Web Application Architectures

Module 2: Ruby on Rails
Lecture 6: Git and Rails

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Distributed Version Control with Git

- Git is a popular open source distributed version control system created in 2005 by the Linux development community and used extensively in the Rails community.
- Git provides means for comparing the differences between the various versions of a project (think of them as project snapshots), and for merging them accordingly.
- You should think of these versions as forming a tree:
  - Main development branch = master.
  - New versions may be created along the master branch, or new branches can be created off of it.
  - These branches can possibly be merged back into the master branch.

Git Basics

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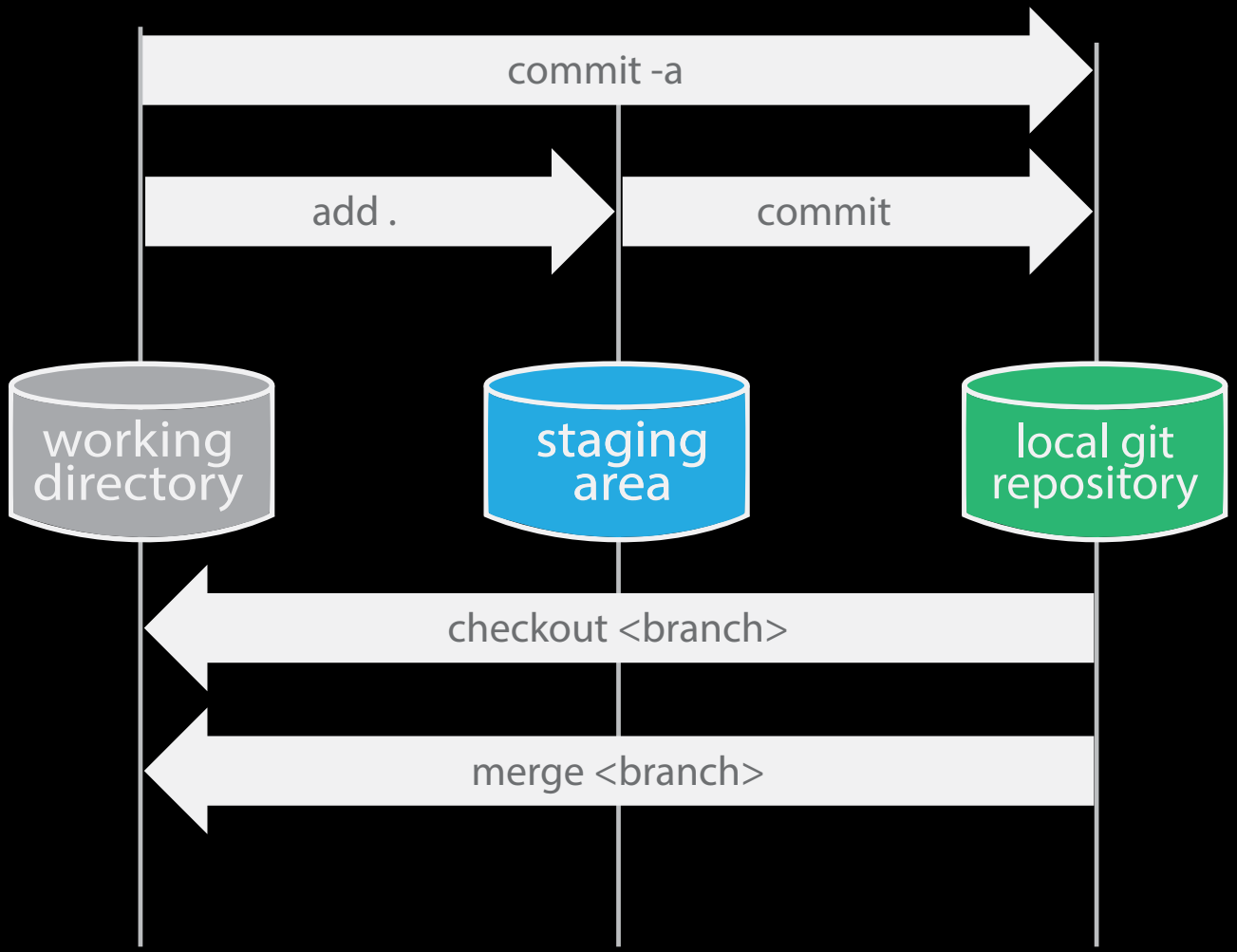
- Git tracks files, which may reside in three "locations":
  - Working directory
  - Staging area
  - Git repository

