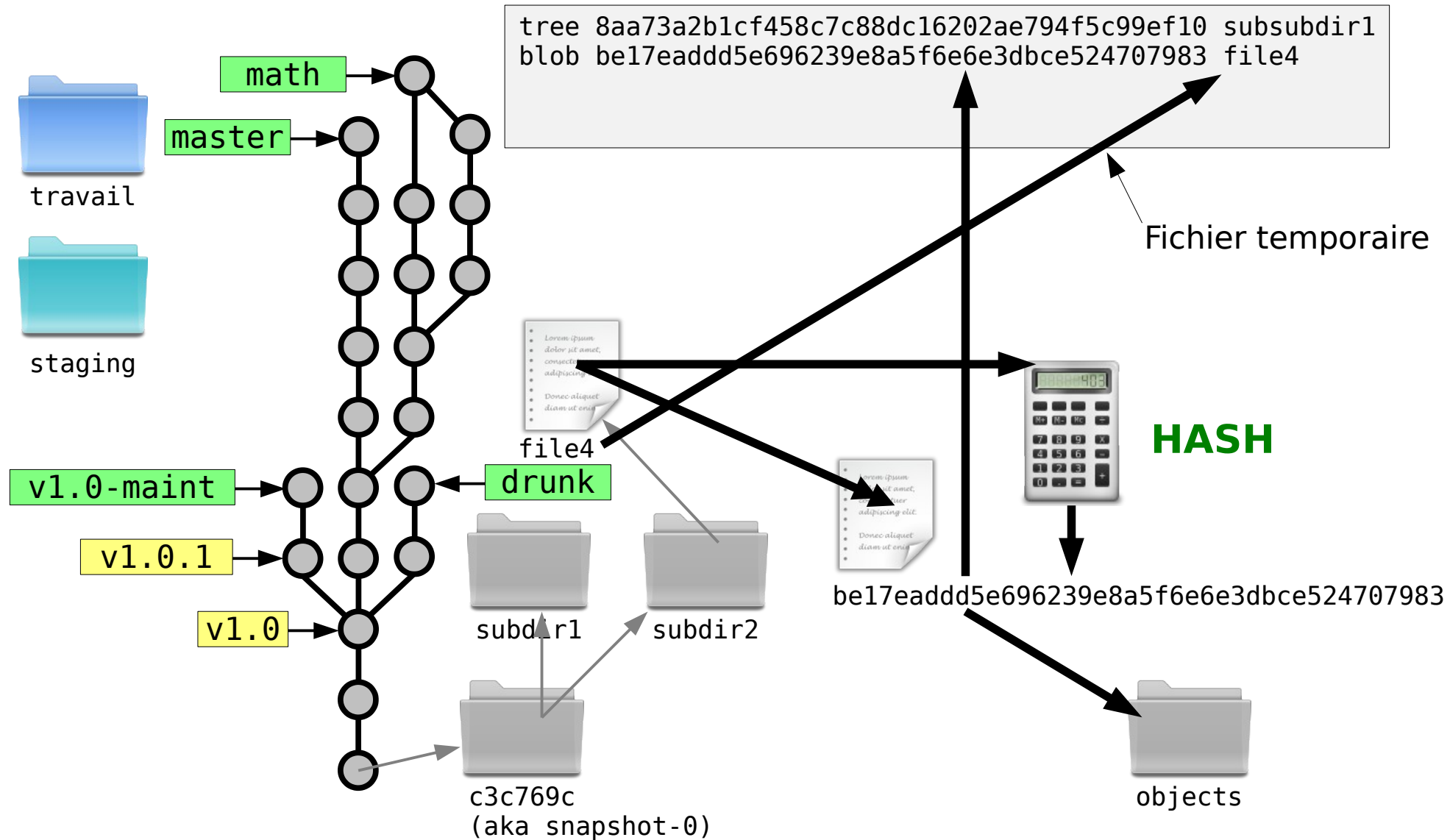
Supprimer les doublons



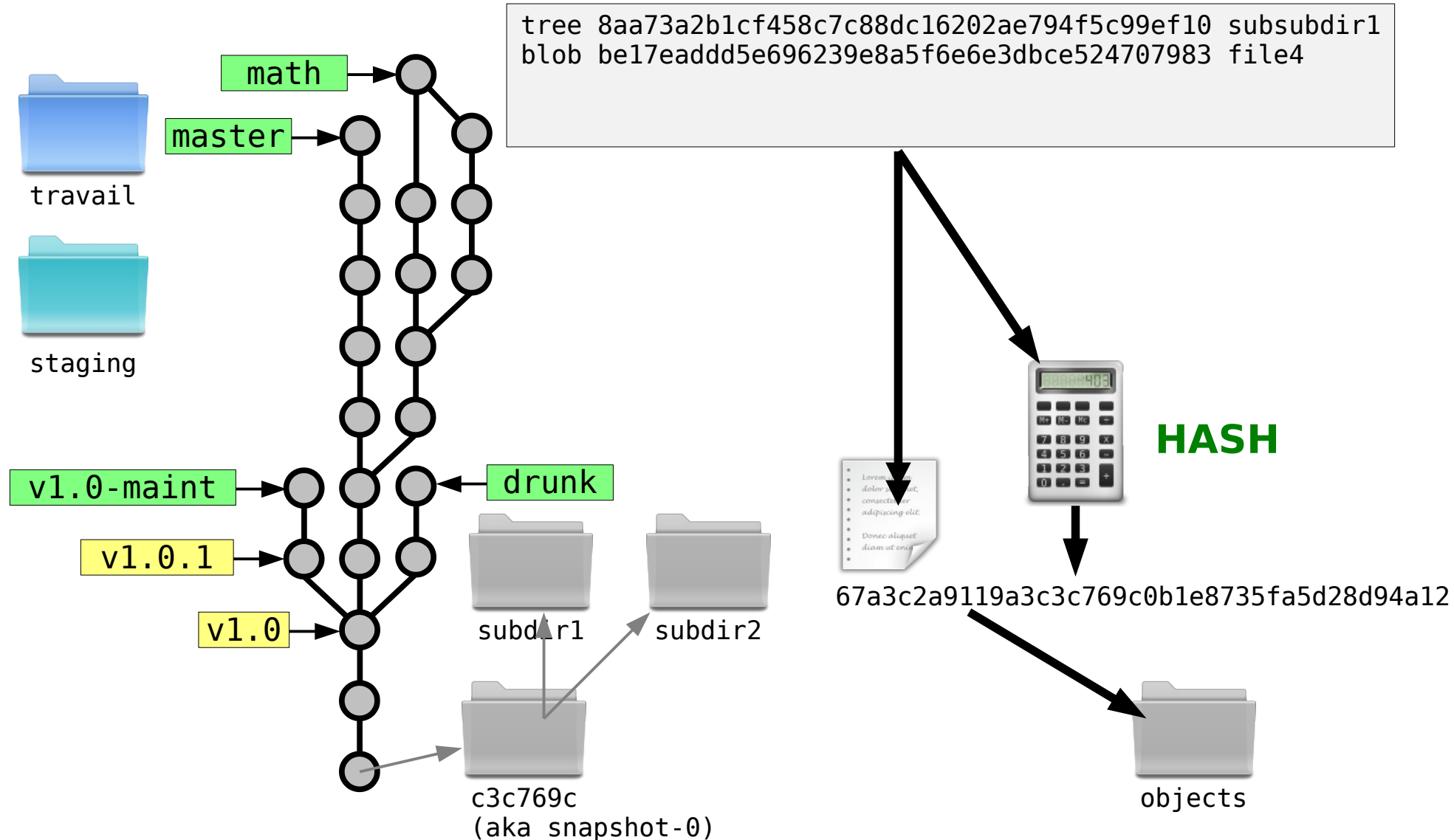
Supprimer les doublons



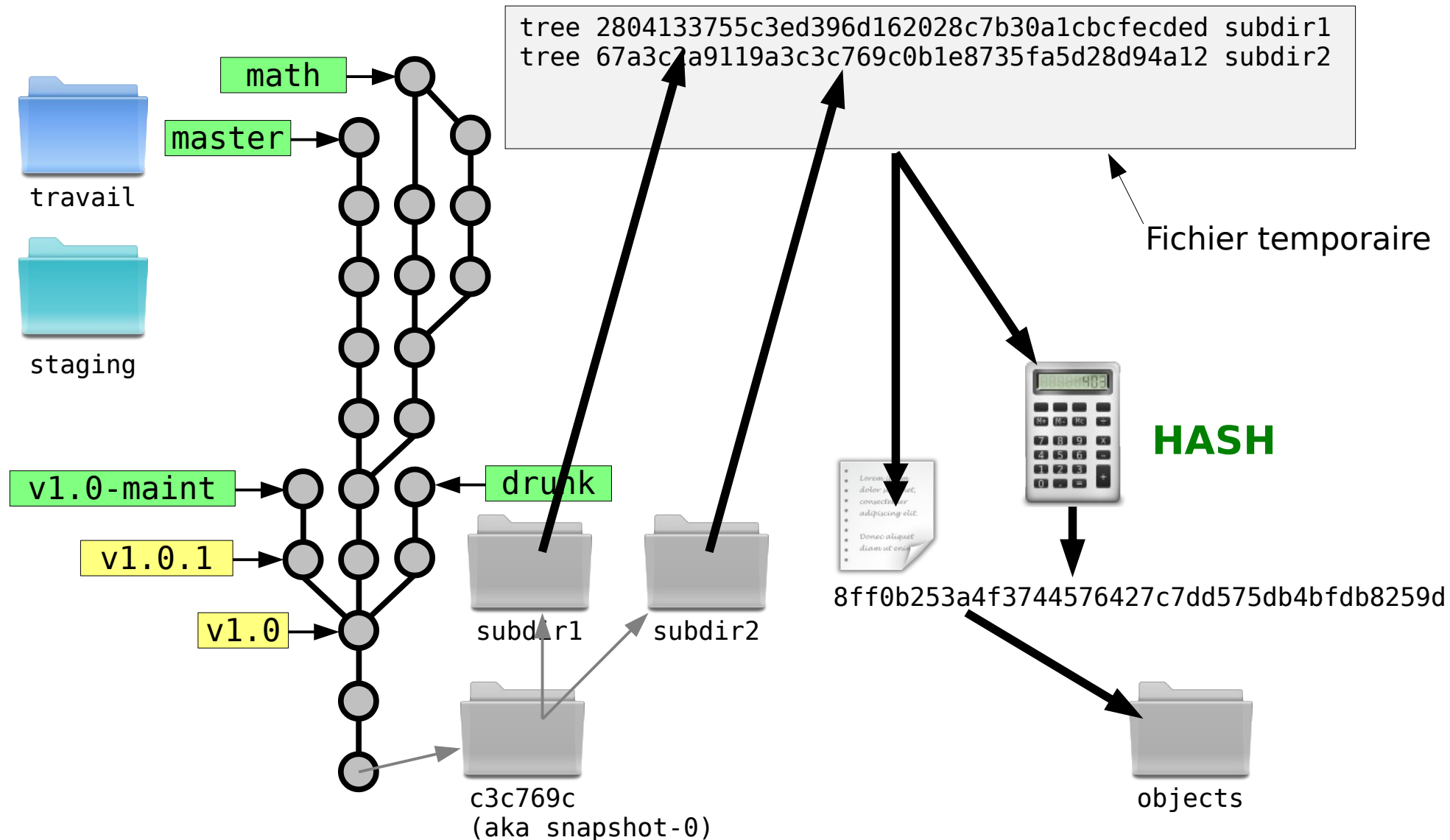
Supprimer les doublons



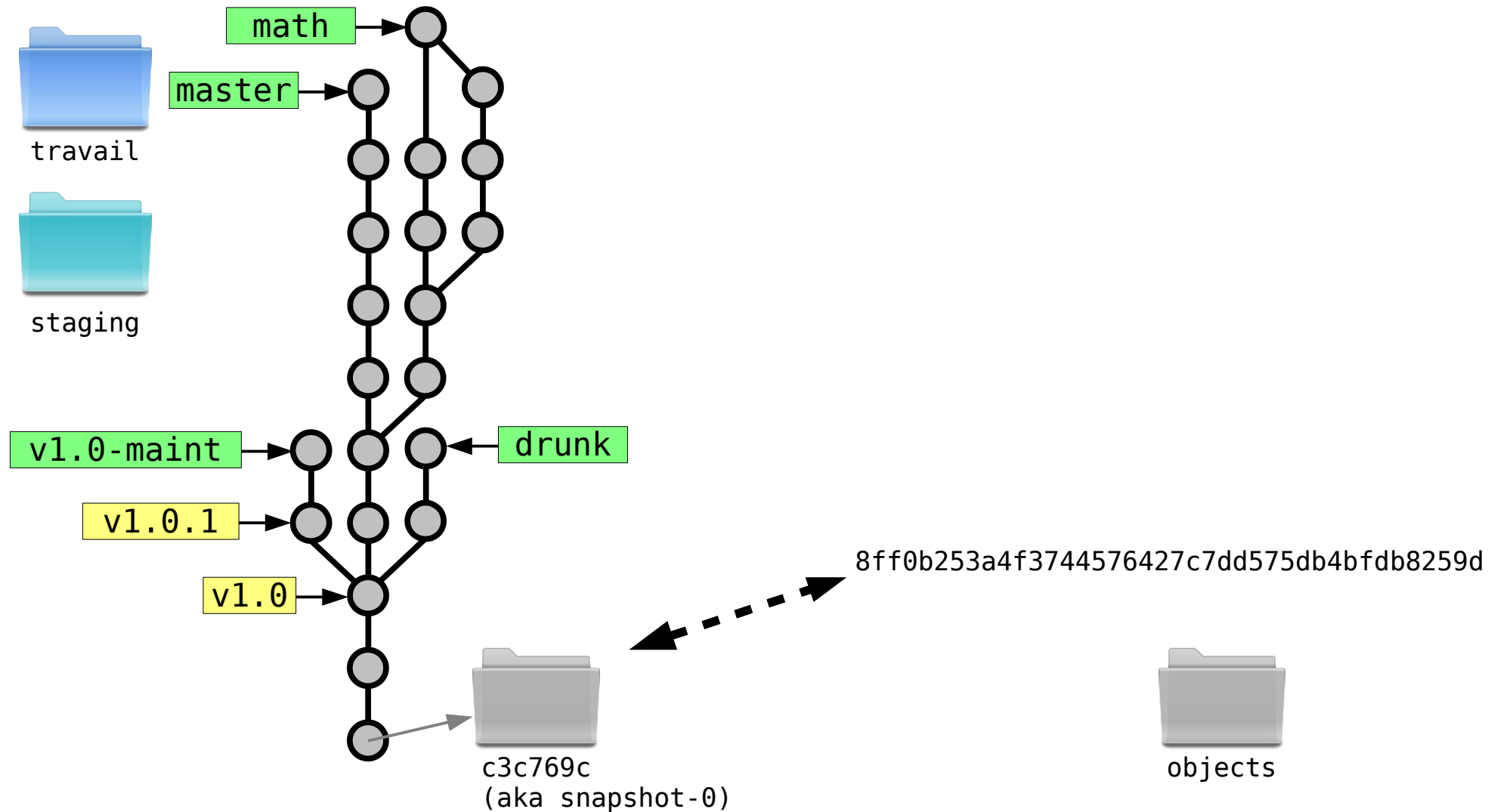
Supprimer les doublons



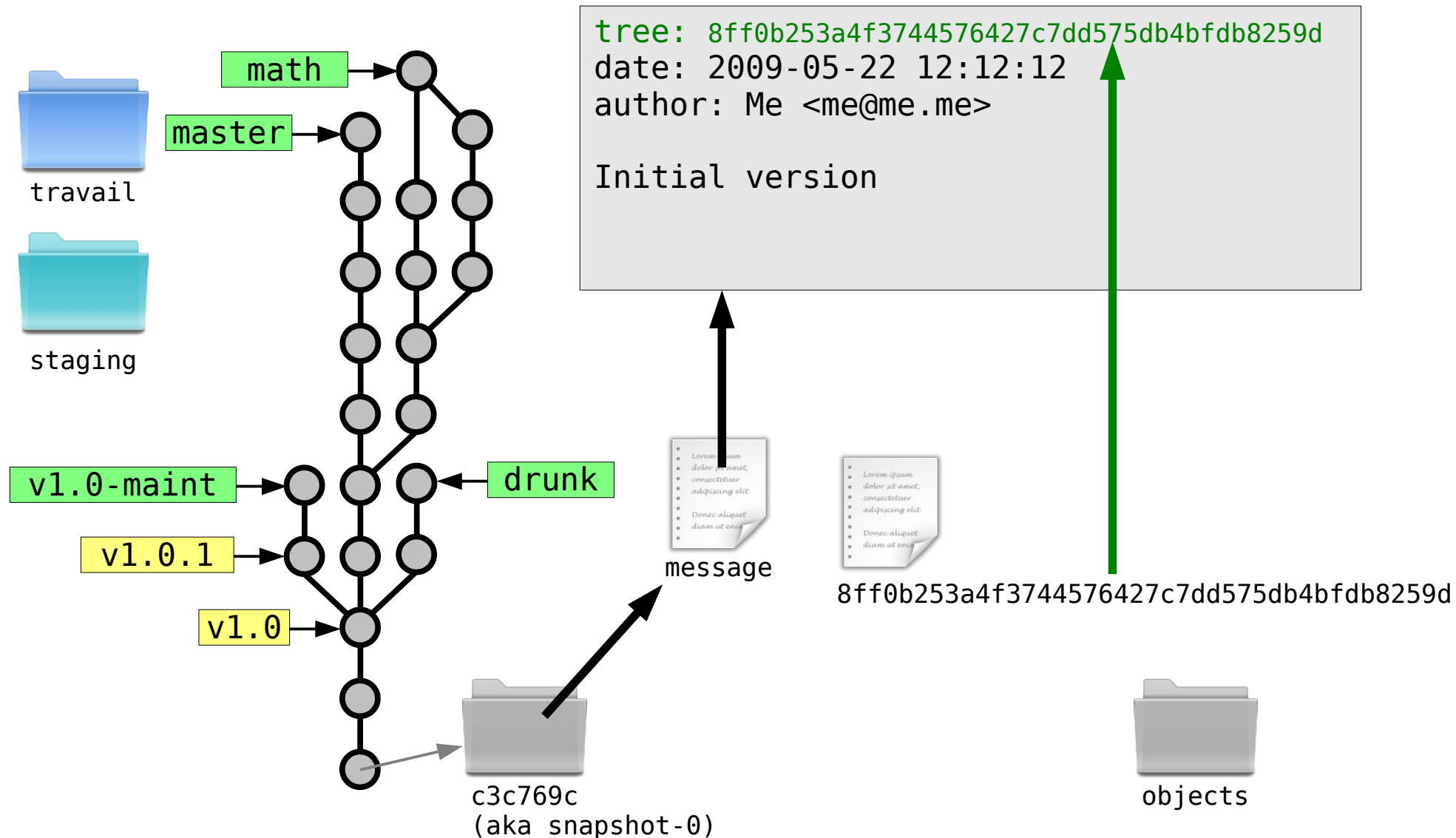
Supprimer les doublons



