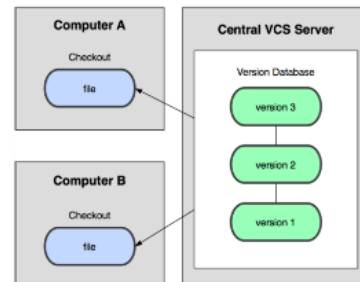


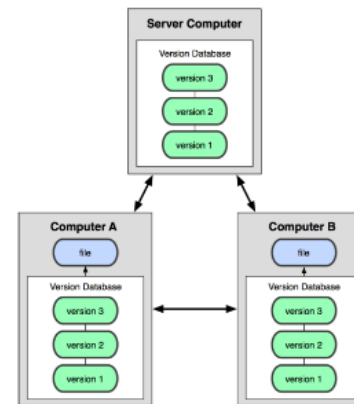
Source Control Management (SCM)

- System that records changes to a file or set of files over time

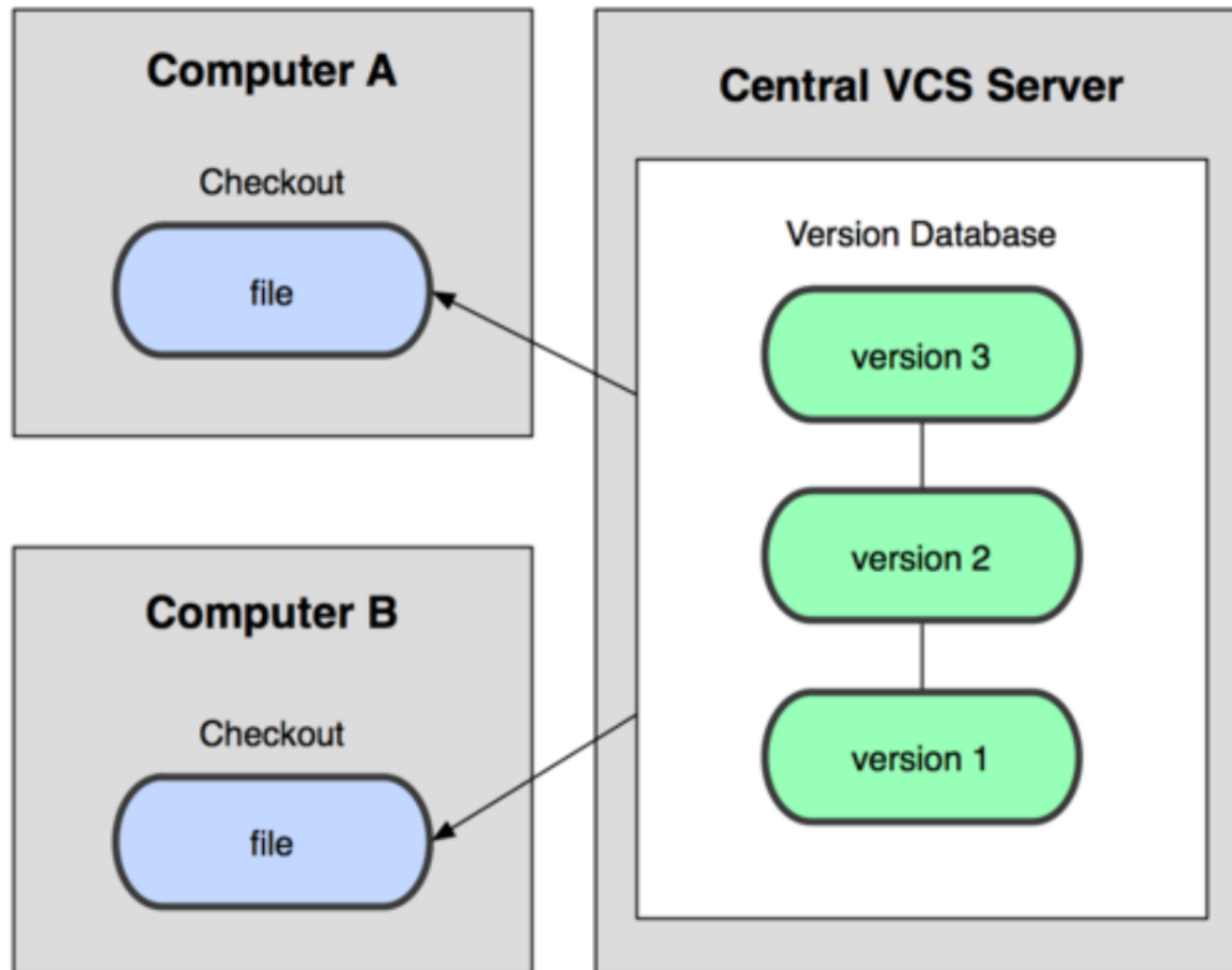
Centralized SCM



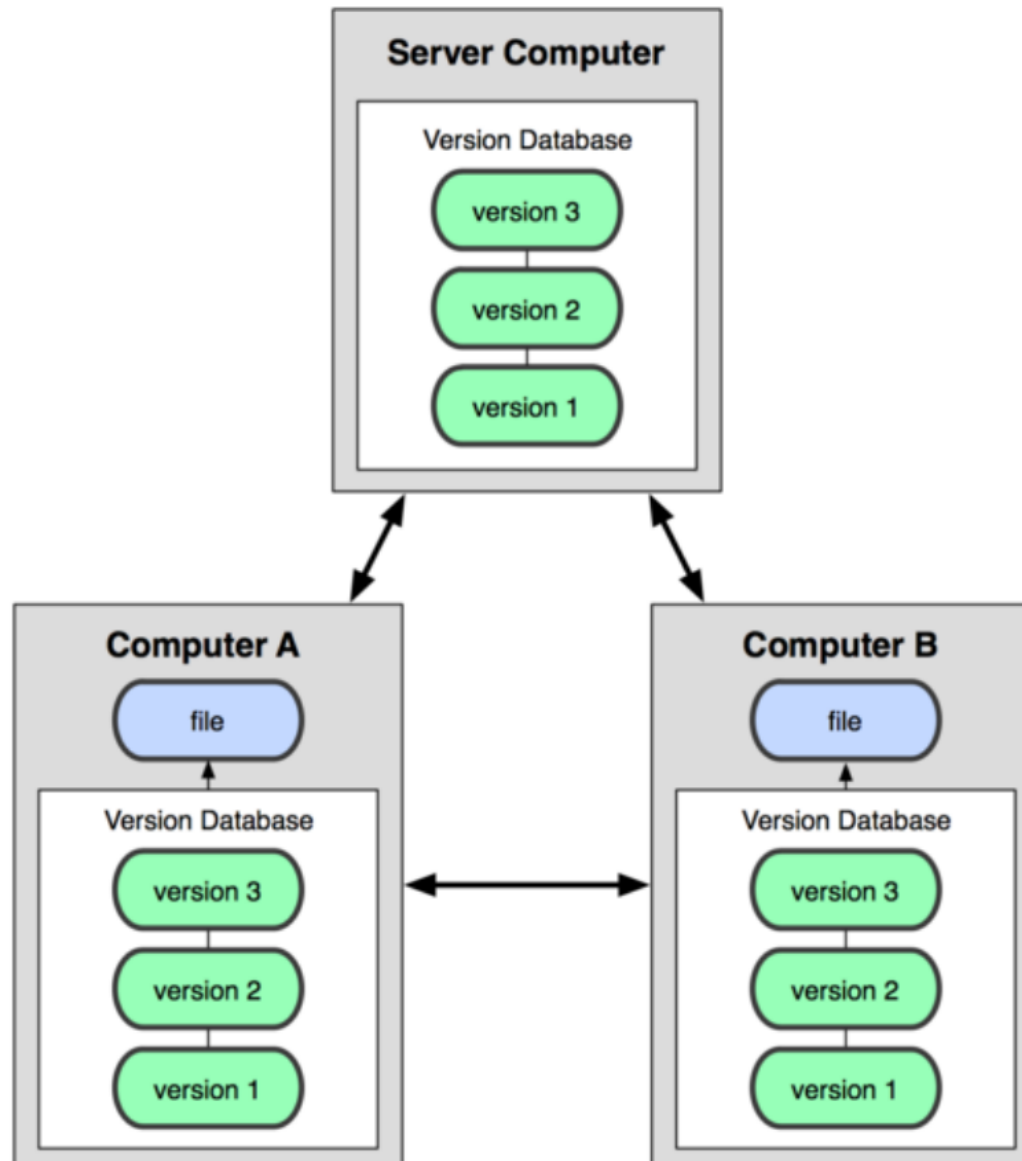
Decentralized SCM



Centralized SCM



Decentralized SCM



Git

- free/open source
- distributed
- efficient
- cheap branching and merging

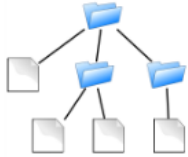
Getting Started

- install git from <http://git-scm.com/>
- how to use?
 - command line
 - GUI
 - smart git (Windows, Linux, Mac)
 - source tree (Mac)

