



Git

What is Version Control System ?

⇒ Version control, also known as source control, is tracking and managing software code changes.

Famous VCS:

Git

Apache Subversion (SVN)

Mercurial

Piper (used by Google)

Git is a free and open source distributed version control system designed to handle from small to very large projects with speed and efficiency.

Cheat Sheet: <https://education.github.com/git-cheat-sheet-education.pdf>

Git Global Configuration:

```
git config --global user.name "firstname lastname"
```

```
git config --global user.email "email"
```

`git init` → Initialize git in directory

`git add <filepath>` → Add file from untracked to stage

`git add .` → Add all files to stage

`git diff` → Show file changes/difference

`git rm <filepath>` → Remove from staging

`git commit -m "commit message"` → make a commit with a given message

Every commit has unique id associated.

`git log` → check full length logs of commit

`git log --oneline` → display commit log in one line

`git show [SHA]` → display changes made in that commit. SHA id will be getting from commit log

`git blame [filename]` → display line by line changes

`git status` → to check local git changes

`git reset --hard [SHA]` → revert commit and HEAD goes to give SHA-id commit

WARNING: use reset hard command if you want to remove latest commit. Because it removes all commit after the given SHA commit id. So you can loose commits, if used wrongly !!

`git revert [SHA]` → revert code of given commit SHA id. It maintain other commits. Safe to use. Better when you want to revert older commits instead of most latest commit.

After this revert command add files to staging and make new commit. Now HEAD will be at new commit.