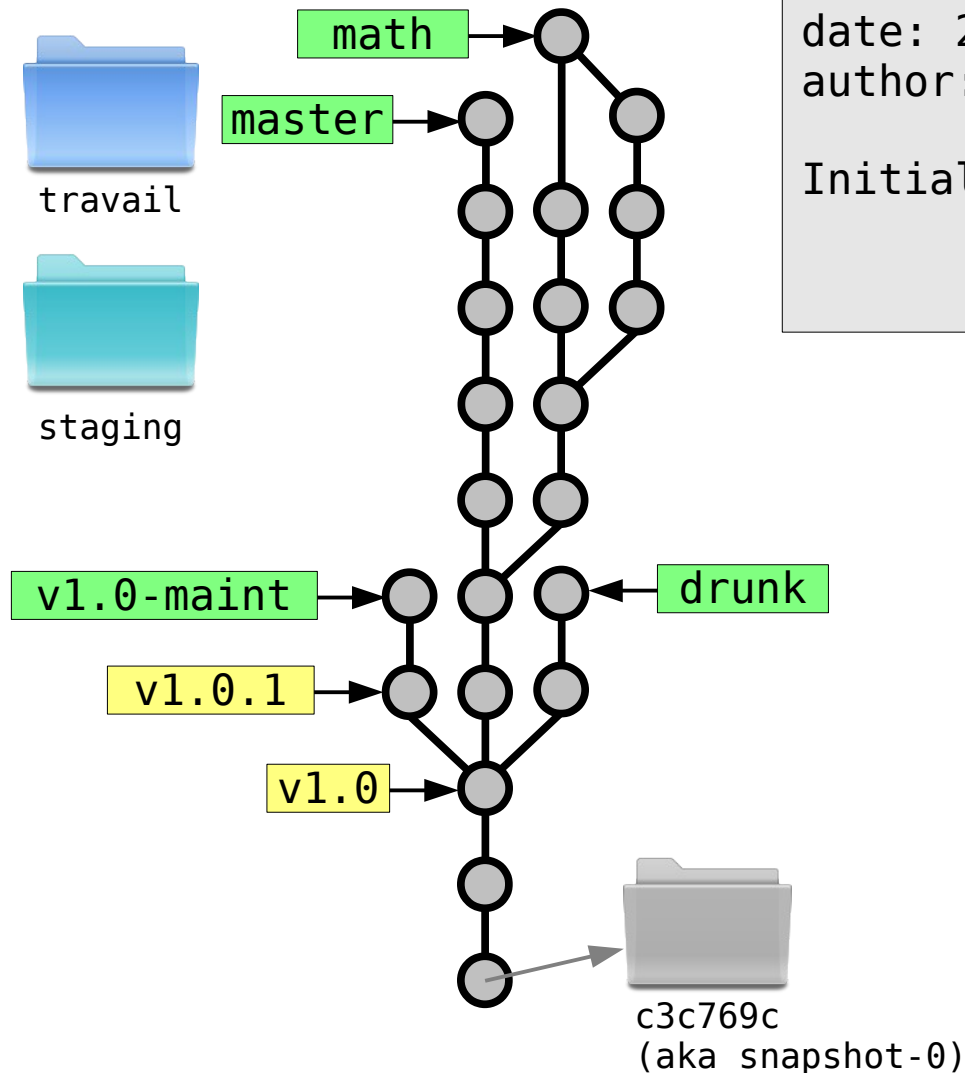
Supprimer les doublons



Supprimer les doublons

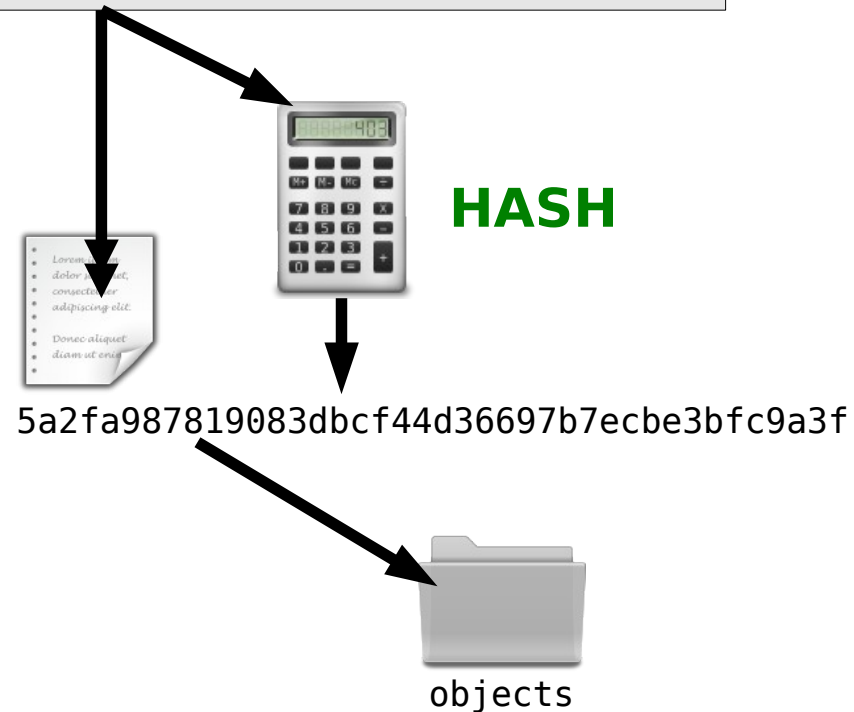


Supprimer les doublons

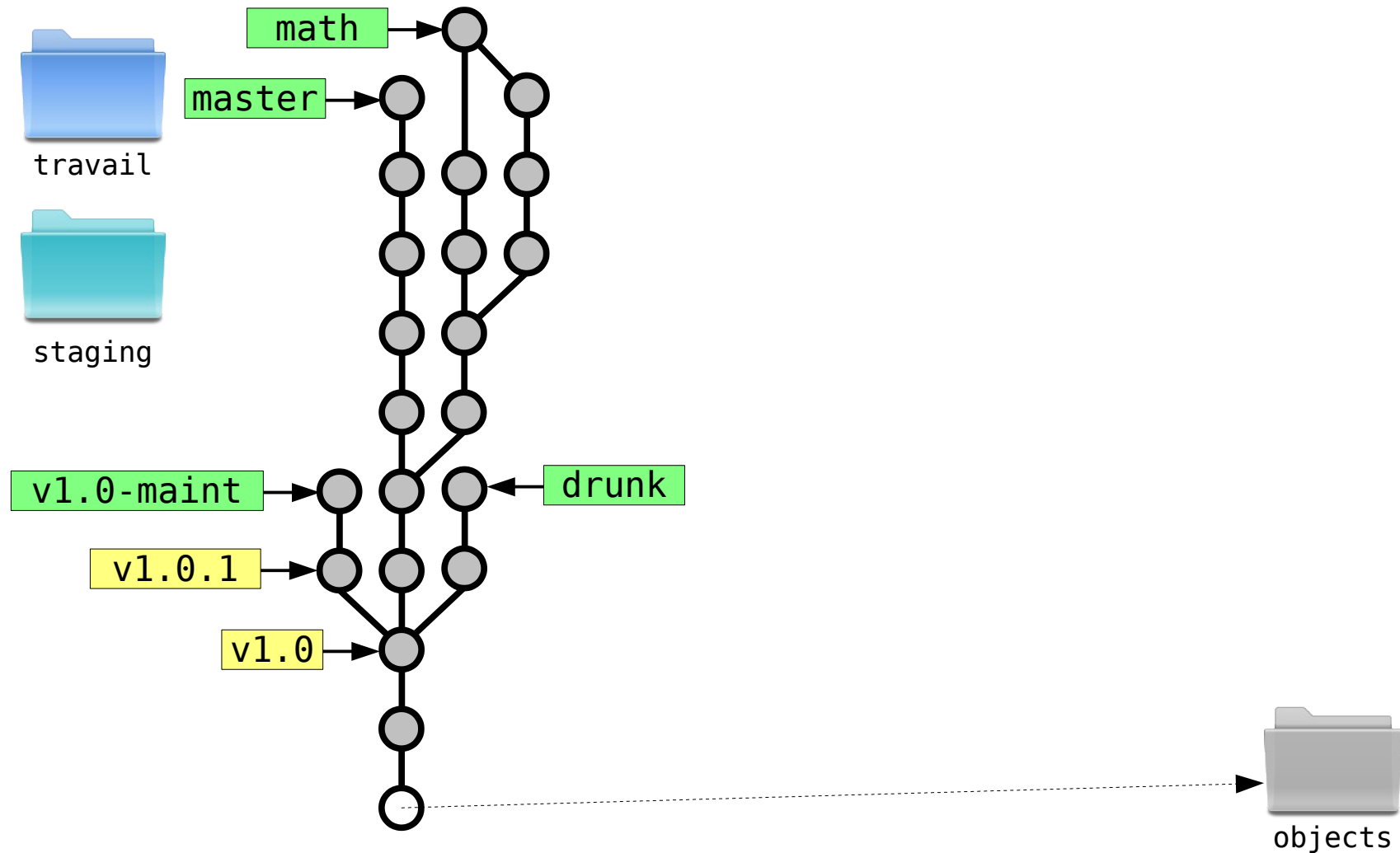


```
tree: 8ff0b253a4f3744576427c7dd575db4bfdb8259d
date: 2009-05-22 12:12:12
author: Me <me@me.me>

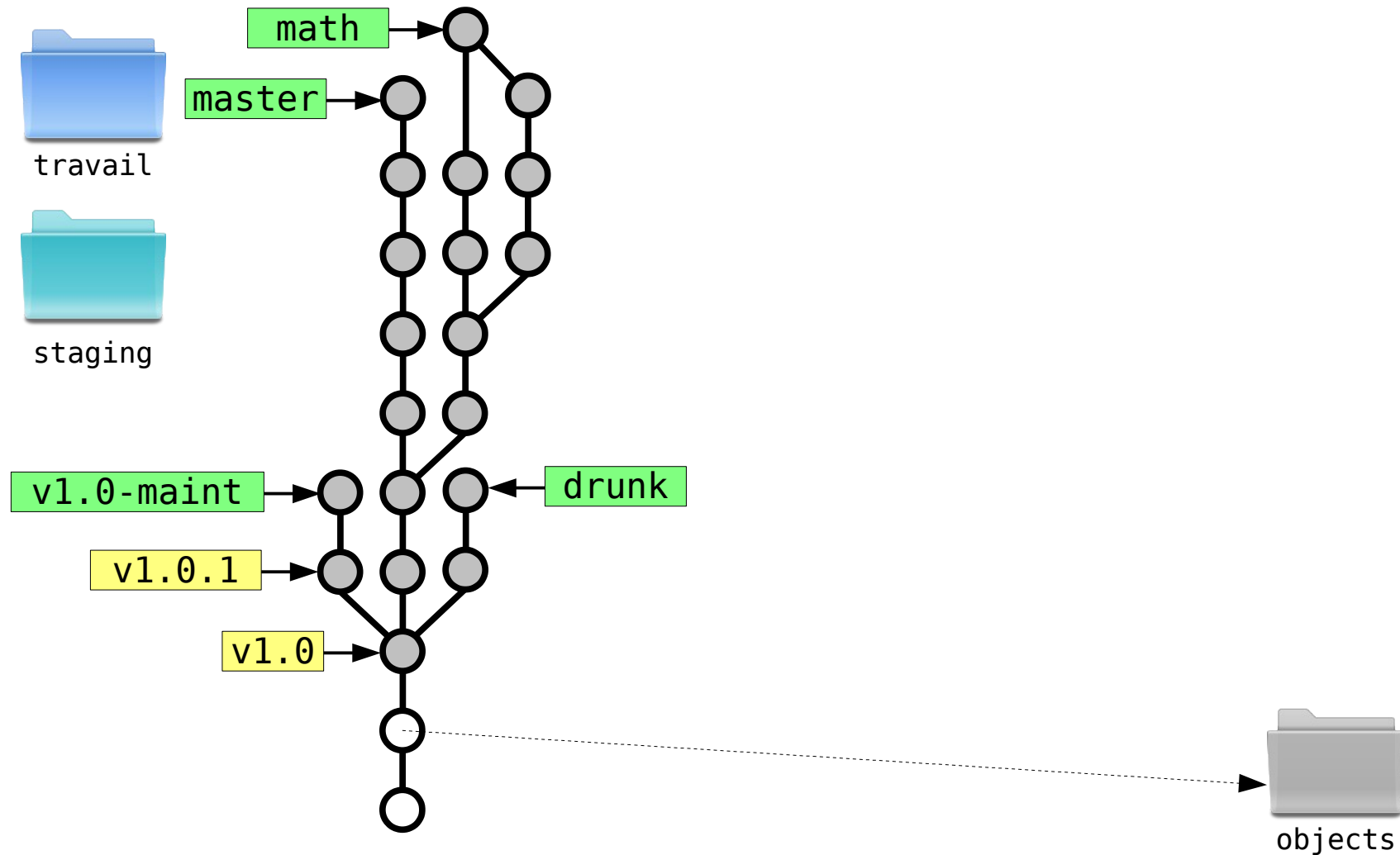
Initial version
```