Concepts

Working directory

- Files
- Directories

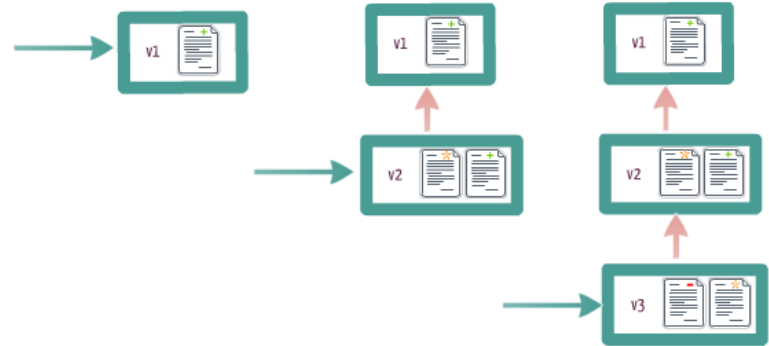


Repository

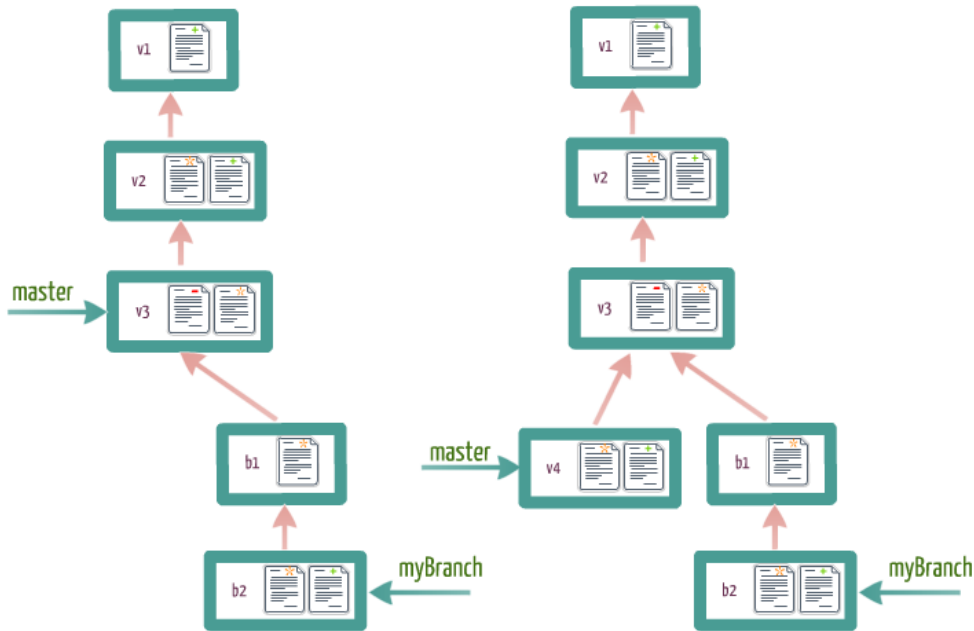
- files 
- commit 



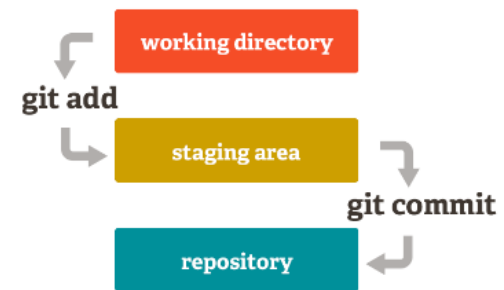
• HEAD



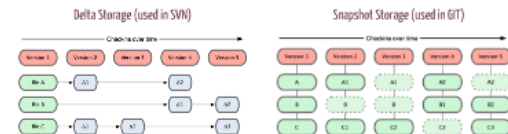
Branching



Staging

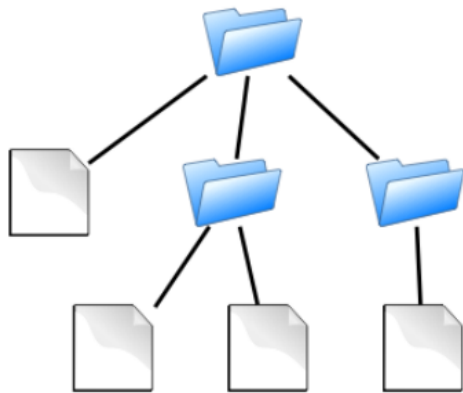


how files are stored?



