

Assignment 4

Git vs SVN

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1. Repository Model: Git is a distributed VCS whereas SVN is centralised. The main difference between these two models of repository model is that with distributed VCS', everyone has a local copy of the entire work's history, meaning one does not need to be online to add changes to the work. For centralised systems, the history of the changes to a given work are kept on a central server. From here everyone requests the latest version of the work and pushes the latest changes to the server.
2. Concurrency Model: Using Git, each user has a local copy of the repository and so can work concurrently on the same thing, however when pushing back the changes to the repository then the users must decide whether to merge the changes or to take one's changes and ignore the others etc. For SVN, once a user begins a work, the user locks that file and so other users cannot make edits on it until the initial user completed their task.
3. Licence: Git is free software distributed under the GNU General Public License while SVN is distributed under Apache Licence.
4. Cost: Both Git and SVN are open source.
5. Operating system support: Git has limited windows support when compared to UNIX
6. Graphical/web interfaces: Both Git and SVN have graphical/web interfaces such as Smart SVN for SVN and the built in GUI for git as well as several third party tools.
7. Other Major differences: SVN employs "atomic operations" which prevent corruption in the database. So when one commits to the version control, either everything goes in or nothing does. SVN is also slower compared to Git