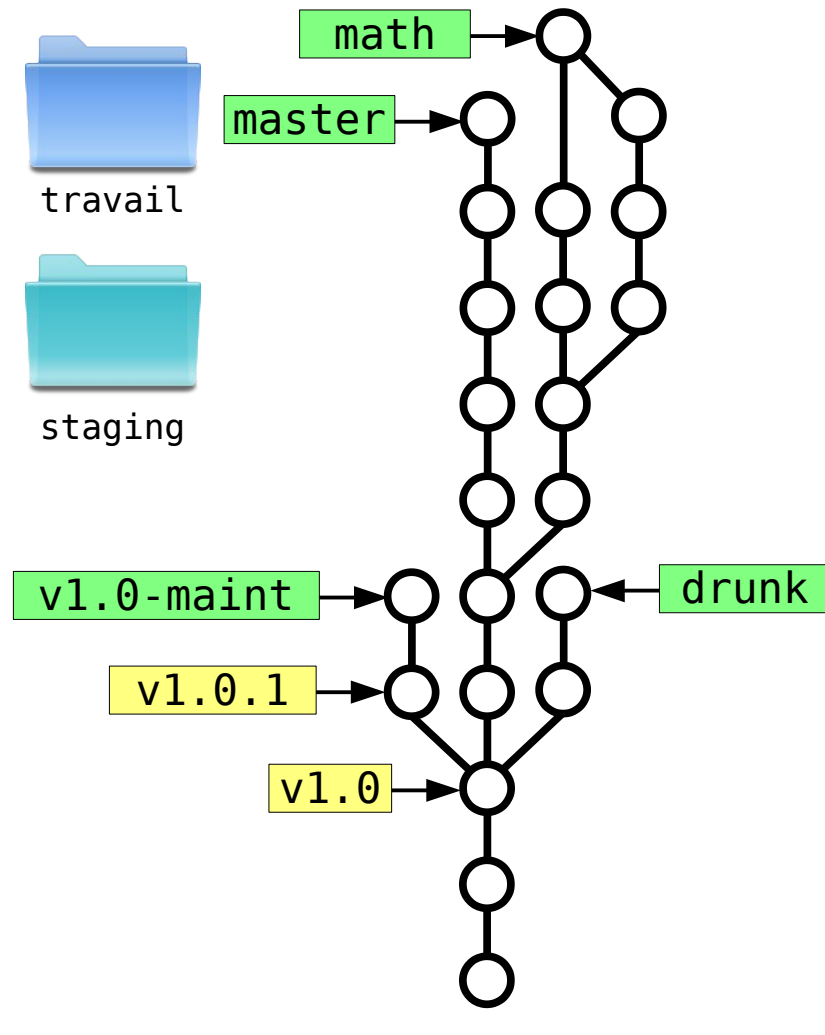
Supprimer les doublons



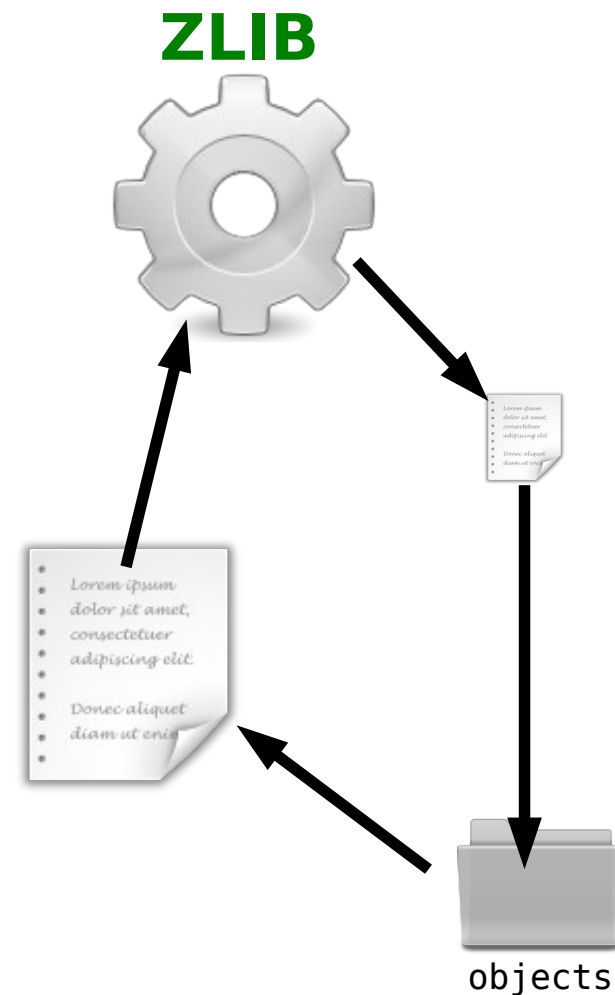
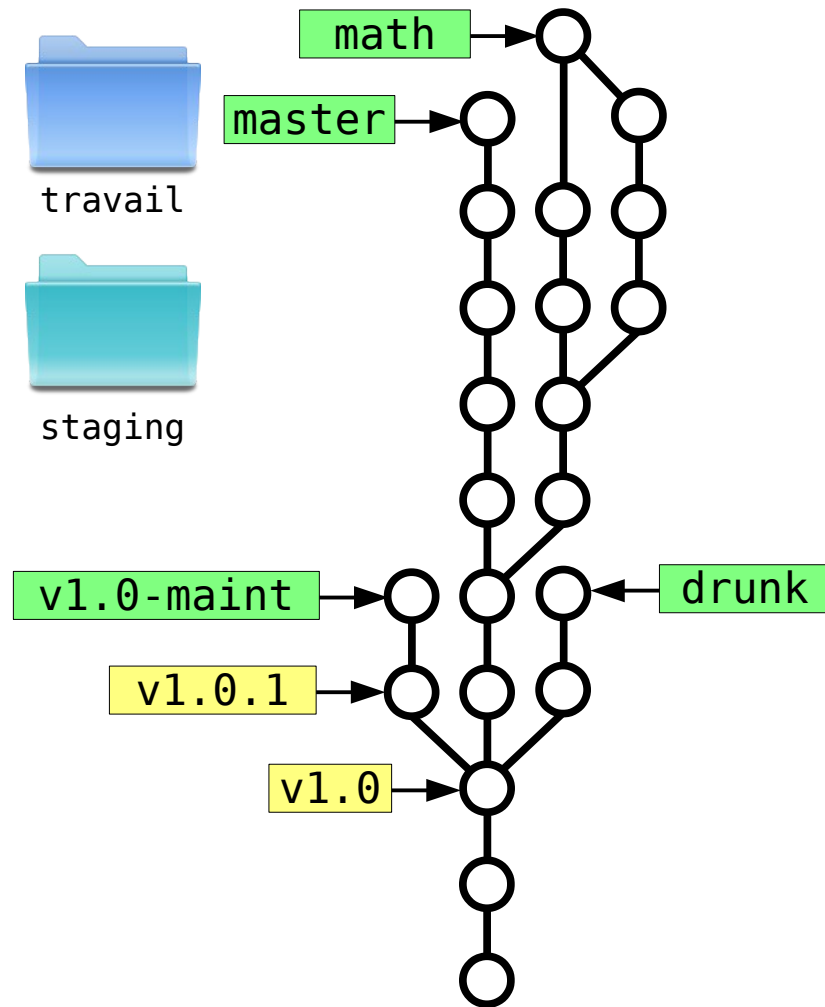
Supprimer les doublons



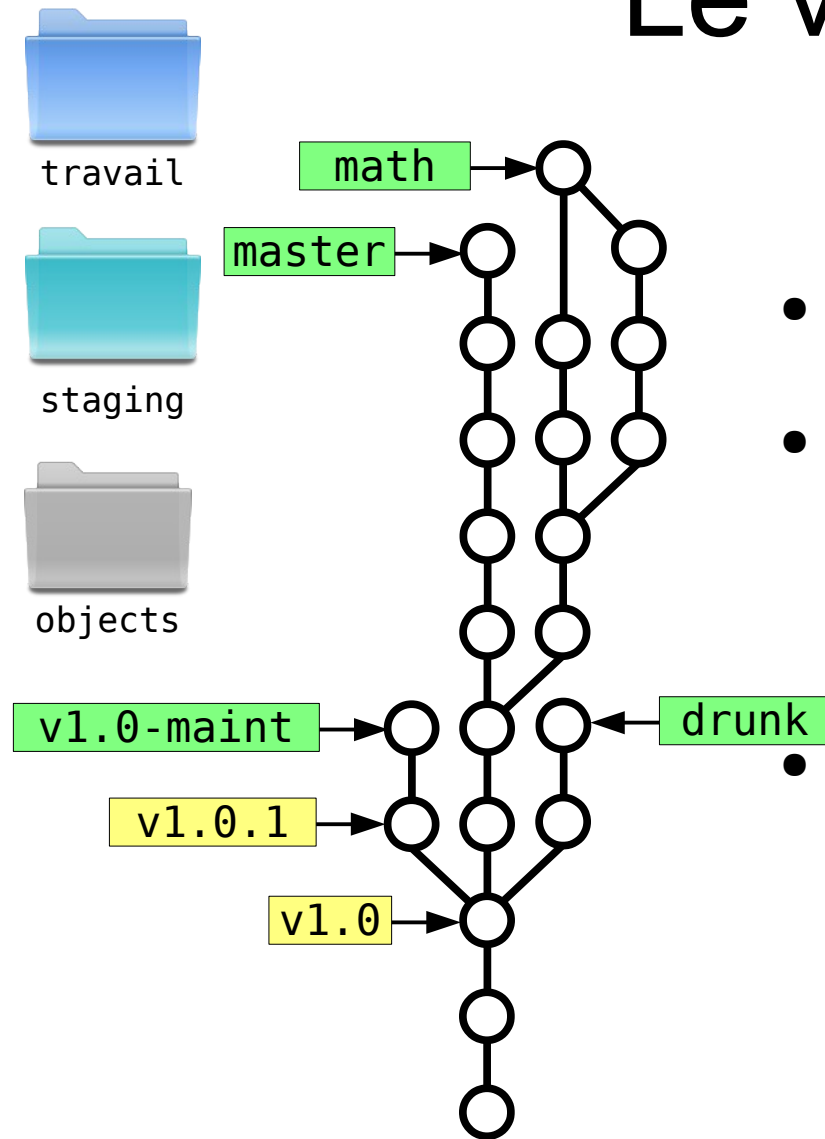
Supprimer les doublons



Compression des objets



Le vrai GIT

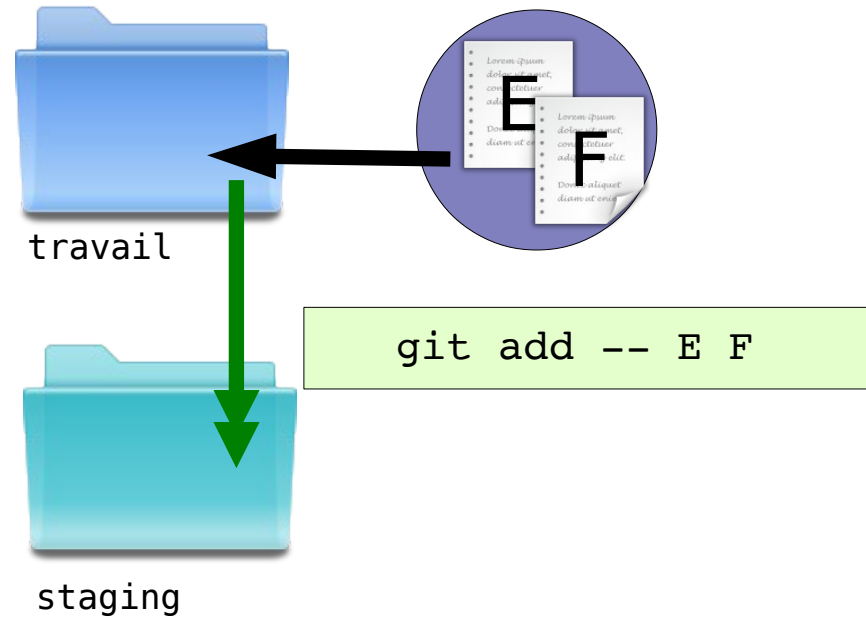
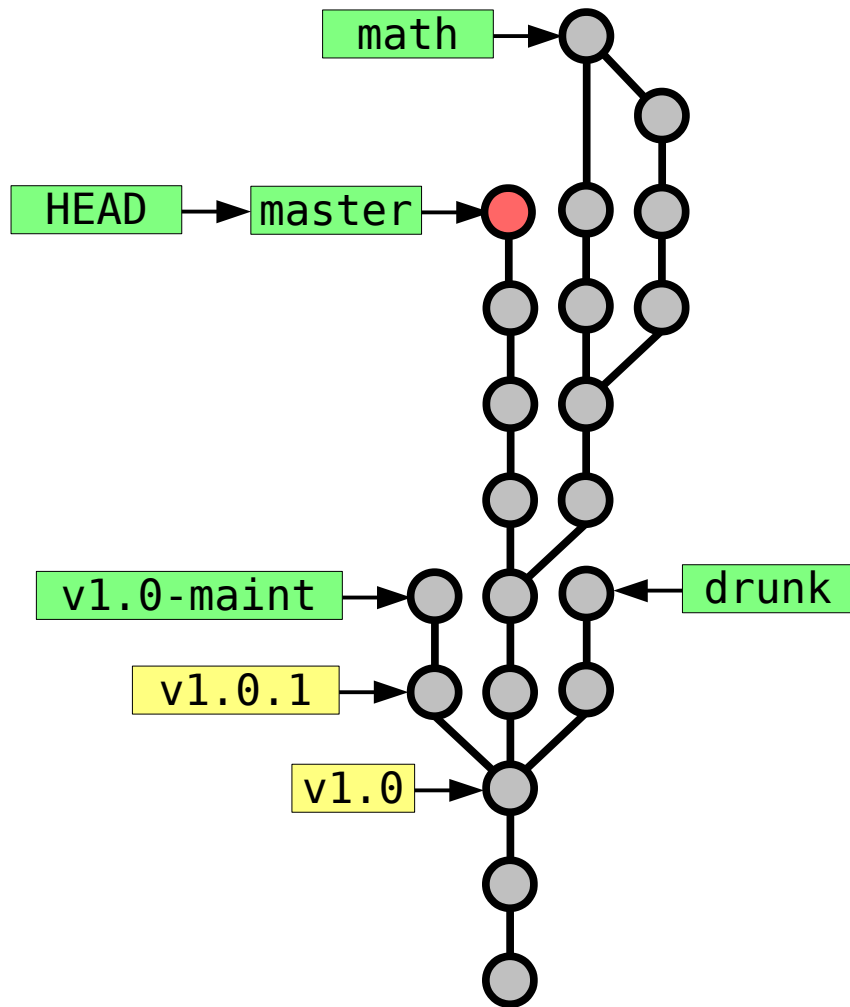


- C'est quasiment GIT...
- Avec de bonnes commandes pour toutes ces opérations
- Et plein (plein!) d'autres outils