Working directory

- Files
- Directories



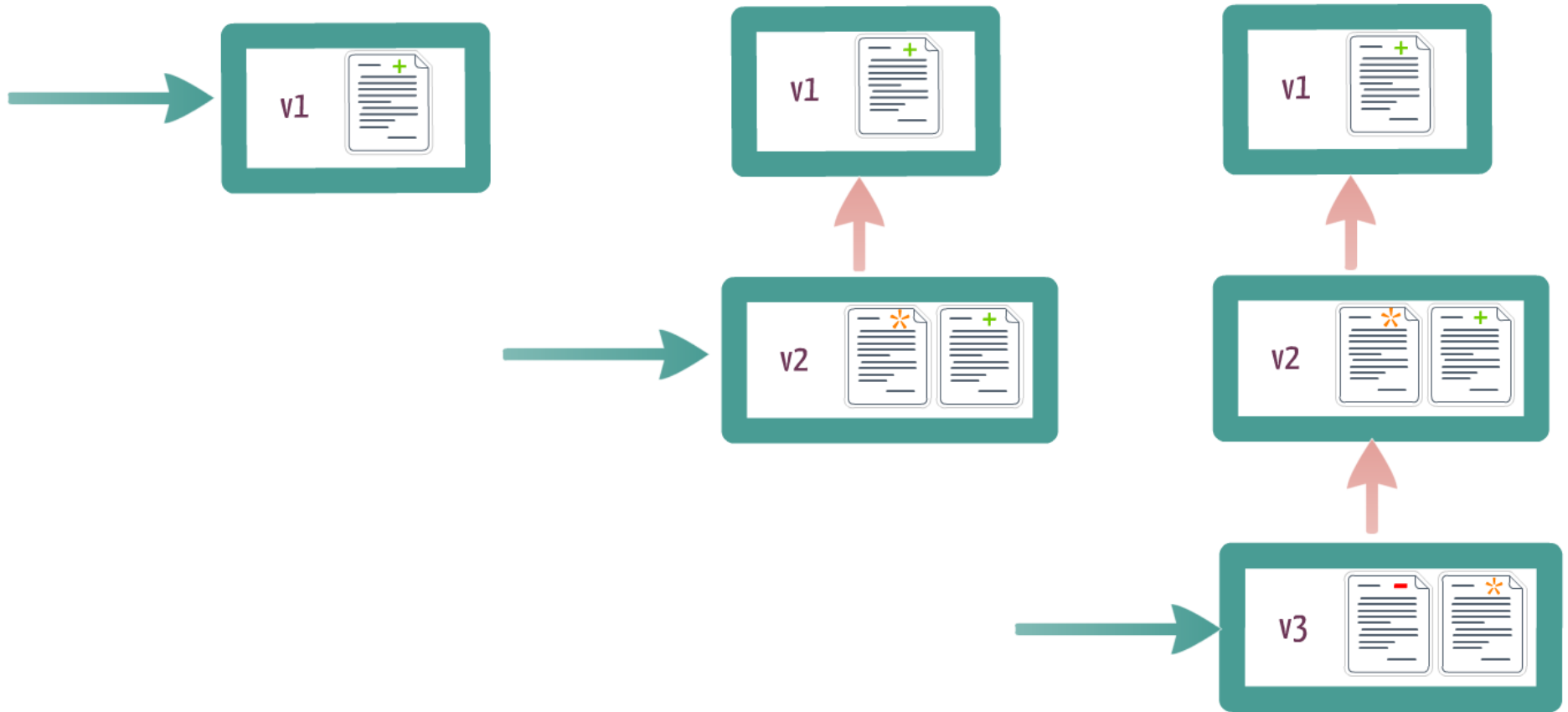
Repository

- files 
- commit



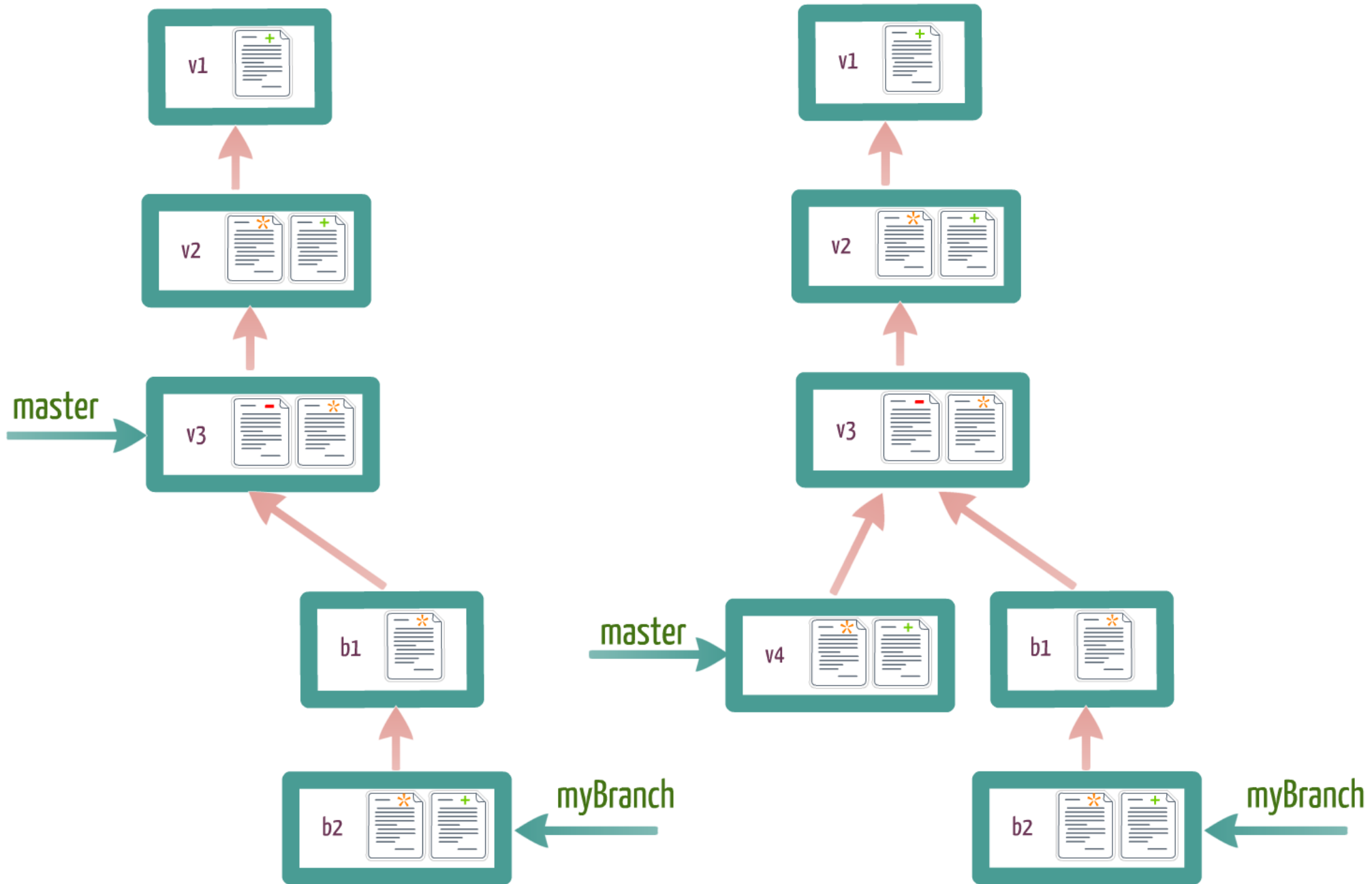