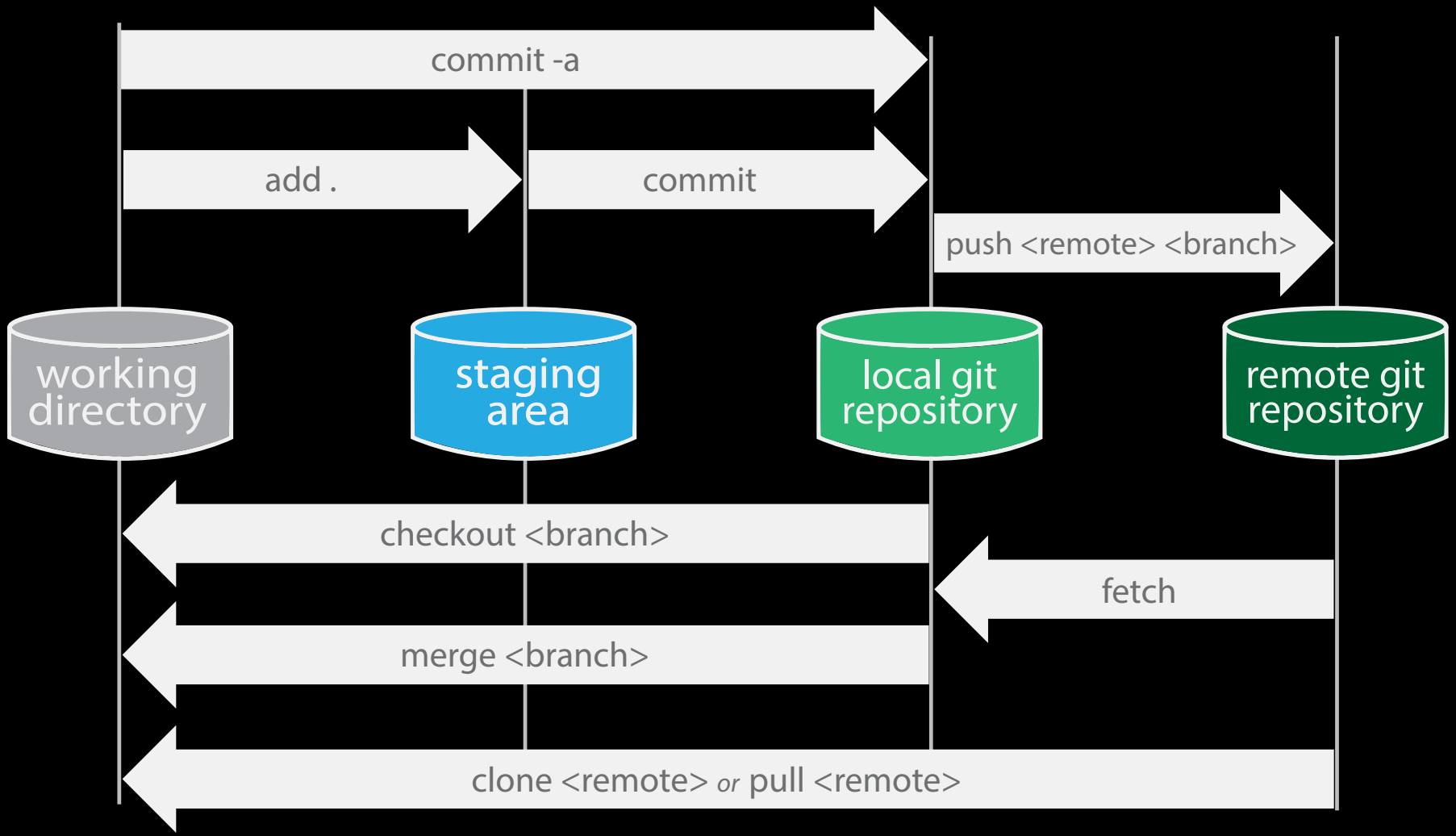
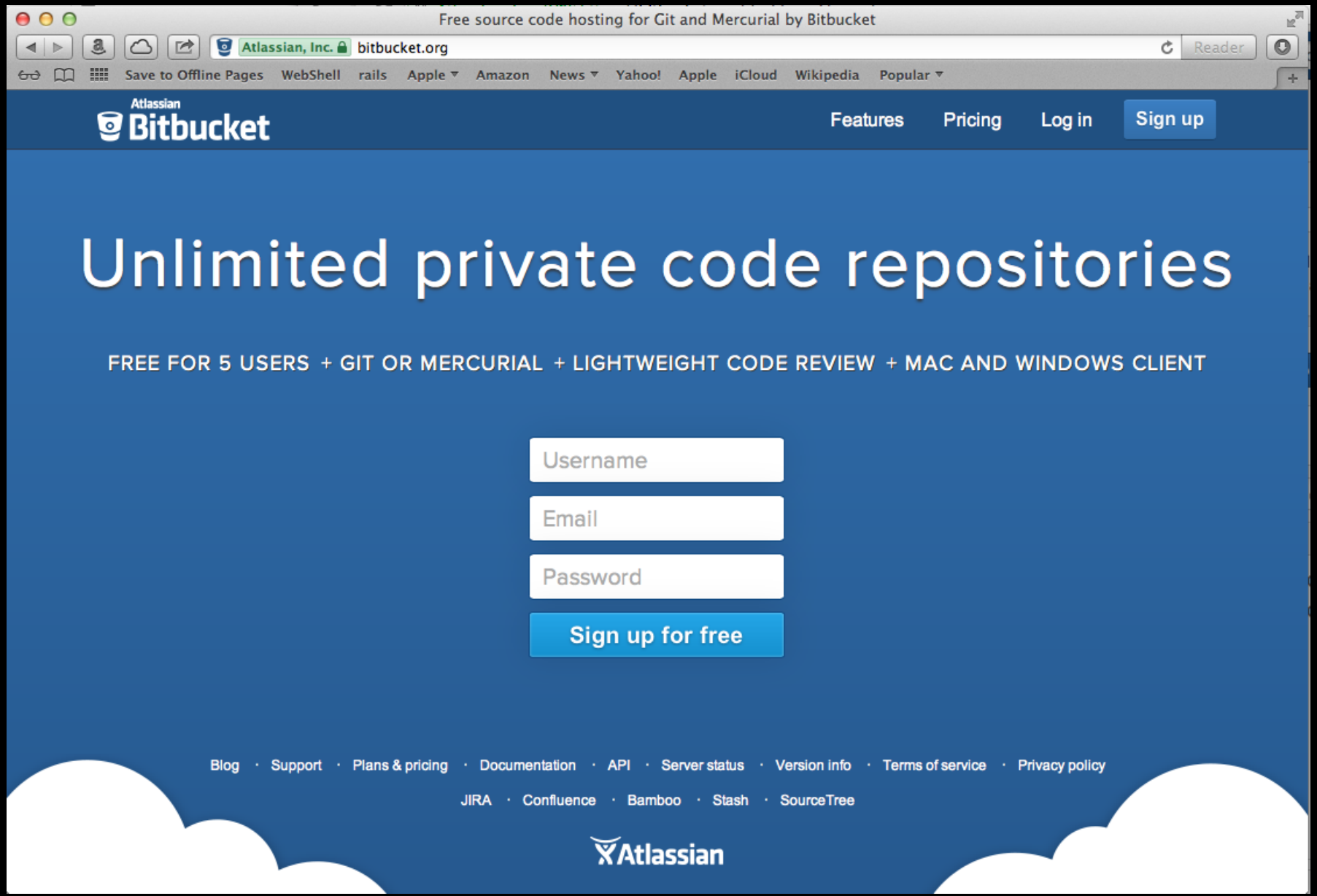
- Furthermore, the files in your working directory can be in one of two states:
  - Tracked: files that were saved to the Git repository by the last commit operation.
  - Untracked: all other files in your working directory.

- Finally, tracked files can be either:
  - Modified
  - Unmodified
  - Staged

Git Workflow–Local Repository



Git Workflow–Remote Repository



Creating a Git Repository at Bitbucket