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SOURCE CONTROL

Source control, also referred to as version control or revision control, is a crucial software development tool. Source control clients serve as a repository for the source code of applications. Each change to the code is saved and tracked; along with the date and time, the author of the changes, and explanatory notes. One can also reverse changes when needed to previously uploaded versions. This ability makes it an ideal collaborative environment.

Teams of programmers whether located in the same office or across the world can effectively work on the same project at the same time. Each contributor can work on their own copy and then commit their changes back to the project. Commit is to upload one’s changes or new code to the repository. Instead of overwriting repository code with the commit, the source control client will compare all changes and flag any conflicting changes. Then, if no conflicts remain an authenticated user will merge the changes with the repository. Other developers will pull your changes to sync their local version of the project. This process of having one central repository to upload to and sync with allows everyone on the team to work with the most current version.

All source files are kept on a server of the source control client. A backup of each commit is kept in an organized timeline allowing one to keep a history of changes. Should any problems occur in a current file, one can simply revert back to an older version by pulling down a previous version from the server. Also, should you need to work from a different computer; one can simply pull the files from the server.

Using a source control client gives one the freedom and peace of mind to work without the fear of breaking code. Everything is reversible. It is an essential tool for software development.