Branching

- HEAD

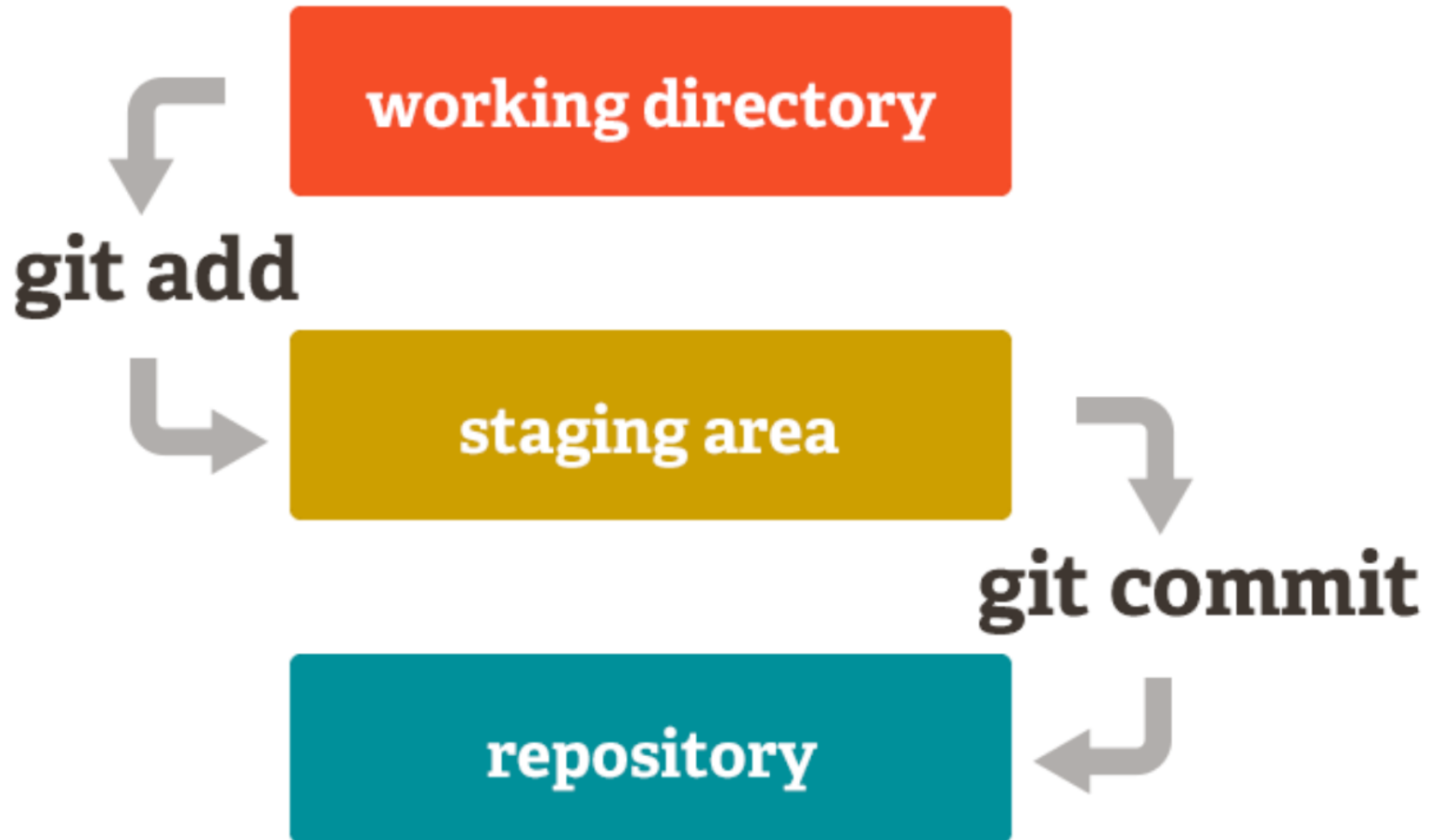


Staging

Branching

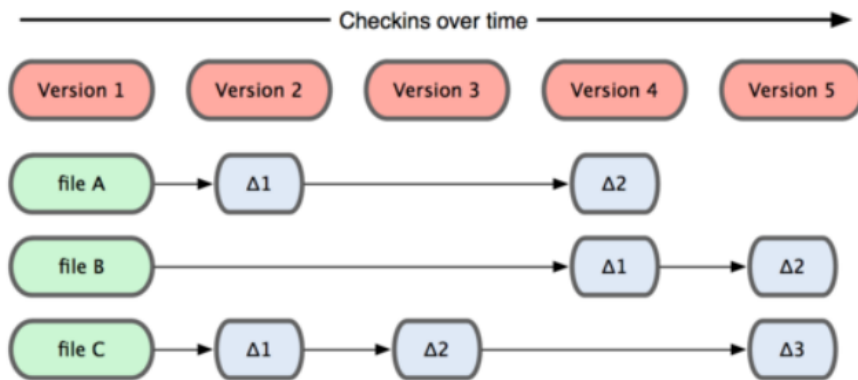


