Web Application Architectures

Module 2: Ruby on Rails
Lecture 5: Version Control

THE UNIVERSITY *of*
NEW MEXICO

Midnight Train to Georgia by Gladys Knight and the Pips:

- Considered the signature song of legend Gladys Knight.
- One of the greatest R&B songs of all time.
- Rolling Stone lists it as one of their 500 Greatest Songs of All Time.

The original title was *Midnight Plane to Houston* — about a plane trip from Nashville to Houston, and the author envisioned it as a country song.
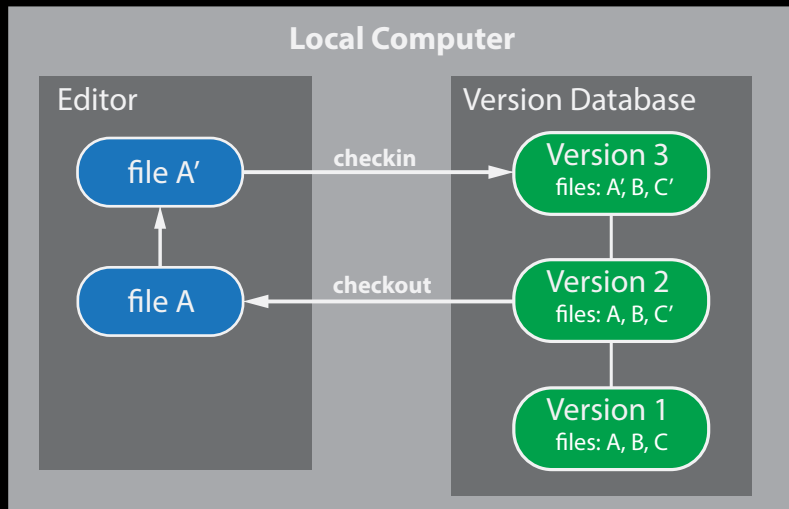
Definition (Version Control, Revision Control, Source Code Control)

The practice of tracking and providing control over the changes made to source code.

- The need for managing software versions has existed as long as there's been software.

- Version control is commonly used by a development team to keep track of the various pieces of source code that different members of the project are working on, along with the various versions that they may wish to create.
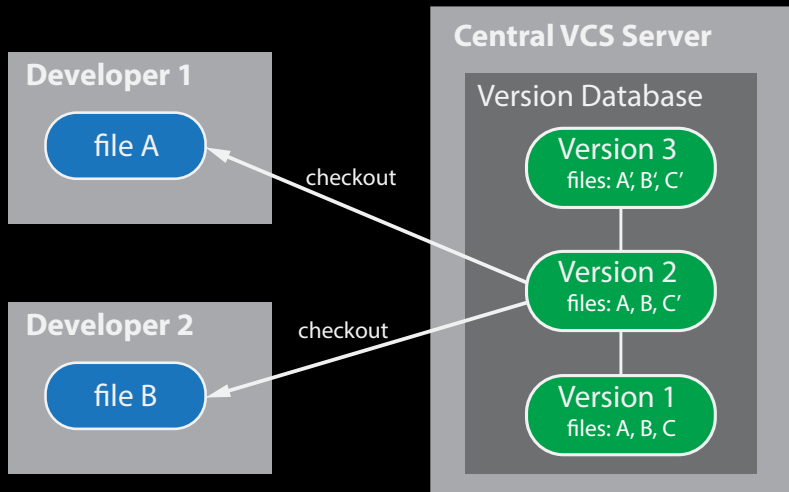
Local Version Control
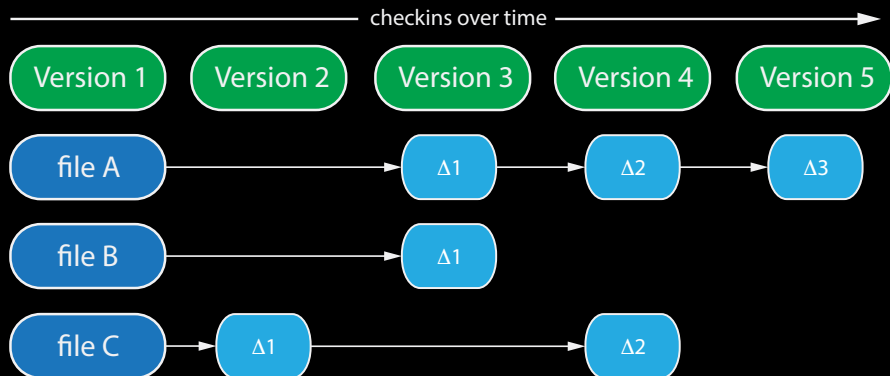
A single developer:

Centralized Version Control

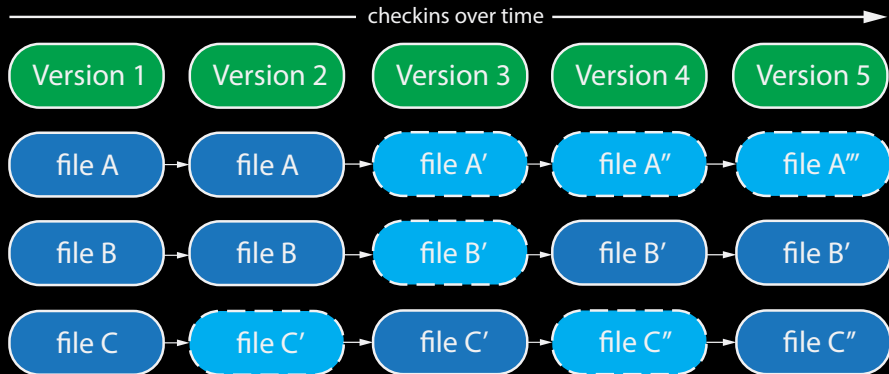A development team:

Centralized Version Control

Differences are stored:

- As software development has become more team-based, and and teams have become more distributed, the need for distributed version control systems has emerged.

- In distributed version control, there is no centralized repository, team members don't check out files from these systems, they check out the entire repository.

- This does not lock the repository — other team members can also download the current version of a project.

- Later, when a team member check the project back in, it is marked as a different version in the repository. Thus, you can think of distributed version control systems as storing different snapshots of a project over time.

- It is up to the owner of the repository to merge different version together if he/she so chooses.

Distributed Version Control

Snapshots are stored:

Distributed Version Control

Distributed development: