

# Web Application Architectures

Module 2: Ruby on Rails

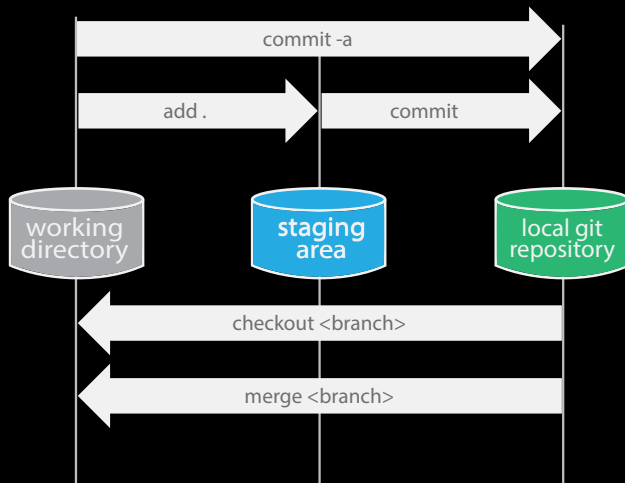
Lecture 6: Git and Rails

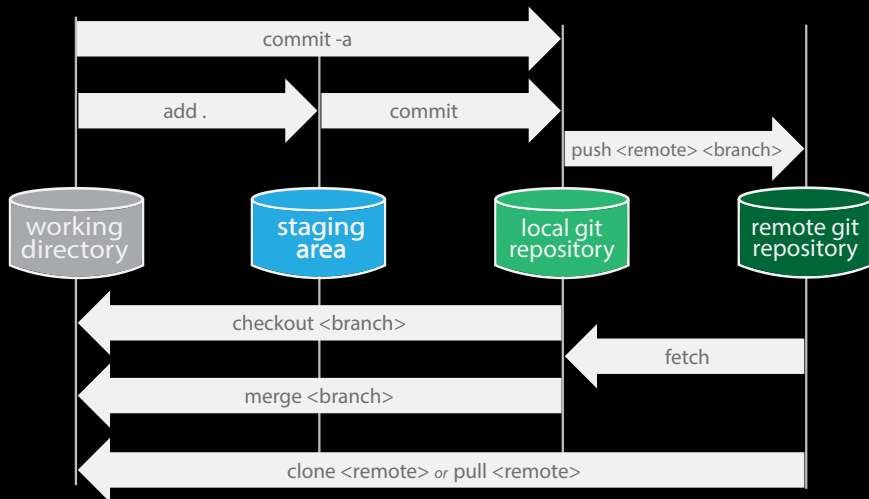


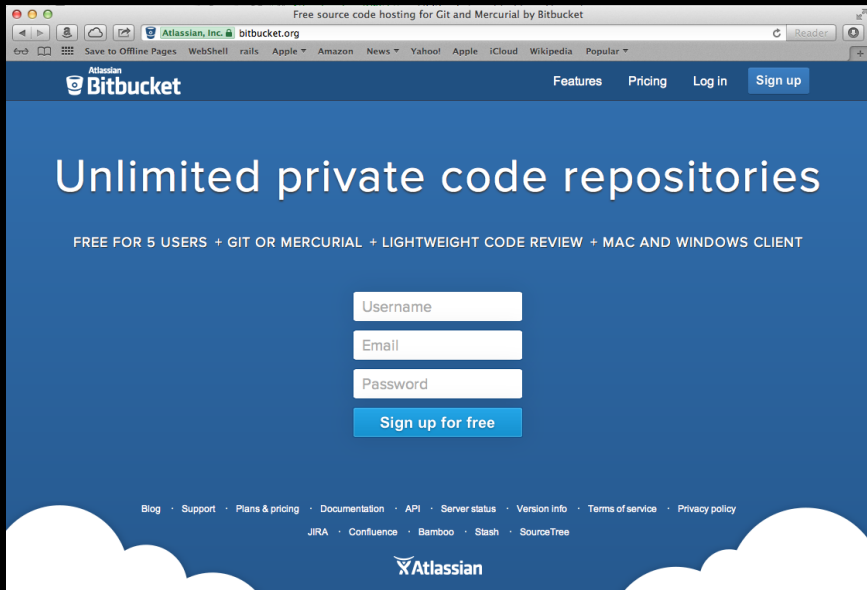
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- Git is a popular open source distributed version control system created in 2005 by the Linux development community and used extensively in the Rails community.
- Git provides means for comparing the differences between the various versions of a project (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 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







A screenshot of a web browser displaying the Bitbucket homepage. The browser's address bar shows "bitbucket.org" and the page title is "Free source code hosting for Git and Mercurial by Bitbucket". The Bitbucket logo is in the top left, and navigation links for "Features", "Pricing", "Log in", and "Sign up" are in the top right. The main heading is "Unlimited private code repositories". Below it, a subheading lists features: "FREE FOR 5 USERS + GIT OR MERCURIAL + LIGHTWEIGHT CODE REVIEW + MAC AND WINDOWS CLIENT". A sign-up form is centered, consisting of three input fields labeled "Username", "Email", and "Password", followed by a blue "Sign up for free" button. At the bottom, a footer contains links for "Blog", "Support", "Plans & pricing", "Documentation", "API", "Server status", "Version info", "Terms of service", and "Privacy policy". Below these are logos for "JIRA", "Confluence", "Bamboo", "Slash", and "SourceTree". The Atlassian logo is at the very bottom center. The background of the page features a blue gradient with white cloud shapes at the bottom.

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