Staging

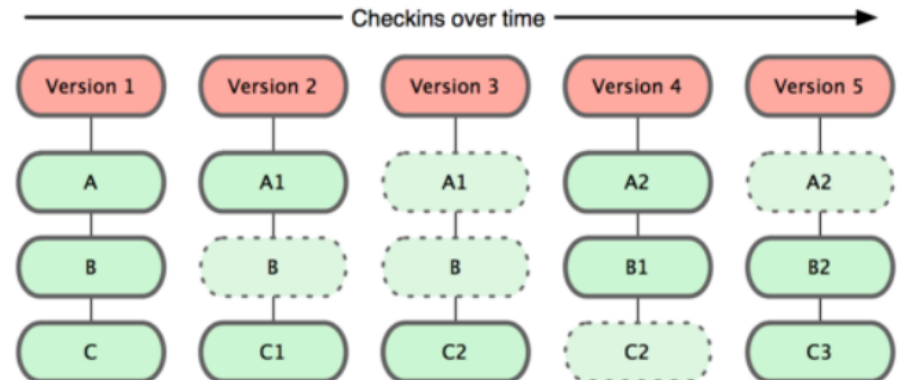


how files are stored?

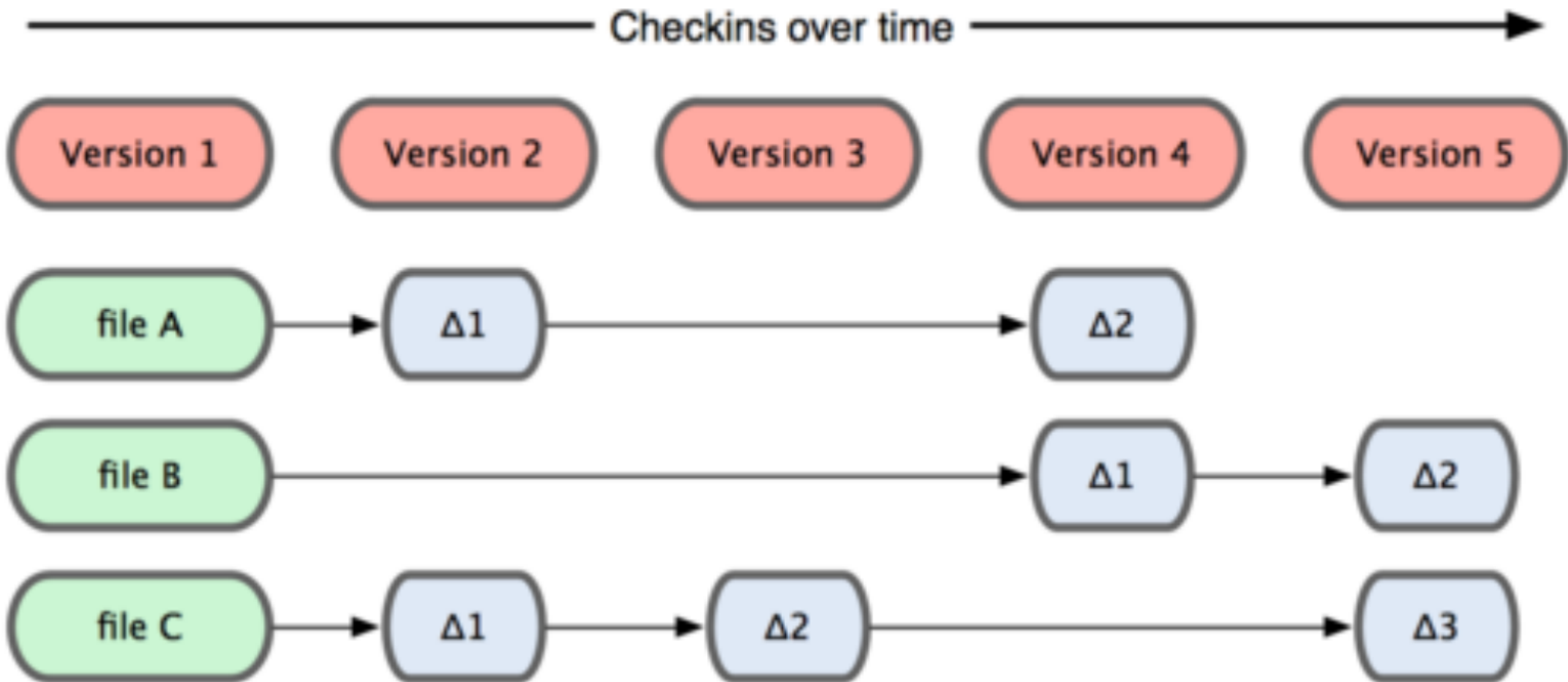
Delta Storage (used in SVN)