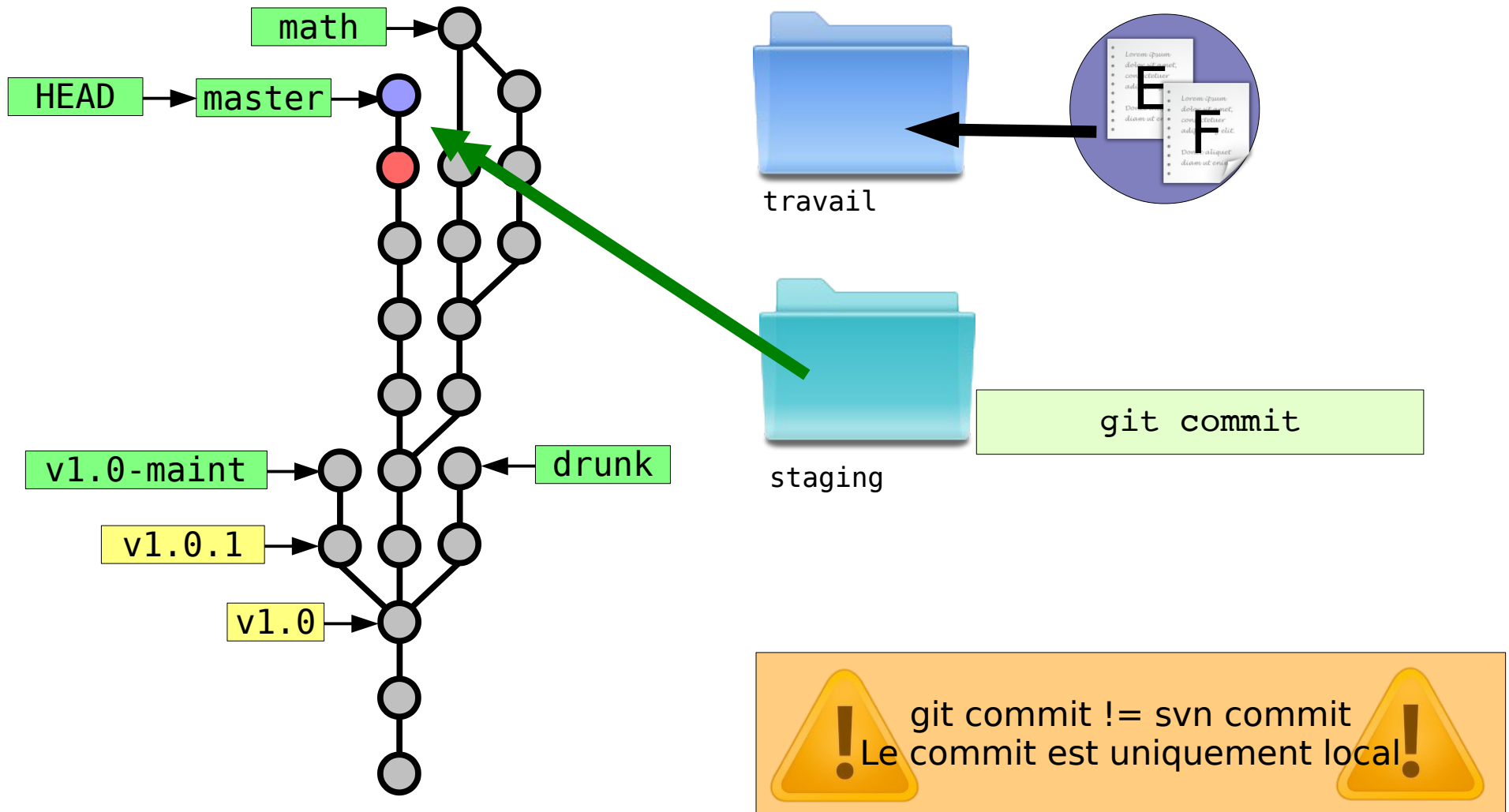
Commands: Configuration

- Premièrement, dire à GIT qui on est:
 - `git config --global user.name "Mon nom"`
 - `git config --global user.email "mon@email.adresse"`
- De l'aide:
 - `git <command> -h`
 - `git help <command>`
- Démarrer un nouveau repo:
 - `git init`
- Copier un repo:
 - `git clone <url_repo>`

