Tooling for Java EE applications
PA165

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Contents

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Contents

Version control

- Motivation
- History
  - One file at a time
  - Centralized (CVS, Subversion)
  - Distributed (Git, Mercurial)

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Git history

- ▶ Created in 2005 by Linus Torvalds
  - ▶ described by himself as "stupid content tracker"
  - ▶ Originally created for linux kernel development
- ▶ Inspired by BitKeeper, aiming to be performant and free
- ▶ CVS taken as example of what *not to do*
- ▶ git - no exact meaning
  - ▶ random three-letter combination that is pronounceable, and not actually used by any common UNIX command. The fact that it is a mispronunciation of "get" may or may not be relevant.
  - ▶ "global information tracker": you're in a good mood, and it actually works for you. Angels sing, and a light suddenly fills the room.
  - ▶ "g*dd*mn idiotic truckload of sh*t": when it breaks
  - ▶ https://github.com/git/git/blob/master/README.md

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Git characteristics

- Strong support for non-linear development
  - Rapid branching and merging
  - Tools for visualisation and navigation in development history
  - Lightweight branches
- Distributed development
  - Each developer has full history
    - Prevents data loss
    - Subteams can share reposities without access to central repository
  - No need to have access to central repository all the time
  - Changes are commited locally and then pushed to central repository

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Git characteristics

- ▶ Variety of protocols supported
  - ▶ HTTP/HTTPS
  - ▶ FTP
  - ▶ SSH
- ▶ Efficient handling of large projects
  - ▶ Fast (when applying patches)
  - ▶ Scalable
  - ▶ Fetching version history from locally stored repository is faster then from remote

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