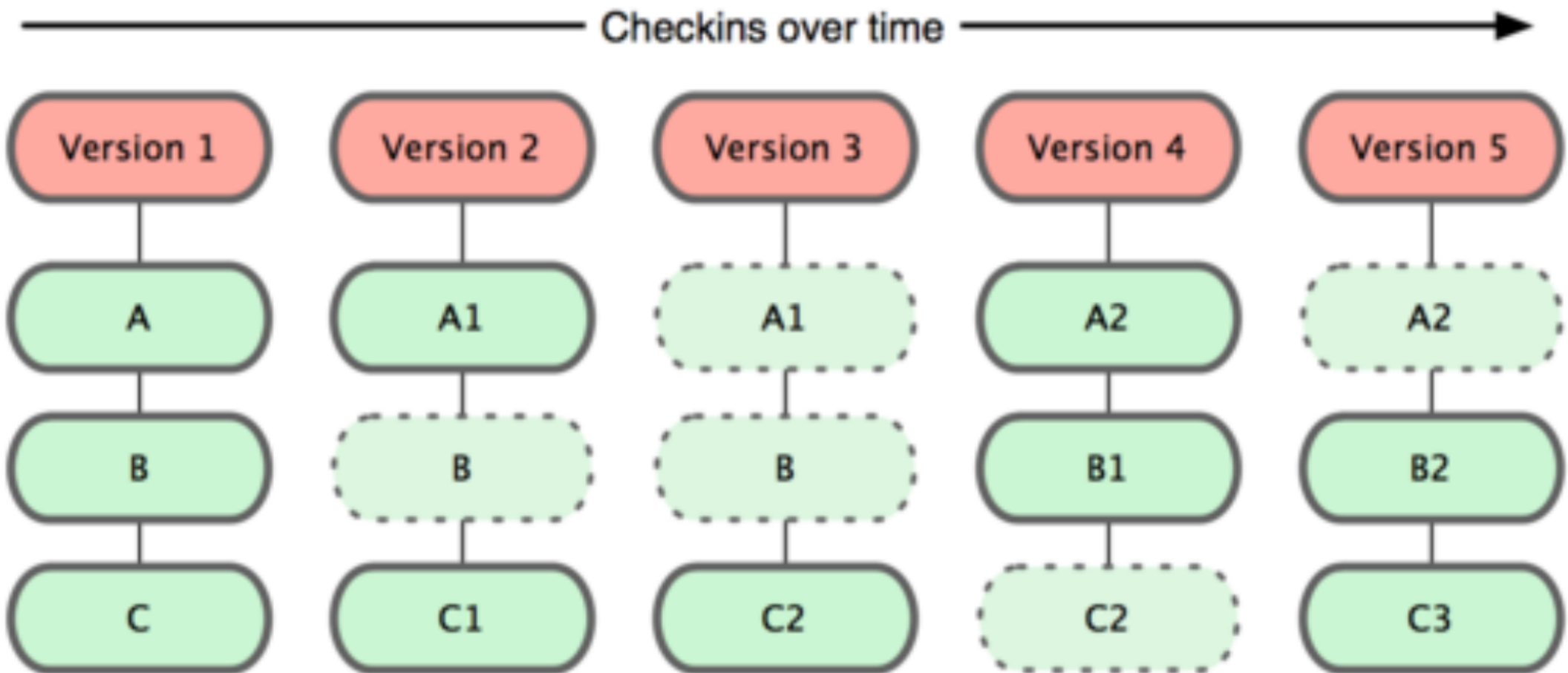
Snapshot Storage (used in GIT)