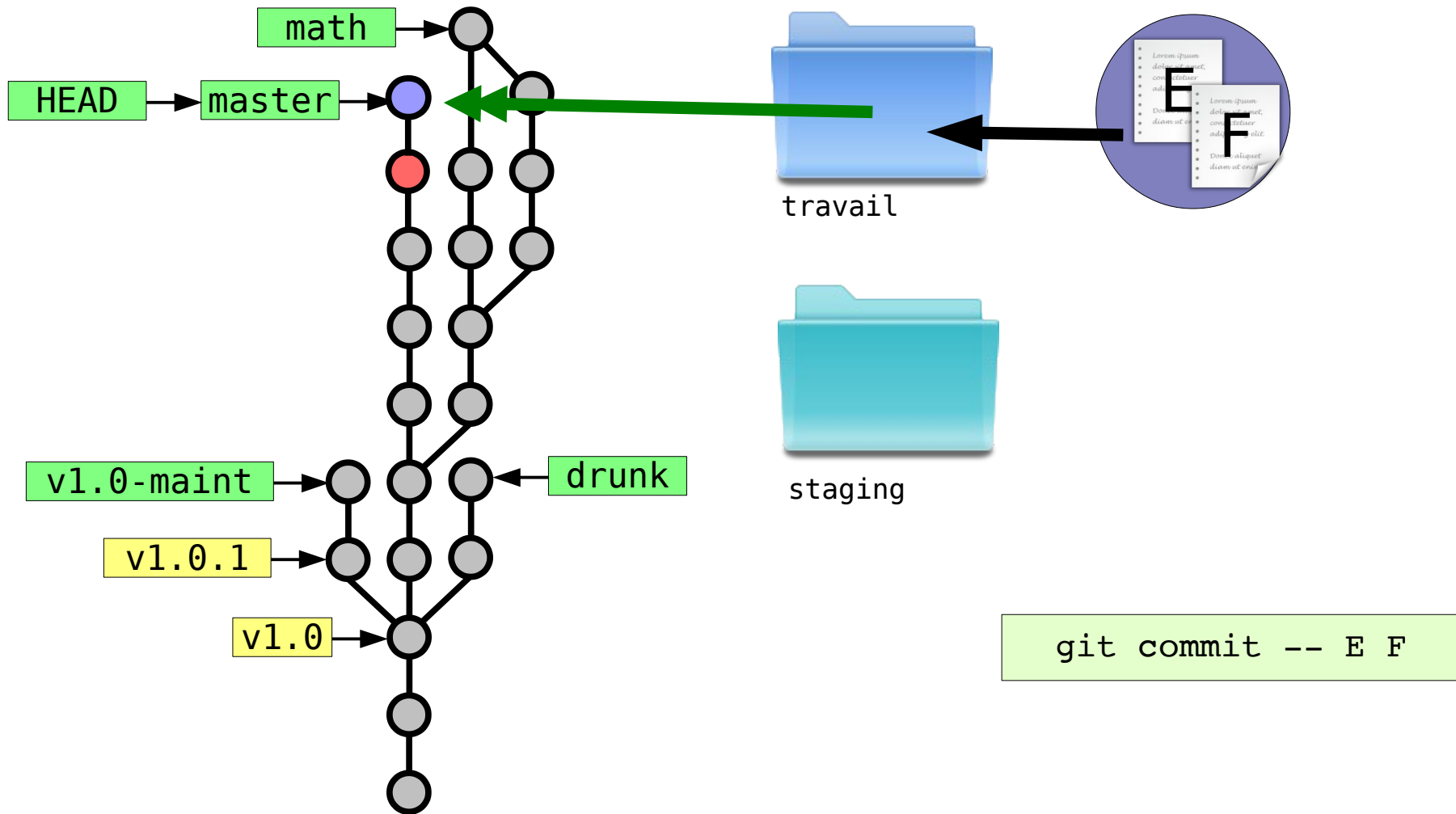
Commandes: add



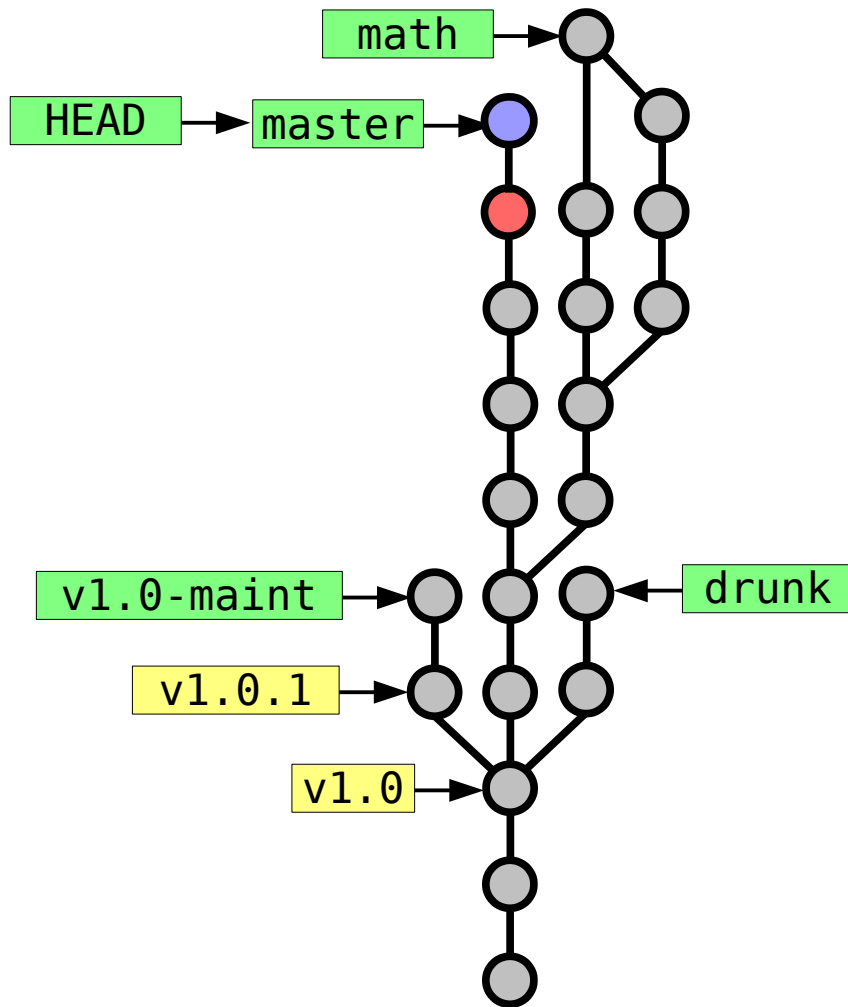
Commandes: commit



Commandes: Faire un Snapshot



Commandes: Etat du staging



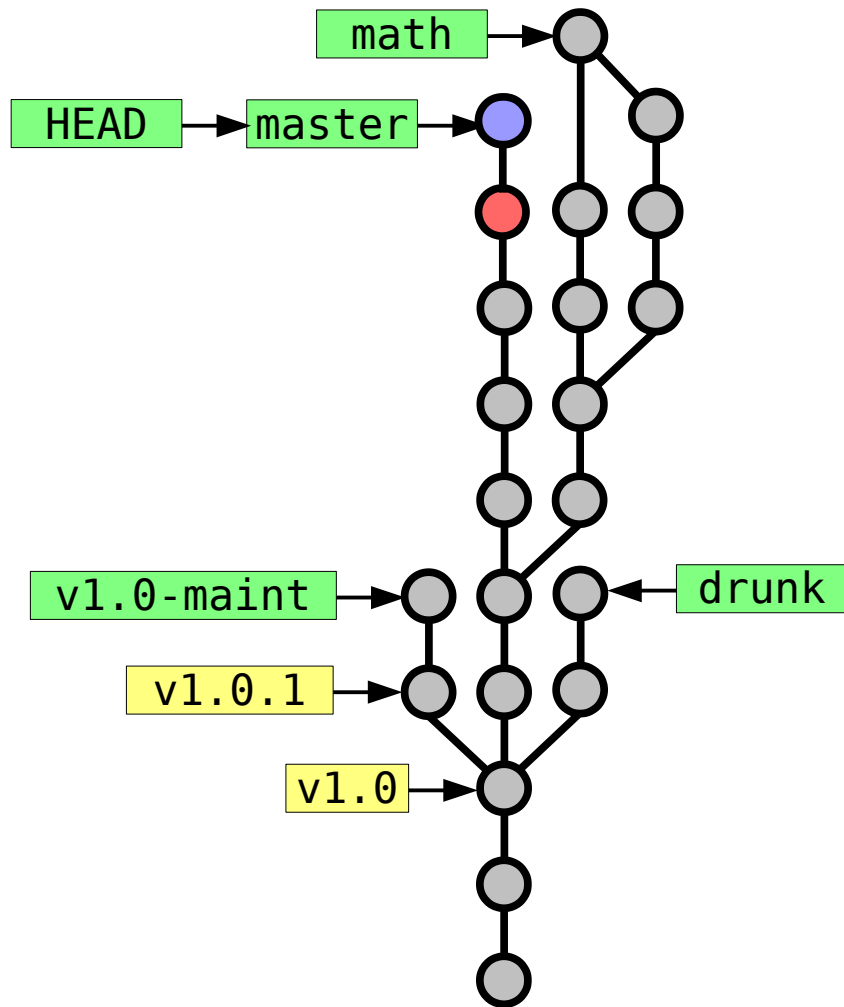
travail



staging

git status

Commandes: historique



travail



staging

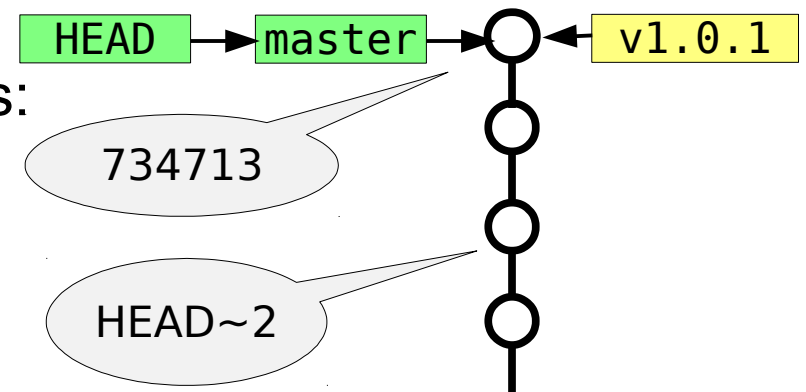
git log

Ex: git log master -2

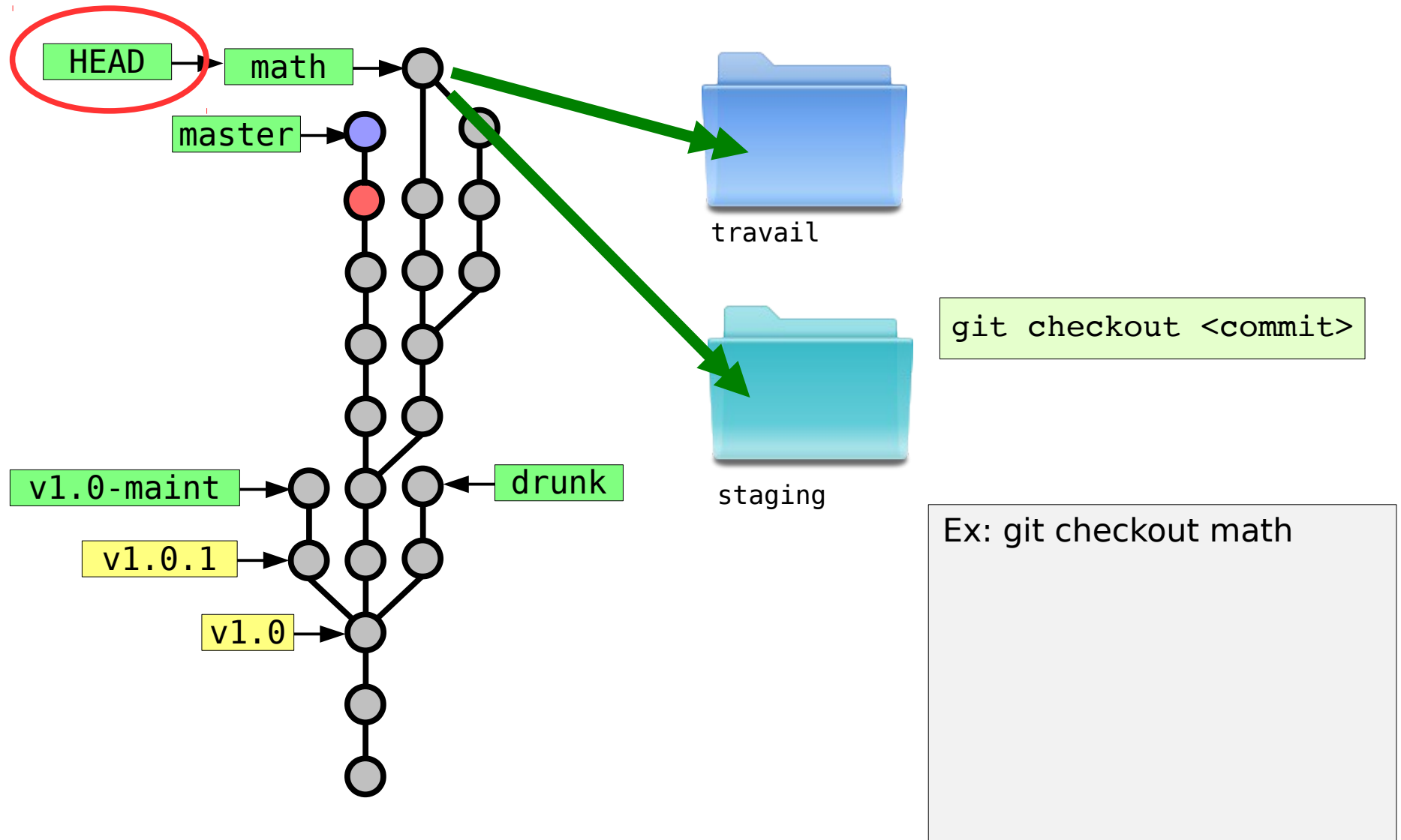


Identifier un commit

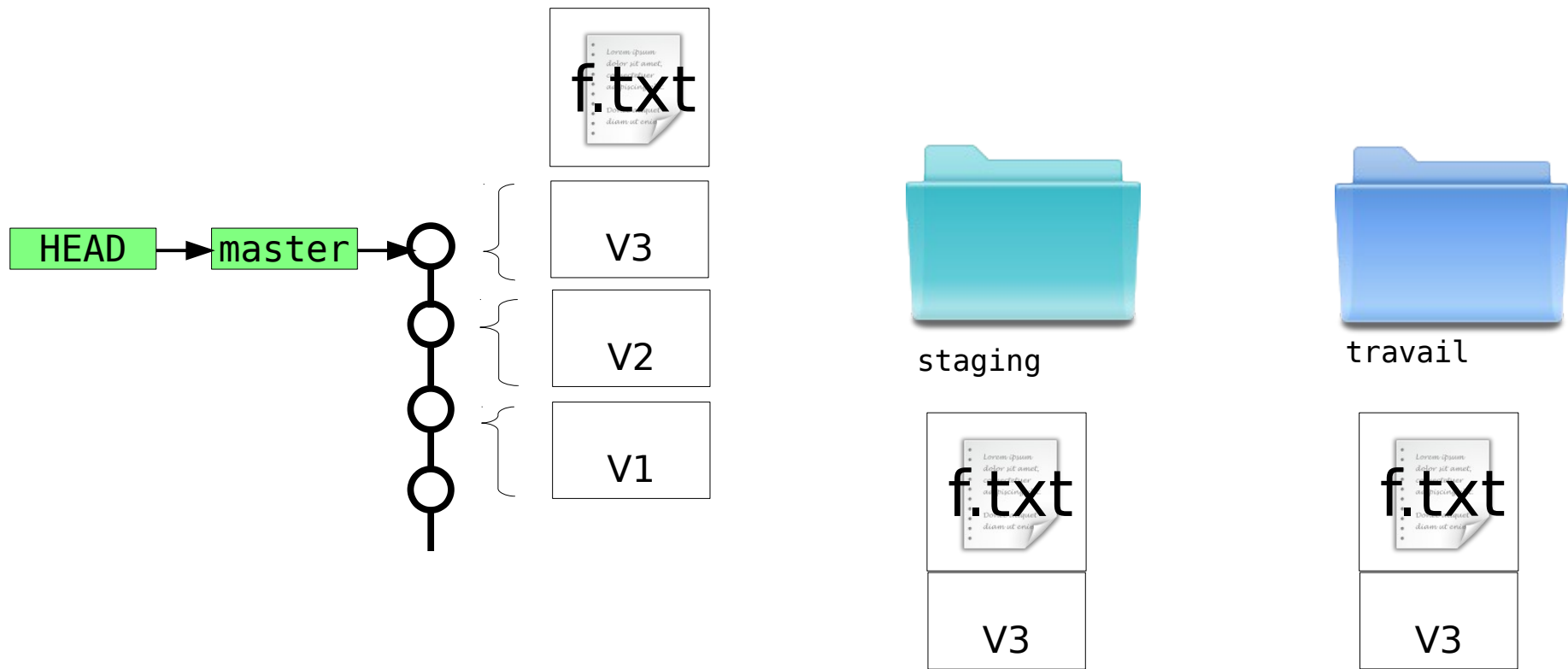
- N° de commit:
734713bc047d87bf7eac9674765ae793478c50d3
