Version Control and Remote Code Repositories

What is version control?

- Manually keeping track of changes is slow and error-prone
- Version control systems automate tracking changes to files
- Version control is *not* a backup system - in fact, the version control system itself should be regularly backed up!

Local version control

- Local database stores changes between different versions of files
- User checks out copies of files to work on

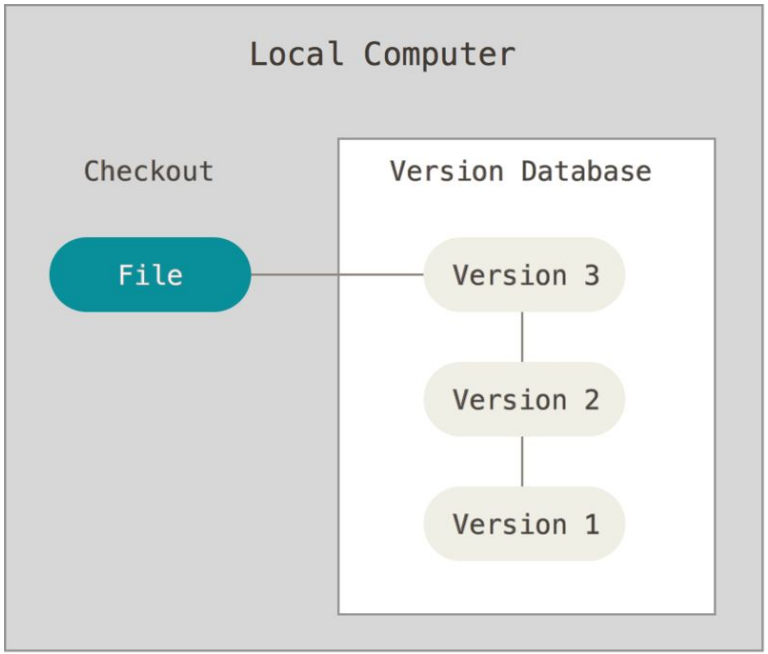
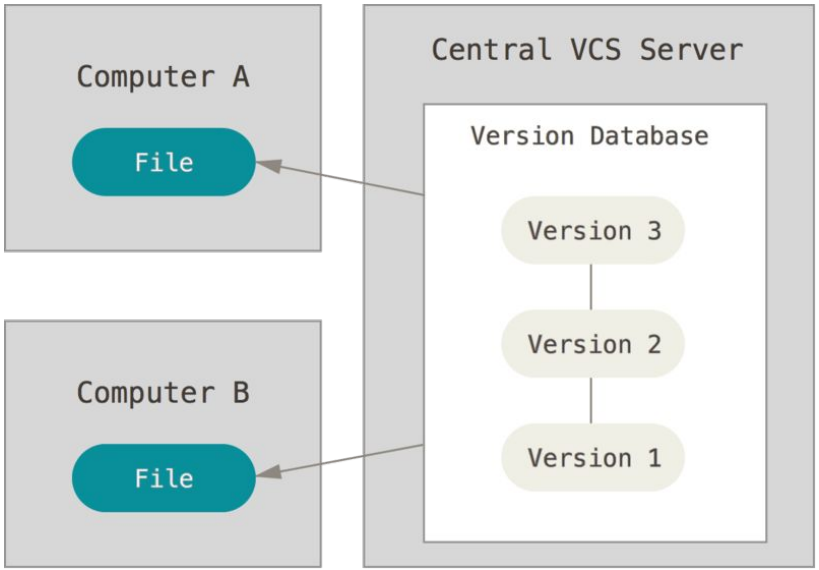


Image credit:
https://git-scm.com/book/en/v2/Getting-Started-About-Version-Control

Centralised version control

- One server holds versioned files and history
- Users check out files from the central repository
- Can’t restore version history from checked-out files if central server fails



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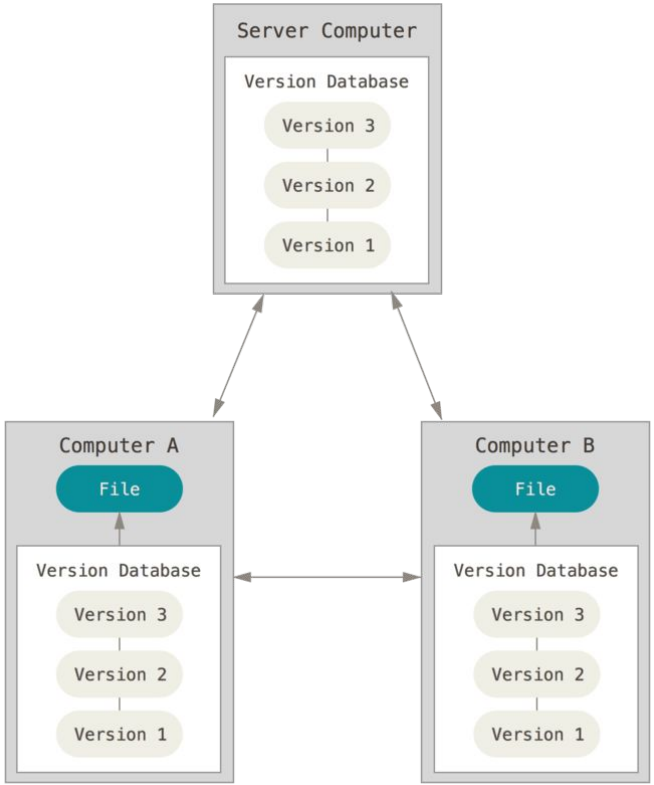
Distribution version control

- Every clone has a copy of the repository, including version history
- Can fully restore lost data from any up-to-date copy
- Integrates well with remote server hosting



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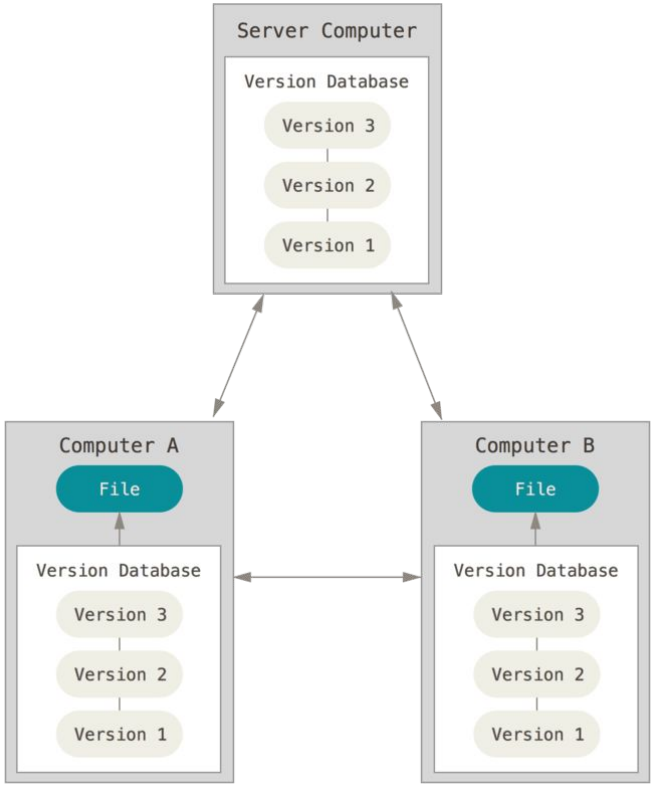
Distribution version control - git and GitHub

- git is a distributed version control system
- GitHub is a remote repository hosting server
- Integrated with git, but adds some extra functionality for online collaboration



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