Delta Storage (used in SVN)



Snapshot Storage (used in GIT)



Concepts

Working directory

- Files
- Directories

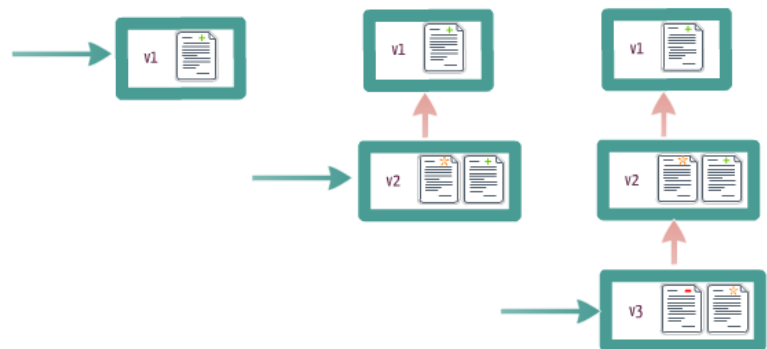


Repository

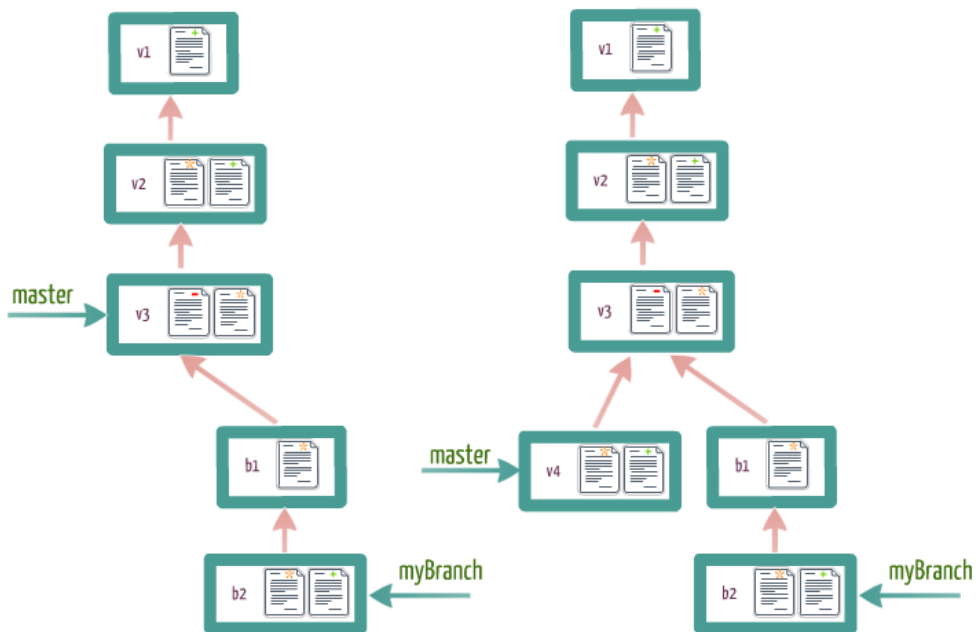
- files 
- commit 



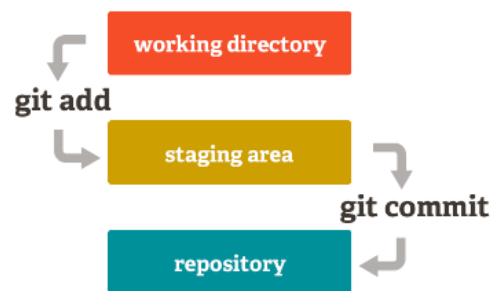
• HEAD



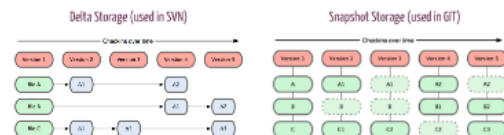
Branching



Staging



how files are stored?



Demo 1 - working local

- create local repository "workshop"
 - add files "timetable, speakers, ..."
 - commit the changes
 - check status and log
 - update files
 - diff changed files
 - create new branch
 - add changes
 - merge branches
 - redo with GUI client
- git init
 - git add
 - git commit
 - git status
 - git diff
 - git log
 - git branch
 - git checkout
 - git merge

you can learn/test Git basic commands online

<http://try.github.com/>

Demo 2 - Working with remotes

- clone remote repository
 - list remote repos
 - changes some files
 - commit the changes
 - push the changes
 - check the other repository
- git clone
 - git remote
 - git push
 - git pull

Resources

- <http://try.github.com/>
- <http://git-scm.com/book/en>
- <http://gitref.org/>