- N° de commit court:
734713
- Le nom d'une branche qui pointe dessus:
master
- Le nom d'un tag qui pointe dessus:
v1.0.1
- Le commit du repertoire de travail:
HEAD
- Un grand-parent de commit:
 $\text{HEAD}^{\wedge\wedge} = \text{HEAD}\sim 2 = 734713\sim 2 = \text{master}\sim 2 = \text{v1.0.1}\sim 2$



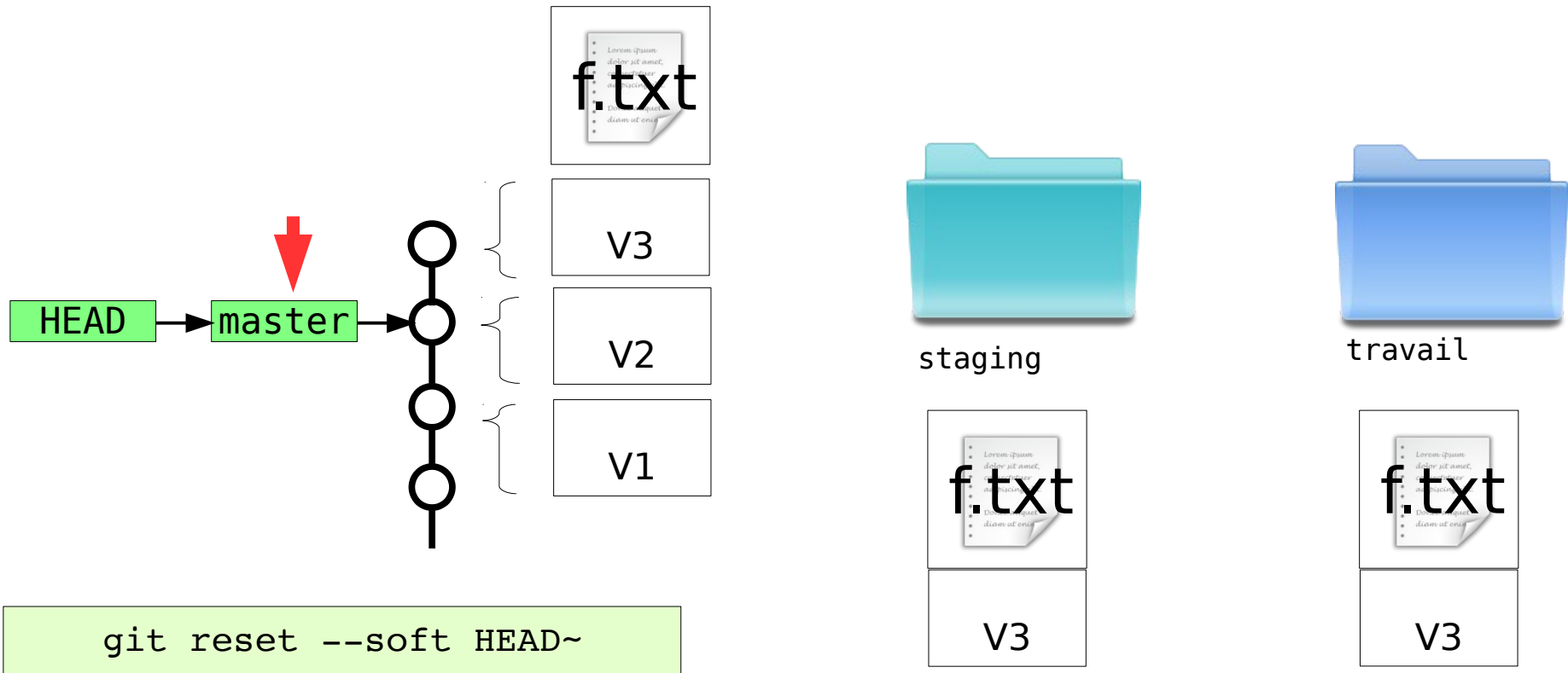
Commandes: checkout



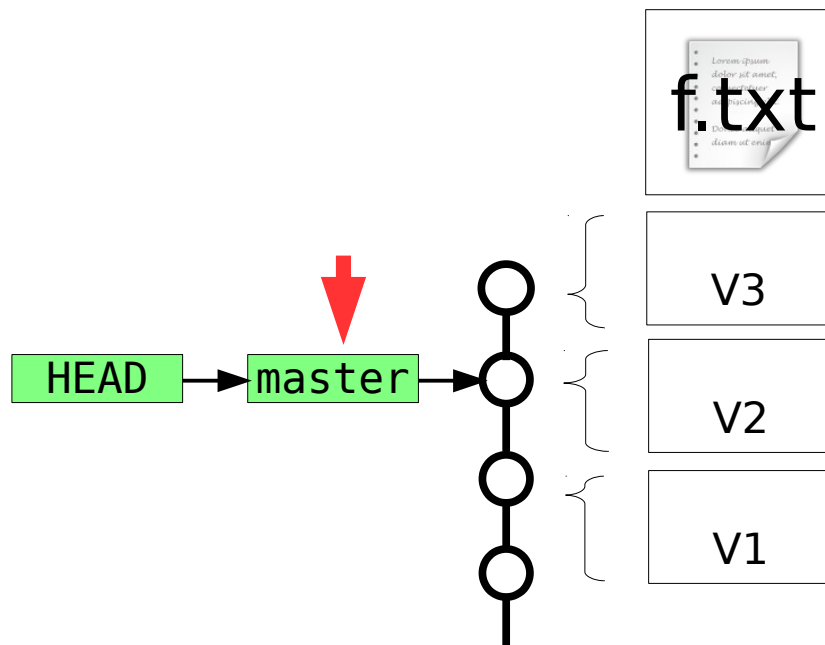
Commande: reset



Commande: reset



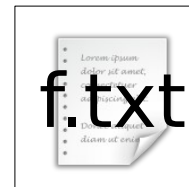
Commande: reset



```
git reset [--mixed] HEAD~
```



