**Git**

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

How advantageous is Git compared to other VCS?

* Git enables to have multiple local branches that can be entirely independent of each other.
* Git is fast because almost all operations are performed locally.
* With Git, you can do a “clone” of the entire repository
* Git provides data assurance and supports integrity in the sense that when you make a commit, not only that your project remains the same as when it was committed, but also nothing in its history was changed
* There is also the beneficial staging area feature that makes it possible to stage some of the files and commit them without committing all of the other modified files in the working directory or having to list them on the command line during the commit.
* Git is free and open source

**Basic Git Commands**

* git config --global: Tell Git your information
* git init: create a new local repo
* git clone /path/to/repo: check out a repository
* git add: Add files
* git commit -m “message”: Commit
* git push origin master: Push
* git status: Check status
* git remote add origin <server>: connect to a remote repo
* git checkout -b <branchname>: create a new branch and switch to it
* git checkout <branchname>: switch from one branch to another
* git branch: List all branches in repo
* git branch -d <branchname>: Delete branch
* git push origin <branchname>: Push the branch to your remote repository, so others can use it
* git pull: Fetch and merge changes on the remote server to your working directory
* git merge <branchname>: To merge a different branch into your active branch
* git diff: View all the merge conflicts
* git log: Get the commit ID
* git grep "foo()": Search the working directory for foo():

**API vs. SDK**

* Application Programming Interface (API) is an interface that allows software to interact with other software.
* Software Development Kit (SDK) provides a set of tools, libraries, relevant documentation, code samples, processes, and or guides that allow developers to create software applications on a specific platform.
* An SDK includes instructions that allow developers to create systems and develop applications. APIs, on the other hand, are purpose-built for an express use — to allow communication between applications.
* It is more often said that SDKs contains APIs, like rectangles contain squares. Or we can think about API as telephone lines whose purpose is communication in and out of the house. Whereas the SDK is the house itself and all its contents.