

Version Controlling



What is version control?

Version control is a part of Software Configuration Management. This component we can use to manage our changes on a particular computer program. Most probably it is used to manage changes in source code.

Where we can use it?

For any code, files, and assets that multiple team members will collaborate on, version control software should be used

Why should we use ?

In a special type of database, version control software keeps track of every change to the code. If a mistake is made, developers can go back in time and compare prior versions of the code to help repair the problem while causing the least amount of disruption to the rest of the team.

How Version Control can operate?

A number or letter code, referred to as the “revision number,” “revision level,” or simply “revision,” is used to identify changes. “Revision 1” is an example of a starting collection of files. The resulting set is called “revision 2” after the first alteration, and so on. Each revision has a timestamp and the name of the person who made the modification. Revisions can be compared, restored, and merged with some file formats.

Advantages

- Easy to manage software Integration within the developers
- Conflicts can be identified in the early stages

- If one mistake did easy to recover
- Can be used as a software development backup environment
- Easy to share code

Disadvantages

- Developers are unable to save versioned changes if the main server is unavailable.
- Remote commits take a long time.
- Unexpected shifts have the potential to sabotage growth.
- The whole history might be lost if the central database is corrupted (security issues)

Version control software

- Git
- CVS
- SVN
- Mercurial
- Monotone

Similar names for version controlling

- **revision control**
- **source control**
- **source code management**