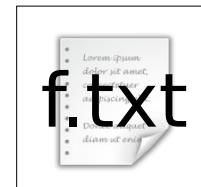
staging



V2

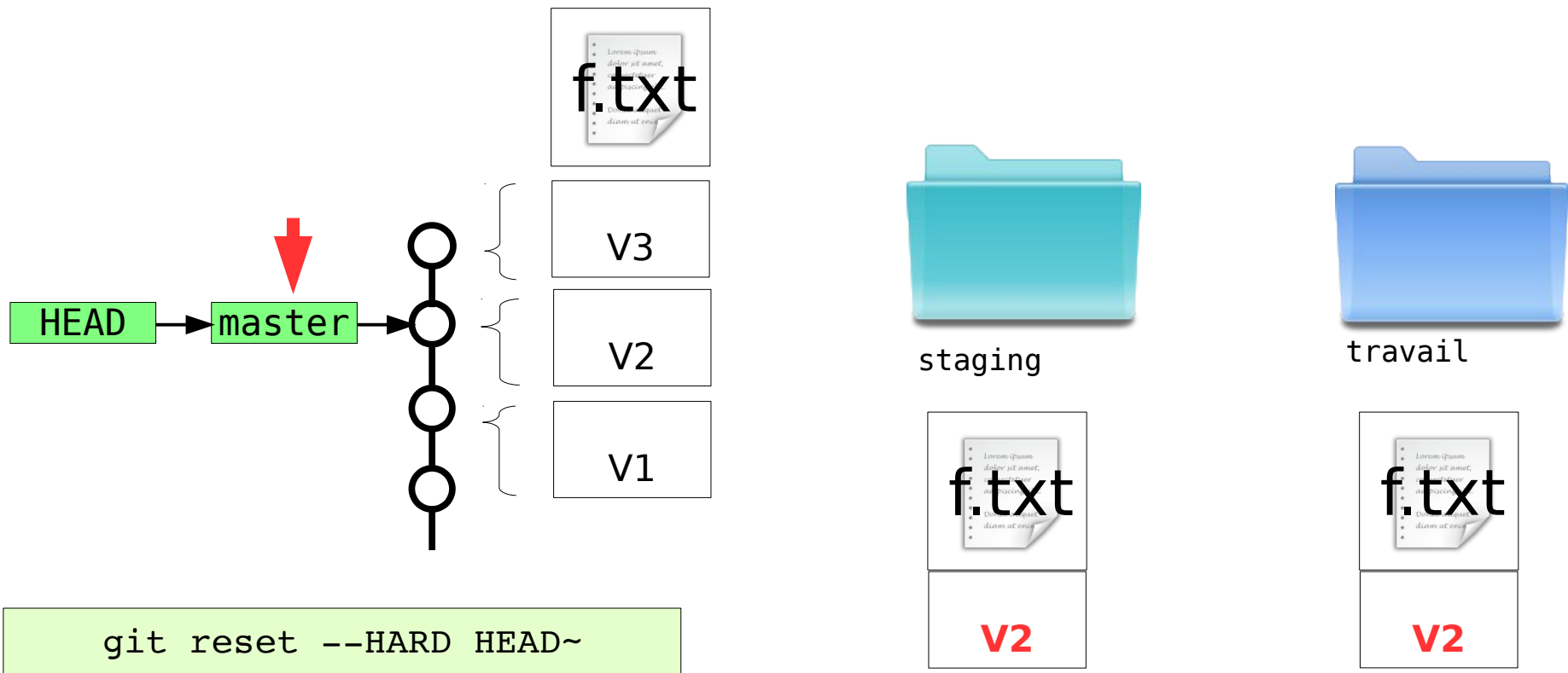


travail

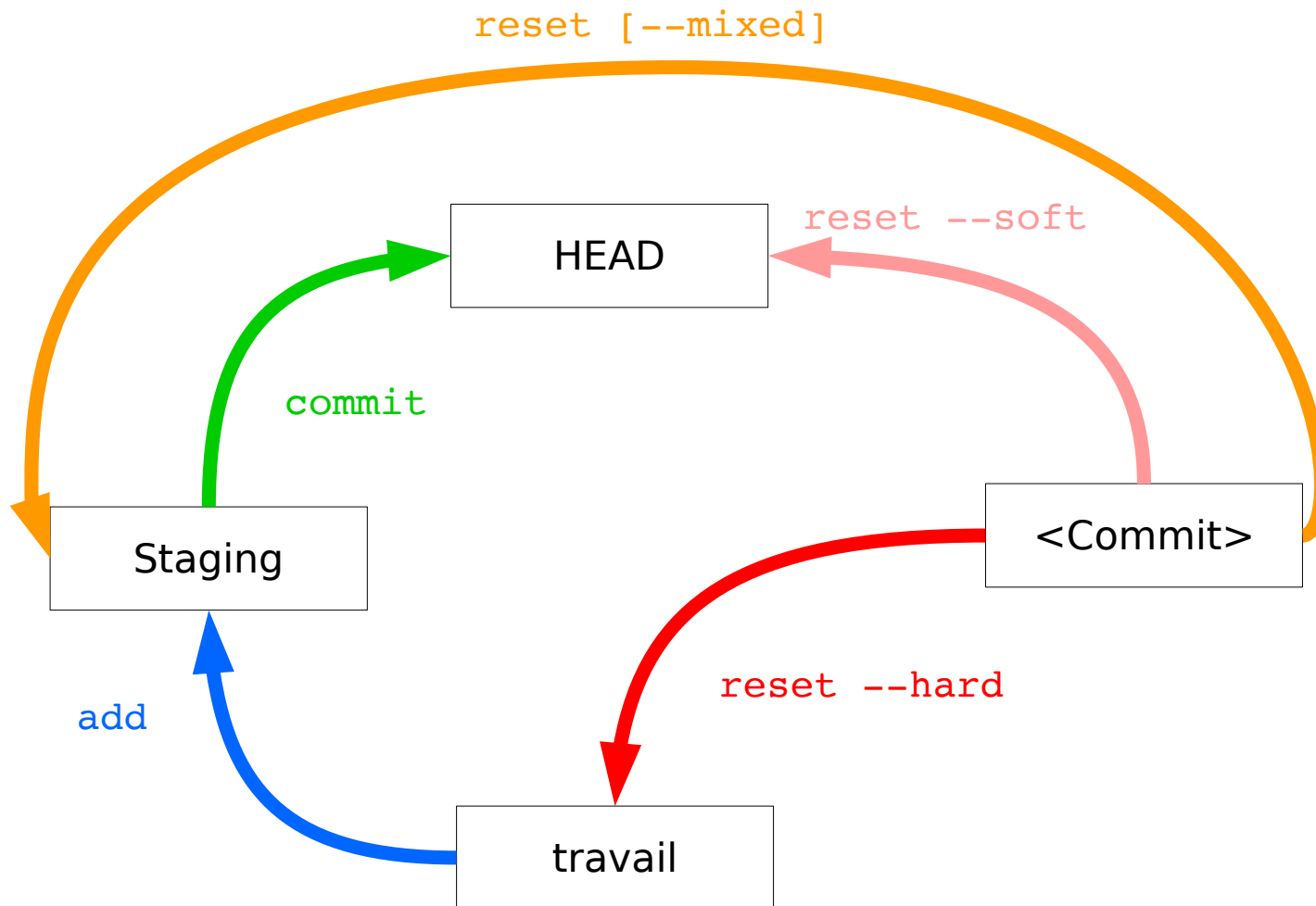


V3

Commande: reset



Commande: reset/add/commit



Commandes: diff



travail

vs.



staging

- `git diff`



staging

vs.



snapshot

- `git diff --staged`



travail

vs.



snapshot

- `git diff HEAD`



snapshot

vs.

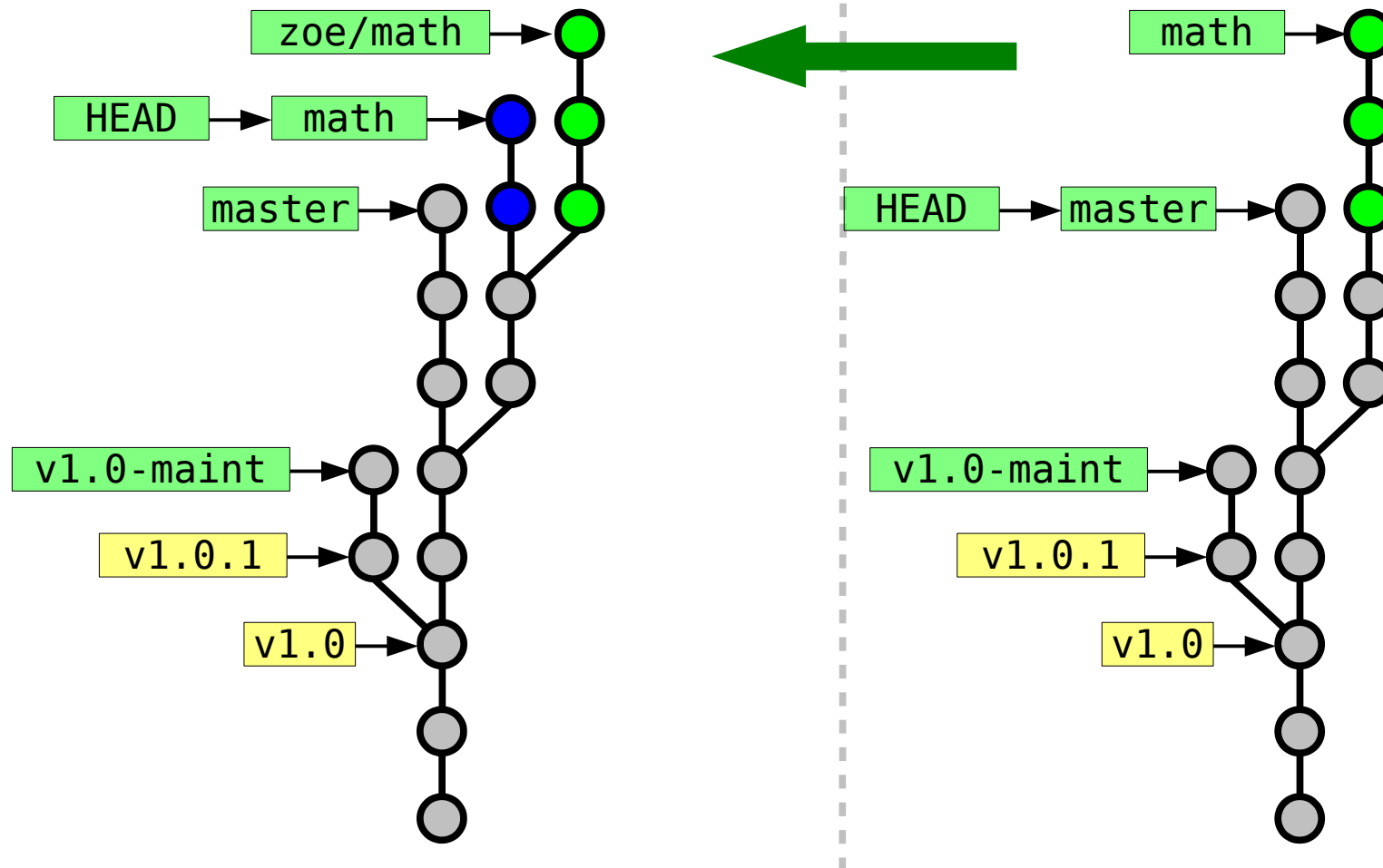


snapshot

- `git diff <from> <to>`

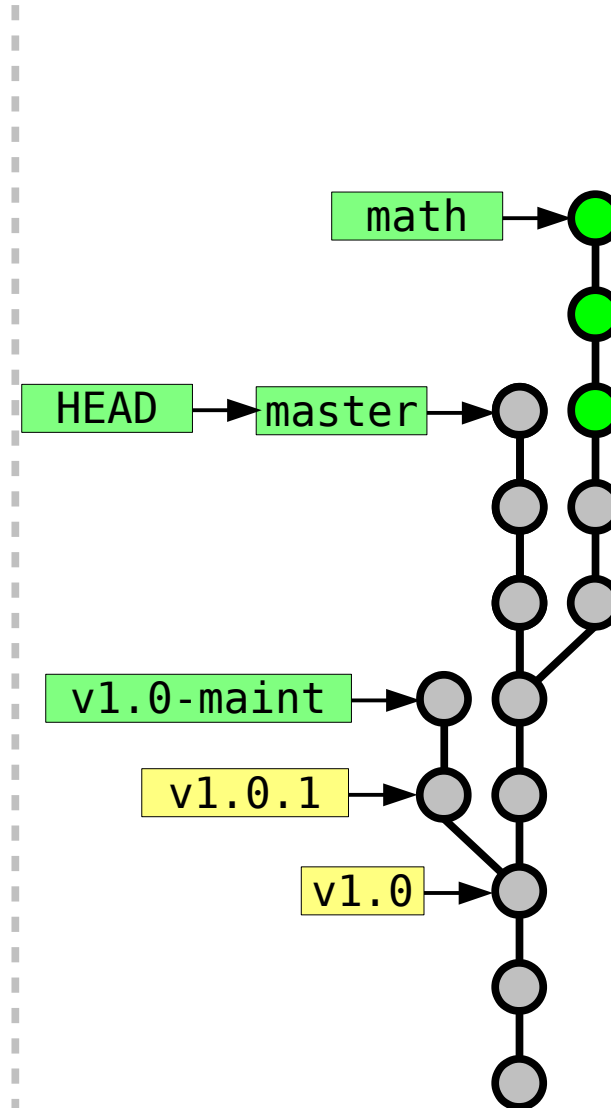
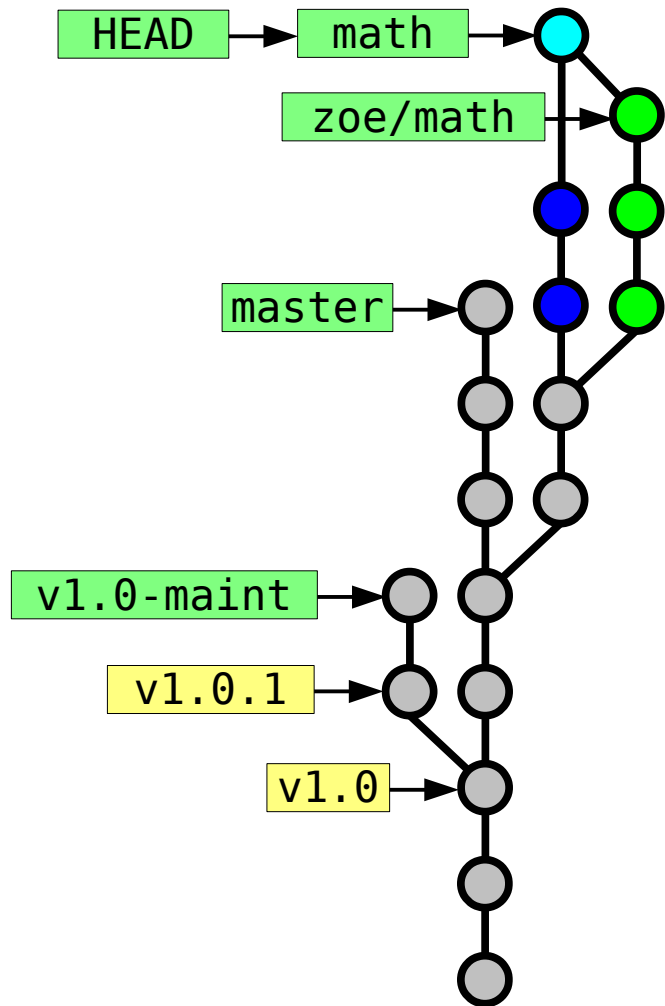
Commandes: Fetch

```
git fetch zoe
```

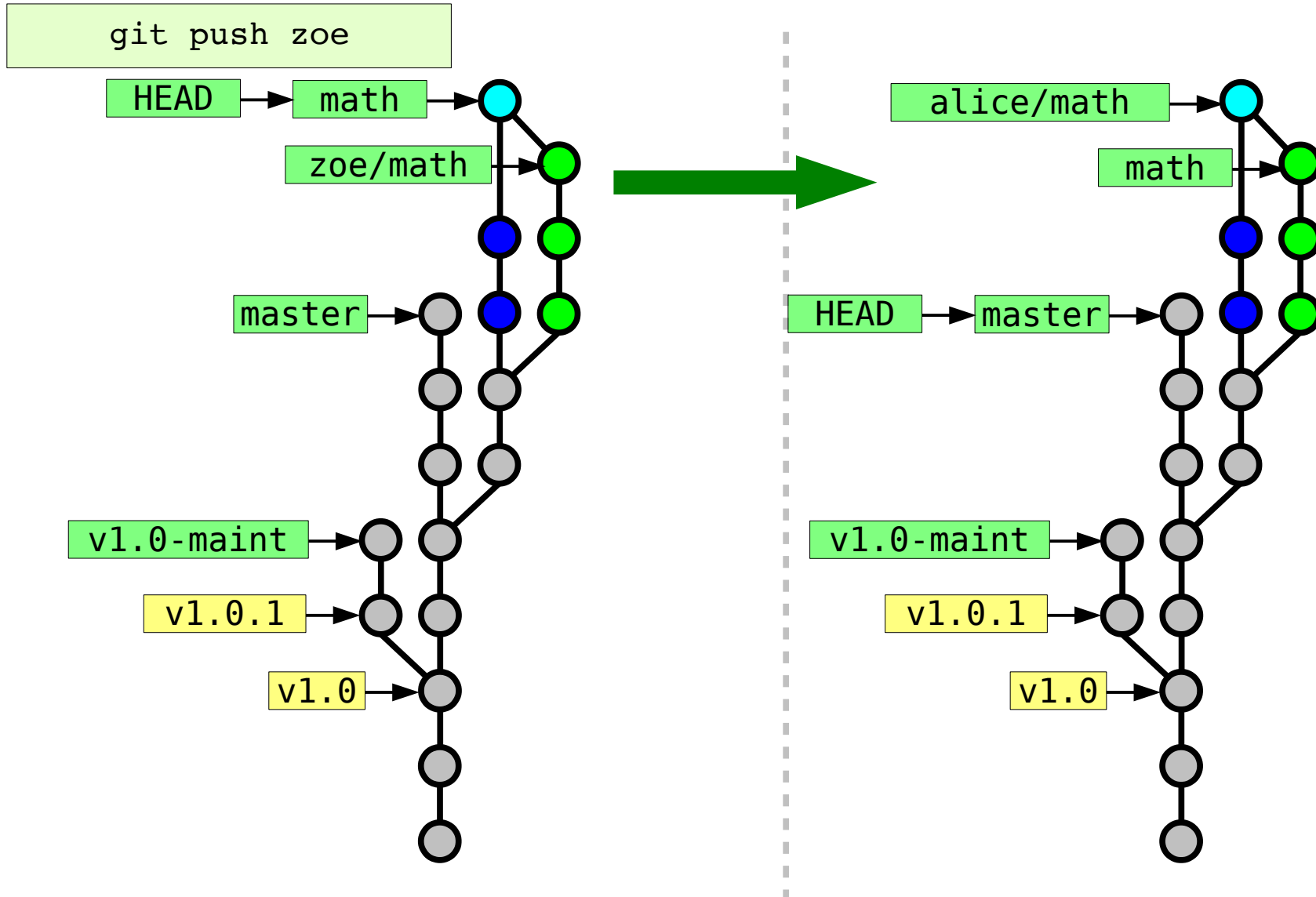


Commandes: merge

```
git merge zoe/math
```



Commandes: push



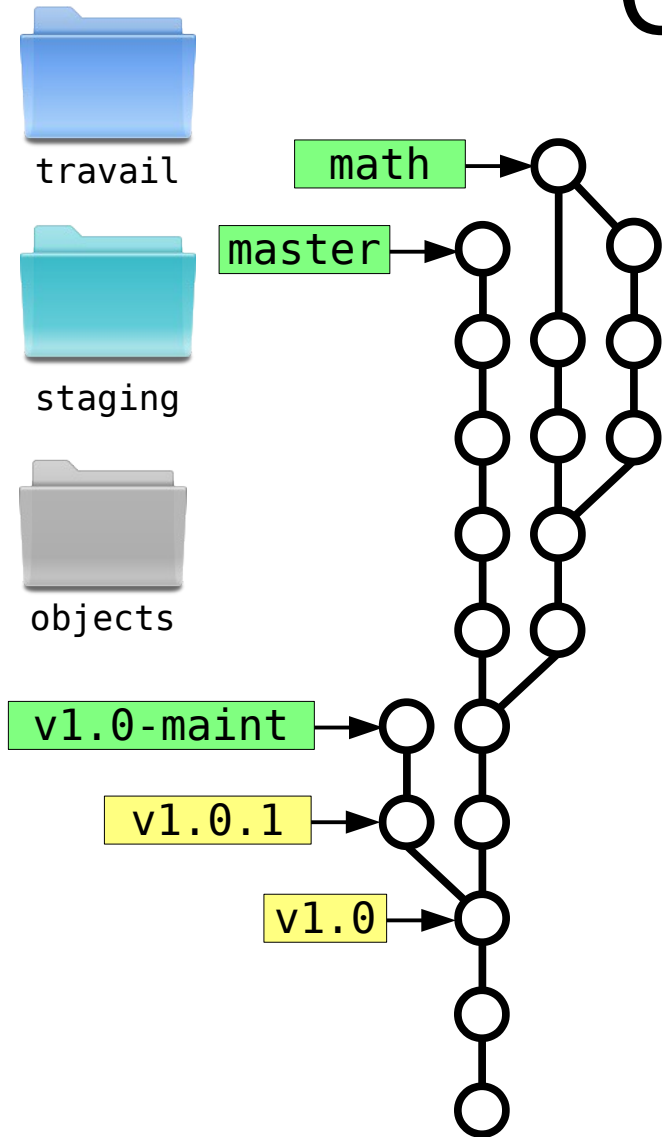
Commandes: Fetching & Merging

- `git remote add <name> <URL>`
 - `git fetch <name>`
 - `git merge <name>/<branch>`
- } `git pull`
- `git push <name> <brch_loc>:<brch_dist>`

Commandes: Branches & Tags

- `git branch <branch>`
 - `git checkout <branch>`
- } `git checkout -b <branch>`
- `git tag -l`
 - `git tag <tag>`

Conclusion



- Garder cette histoire en tête
- Git est simple et très puissant

- Une dernière de chose:

`git reflog`

Ensuite ?

- Git: <http://git-scm.com>
- Pro Git: <http://git-scm.com/book>
- Git Reference: <http://gitref.org>
- GitHub: <http://github.com>
- Gitorious: <http://gitorious.org>
- Gitlab: <http://gitlab.com>

Questions?

- Merci pour votre attention!
- Ces slides sont dispo:
https://github.com/Djabx/git_parable

